

LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

610.5

BR

1871²

pld
18 1948

~~NATURAL~~
~~HISTORY~~

THE
BRITISH MEDICAL
JOURNAL:

BEING THE
JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

EDITED FOR THE ASSOCIATION BY
ERNEST HART, Esq.

VOLUME II FOR 1871.

JULY TO DECEMBER.

London:

PUBLISHED FOR THE ASSOCIATION BY THOMAS RICHARDS, 37, GREAT QUEEN STREET.

MDCCCLXXI.

BRITISH MEDICAL

JOURNAL

LIBRARY
UNIVERSITY OF ILLINOIS
CHICAGO

THE EDITORIAL BOARD
OF THE JOURNAL

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

THE EDITORIAL BOARD

610.5
BR
1871.2

Not Hist

BRITISH MEDICAL JOURNAL:

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED BY ERNEST HART, Esq.

LONDON: SATURDAY, JULY 1, 1871.

THE HARVEIAN ORATION ON THE PROGRESS OF THERAPEUTICS.

DELIVERED AT

*The Royal College of Physicians of England,
June 21st, 1871.*

By THOMAS KING CHAMBERS, M.D.,

Senior Consulting Physician and Lecturer on Medicine, St. Mary's Hospital.

I KNOW I shall be carrying out in spirit the intention of this oration's founder, when I ask you to join me to-day in reviewing the contemporary progress of therapeutics. While science is our privilege, art is our duty, and, quite as much as science, is capable of advance by that method of direct experiment, to advocate which Harvey bids me stand here. Now is a fitting time to take such a review diligently and often, for I am sure that this our art of healing is passing through a most trying crisis, which will decide the direction and place of its onward march in a most sovereign manner. Let our motto be *Vigilemus*, or we shall stumble and block the road.

This crisis I have elsewhere described by saying that medicine is now entering upon a biological phase. By this I mean that our practice is becoming yearly more and more influenced by that idea of disease which paints it as a mode of living, as an imperfect form of undeveloped vitality, as a loss of something present in health. Is this new? Is it true?

It is new; it is not implied in former theories of therapeutics. I must ask you to bear a little with the unpopular subject of medical history; for the advocates of various principles of healing have made their differences so strongly felt, that their important point of resemblance is somewhat overshadowed. And their point of resemblance is that in which they differ from the newer medicine of to-day.

The Athenian physicians were the first to recognise that health and sickness obeyed any universal law,* and not the arbitrary wills of good or bad powers. They considered that the important point in disease was the *excess of some constituent* of the body—of phlegm in winter, of blood in spring, of yellow bile in summer, of black bile in autumn. This view still survives in the practice of *elimination*, and in the phrases of "reducing the fever", "clearing out the liver", "getting rid of the bile", and the like, so often in the mouths of patients.

Galen brought into pathology the notion of Force, as distinct from its object. To Plato's Life of Nutrition, Life of Animal Motion, Life of Volition, he added the idea of the foreign force of Disease. Diseases were foreign forces, foes to the native; and the duty of a physician lay in opposing them (*ἐναντίωσις*). Remedies were to be sought which in a healthy man would produce abnormal symptoms contrary to those of the disease. Nobody can deny that this *cure by contraries* holds its ground bravely, and will do so till we find sleeplessness not to be alleviated by narcotics, constipation not to yield to purgatives.

Its permanence has been in a great measure due to its openness to accept modifications and reforms. One of the most important of these is an extension of Hippocrates' suggestion that "diseases naturally contain their own cure" (*νόσων φύσις ἰηρὸν*) into Sydenham's designation of their phenomena as an effort of Nature (*Naturæ conamen*). This theory has been so salutary in promoting a milder and better treatment of acute ailments, that it too still influences deeply our pathology and therapeutics.

Neutralisation, by what may be called antidotes, is the application of chemistry to the cure by contraries. During a given disease there is found in the body a substance differing from what is found in health.

United with certain drugs, it forms a third neutral and harmless substance. We will give those drugs. If the urine be over-acid, we will give alkalies; if it be alkaline, we will give acids. It seems as if contagious fevers were set in action by a ferment in the blood, so we will administer, in as large doses as we dare, chemicals which decompose ferments. Though sometimes leading us into blunders, this idea has certainly taught modes of treatment which relieve illness; so that it has advanced along with advancing chemistry from the time of our famous co-fellow, Dr. Thomas Willis,* author of the *Pharmaceutice Rationalis*, up to the present time. And seeing that our generation of fellows has contributed a Dr. Prout, a Dr. Bence Jones, a Dr. Garrod, and many others, to the labourers in the cause, we cannot be surprised that valuable therapeutical results have arisen.

Counterirritation† is a principle of treatment which owes its prevalent application to the study of morbid anatomy. The idea is, by exciting artificial diseased action in parts under our control, to divert the diseased actions from a less accessible or more hazardous localisation. We see before us the fact that a spontaneously generated secondary disease is often rapidly followed by the cessation of a primary one, whether milder or more serious; and we infer with reason that the same result will be found if the secondary disease be the consequence of a drug. This therapeutic theory is obviously made more universally applicable by an exact determination of the parts affected; and, therefore, with the advance of morbid anatomy, has more influenced our practice. That this advance will continue, we have the guarantee of the devotion of our own Johnson, and Murchison, and Ogle, and Quain, and Sibson.

All rational cures seem to have resolved themselves into these five; namely, the Cures by Elimination, by Opposition of Contraries, by Assisting Nature, by Neutralisation, by Counterirritation. All except mere reactionary speculators have, till lately, followed the advances here implied. Examine each, and you will see that they are all agreed in one feeling as to the nature of disease; namely, that there is therein added to the animal frame something which needs to be reduced, or opposed, or assisted, or neutralised, or counterirritated. Now it seems to me that the tendency of the medicine of to-day is to take an essentially opposite view. Daily stronger and stronger an impression is being borne in upon the practitioner's mind, as expressed in his acts, that disease is something less, not something more, than life. Under the light of advancing physiology, morbid substances and processes appear examples of arrested development, each one the more as the more intimate is our acquaintance with it. The end and aim of happy treatment is, therefore, essentially an addition, an endeavour, to retain, to restore, to develop, into fuller life those identical morbid substances and processes which have hitherto been uniformly condemned to expulsion. When we are sick—

"'Tis life of which our limbs are scant;
'Tis life, more life, for which we pant;
More life, and fuller, that we want."

To answer the question as to novelty in a more concrete form, take the yet unfinished collection of monographs on specified diseases which we are owing to the labours of our accomplished fellow, Dr. Reynolds—the first and second volumes of the *System of Medicine*. Compare each subject with its prototype in the *Cyclopædia of Practical Medicine*, published thirty-five years ago; and in no single essay will you find the treatment recently recommended to be more evacuant than that of old, or more antipathic, or more counterirritant. In a few instances it remains unaltered; but in the most you read of medicines advised "to support the strength of the patient" in diseases where the writer's teacher would have used the most active debilitants with the avowed purpose of weakening the disease.

The volumes are in the hands of all, and I will not sit in the seat of the reviewer by reciting examples. We have all seen the day when

* Though Willis's reputation was mainly connected with Oxford, he was admitted an honorary fellow of our College in 1664.

† Dr. Parry calls it the Cure of Disease by "Conversion". But that word seems to imply change of nature rather than change of place, whereas in most of the examples of the influence of this principle the curative morbid process is either identical with or closely related to the ailment.

* Νόμος πάντα κρατύνει.—Hippocrates, *De Geniturâ*, I. 1.

hospital-physicians gave five grains of calomel three times a day to cure acute rheumatism, mercurials and purgatives in enteric fevers, tartar emetic in full doses and venesection stroke upon stroke in pneumonia; when they narcotised with monstrous doses of opium the brain of a raving drunkard, exhausted with artificial sweats the moist skin of a gouty man, or turned his urine alkaline with soda and potash, and scalped with blisters the acute maniac and the hydrocephalic child. Were they not right according to the principles of Elimination, Contraria Contrariis, or Assisting Nature, or Neutralisation, or Counter-irritation? Go round the wards now, and you will find these extremes at any rate as nearly extinct as flint-locks or duelling. Indeed, the extinction has been in some instances too rapid; physicians have so hasted to cry *ἔφυγον κῆκον*, that they have forgotten to add *εἶπον ἀμείνον*; and, unready with a substitute, have displaced that which was certainly better than a vague expectancy.

If you look down the lists of new articles of materia medica, brought into common use of late, you will see that none are of a nature to augment destructive metamorphosis. Cod-liver oil, hypophosphite of lime, phosphates of iron, manganese, soda and potash, ox-gall, pepsine, pancreatine, are familiar instances of those whose intention is to form a basis of new cell-growth, thus being directly constructive.

The surgeon, too, when the skin is lost or wounded, builds up as good a restoration, or imitation, as he can, with collodion, or some other impermeable substance, to shield the inside tissues, instead of tearing them open to the bitter air, as in the horrible operation of dressing and cleaning. Again, with the expressed aim of limiting the resolution into their elements of diseased tissues, there are largely used anticatalytics, such as carbolic acid, the subsulphites of lime, soda, and ammonia, while several sulpho-carbolates, chlorine, etc., are administered internally. On the other hand, permanganates, whose oxidising action is their distinguishing character, are given only when it is held wise to skip the dangers of the first stages of catalysis by hurrying them on. I do not know that I can cite alcohol as a new remedy, seeing it came into use so soon after the Deluge; but at all events our notions concerning it are new. Our fathers looked upon it as a fuel to life's lamp, augmenting heat, secretion, power, and vital action, and consumption in general. We find it to be in reality a damper to the flame. It has been used as a medicine, and as a good friend to poor humanity, throughout all these centuries; but now in a somewhat different class of cases, and with a better result, I trust. Though not a repairer of the waste, it is a conservator, and has thereby its own, though lesser, value. This change of use, without change of tool, has befallen many other old established remedies, such as iron, digitalis, quinia, arsenic, warmth, oxygen.

If you go beyond materia medica into pharmacy, you will notice that the energy exhibited by the deviser of new forms of old favourites has turned itself to constructive drugs in the proportion of nearly three to one of destructives. This shows the direction of prescribers' requirements.

There is an interesting class of substances of old called "alteratives", which may probably have light thrown upon them by the new movement of therapeutic thought. These agents are not in any wise eliminative, nor do they arrest elimination; in moderate doses they cause no symptom either opposed to, or like, the diseases they cure; their effects do not resemble the efforts of nature during sickness; and any toxic action they may exert is not enough to counteract anything, so that I do not see how their use is to be reconciled to any of the older therapeutic theories. Typical instances of this class are the iodides and bromides, of which the tonnage consumed is monthly increasing. Their sole effect in medicinal doses seems to be cure. Either nothing happens, or certain failing functions are restored to health without any morbid tissue being destroyed. The diseases to which they are applicable are so various that it appears at first impossible to find any common point at which the successful physic has touched them all. The connection is truly not obvious between syphilis, aneurism, epilepsy, neuralgia, gout, ague, hysteria, lead-poison, and acute hydrocephalus. Yet in certain cases of all such ailments this class of drugs is useful; and we needs must discover wherein the kinship lies, or we can never attain to a rational use of the remedy. It has struck me—and indeed I usually act upon the thought—that they are related to one another in virtue of an imperfect vitality of the white fibrous tissues with which bones and trunk-nerves are sheathed. When a periosteum is tender from the syphilitic poison, iodide of potassium acts like a charm, while its influence on a chancre or sore-throat is scarce perceptible. The same may be observed in rheumatism and in neuralgia. The bromide prevents with considerable certainty epileptic attacks which arise from injuries and jars to the pericranium; with less certainty, obscure cases whose cause you cannot trace, and very rarely congenital or hereditary instances of the disease. It heals the tissue, not the epilepsy. Deep-seated gout

racking the tendons is relieved by the iodide, but gouty urine and gouty indigestion are untouched. Lead-poisoning is also cured by the iodide, when it is given in painful or paralytic conditions of the limbs; but colic is not benefited. The same drug has rescued from death in a wonderful way cases of acute hydrocephalus where the membranes of the brain were affected, but has apparently no influence when the cerebral substance is inflamed. I should be disposed, therefore, to assign a neutral pathology to those cases of hysteria and of ague which I read have been relieved by these salts, for I suppose they will renew to health the sheaths of the nerves as well as the sheaths of the tendons and bones.

That which has above all things contributed to change of practice, is the gradual course of change in our ideas of inflammation. The last great teacher who has published a monograph on the subject—Dr. Alison—depicts it as "a local increase of a vital property" (*Library of Practical Medicine*, vol. i, p. 64), and urges the use of blood-letting to subdue it, on the express ground that the evacuation "weakens the heart's action" (*ibid.*, p. 98), to which weakening influence, indeed, he ascribes the power of all other antiphlogistics whatsoever. Monographs on inflammation have not been written of late years; but morbid anatomists, chemists, physiologists, and clinical teachers, of all nations and tongues, unite in speaking of it as "a perversion of nutrition". And to each one in his own department the perversion displays itself as in the direction of incompleteness. The anatomist sees it in the *premature expulsion* of new-born germinal matter which should have budded into tissues, but which now at best becomes a deformed scar, and more usually dies off as pus. The chemist points out the *defective oxygenation* which causes lithate of ammonia, uric acid, or oxalates, to appear in the urine, or an excess of fibrine in the blood. Inflammation is a cooling, not a kindling, of the furnace in respect of chemical power. The physiologist discovers the swelling, redness, and heat, of inflamed parts to be due to a *loss of elasticity in the smaller arteries*. He regrets his inability at present to explain the general rise of temperature; but as that sometimes occurs after death, he does not think it an evidence of increased life. The practitioner at the bedside, casting about among the means at his command for something to cut short inflammation with, finds that the nearest approach to such an end lies in replacing the loss of elasticity by pressure, by cold, by astringents, or by spurring up the contractile arteries to exertion with nervine drugs. Among the latter he reports well of quinine, and, finding that by its use the fever-heat is quickly lowered, he looks upon that high temperature as arising from diminished nervous control.

Morbid anatomists have also done much to shake the fixedness of our methods of healing, by finding evidence to show that what appear superficially different *forms* of morbid products are in reality different *grades*. That which distinguishes them is a higher or lower degree of vitality, a more or less of the characters of living flesh. As an instance, I may cite Gerber's classification of tubercle into (1) granular or unorganised, (2) cytoblastic, (3) cellular, (4) filamentous. Each form is a little higher than the other in the scale of resemblance to tissue.

This is no guide to prognosis, for the more highly organised growths may be the most destructive to neighbouring parts—indeed, in the case of cancer it would seem as if the danger were directly in ratio to the organisation—but it can hardly fail to influence treatment.

Another powerful agitator of therapeutic aims is the distinction made between disease and its cause, arising out of the attention paid to morbid germs. I think it wise at present to use the word germ in its widest sense, as meaning either a fragment of organic matter in a state of decomposition, or a fragment capable of resuming vital characters, or a separate individual. The investigation is being carried on by our co-fellows, Dr. Beale and Dr. Burdon Sanderson, with the aid of the highest powers of mind and microscope; and the facts elicited are too widely known to make needful more than allusion. But they all combine in leading us to draw a distinct line between the treatment of the disease and the treatment of the cause, between the management of the wound and of the bullet, which our forefathers were apt to pass over in their views of enthetic disorders. Whatever be the etiology of the germ, it is clear that the condition which results from it can be looked upon only as an arrest by obstruction in the life of the tissues where it is inserted.

The becoming conscious of these invisible angels of death, hourly drifting around us, reminds one of the opening of that mythical box of evils with which Horace has made us familiar; yet here, too, there is a hopeful germ at the bottom. We have to deal with (let us say) an unhealthy stagnant ulcer; we strip out a bit of clean skin, not so big as a mustard-seed, from the patient or a friend, and we plant it among the torpid granulations; it sticks, it unites, it lives, it feels, and becomes with its new home one flesh, not to be put asunder. John Hunter had taught us to expect this. But, better still, it becomes a centre of new

growth. Healthy skin begins to form round its edges. Praise be to the All-merciful ! not only disease, but health also, is contagious : better still, it is infectious ; it has stepped over the gulf of festering stagnation and is sowing growth along the neighbouring margin, throwing out peninsulas and promontories to join the parent piece of grafted skin. One who has experienced in his own person what uphill work cicatrization of a large surface is, must be pardoned some exultation at this surgical promise, and may be allowed an Utopian dream of restoration which would throw present success far into the shade. Even the practitioner upon others' ailments cannot but feel enthusiasm at the revelation of this important law of Nature. Does it not promise to explain the hitherto inexplicable benefit derived from firing, blisters, mustard, croton oil, caustic potass, and other means of cure by external sores ? It is when the artificial sore is getting well that the benefit arises : as the new healthy tissue shapes itself outside, it infects the diseased parts with health.

It is possible, also, that by applying the same principle to blood-letting we might learn the true use of that now unpopular treatment. We have left it off because it failed to do what we had been led to expect of it : but may it not have another use in a differently selected class of cases ? May it not set in action the healthy formation of new blood, replacing over and above the previous loss ? However, I must not trespass on your time with untried speculations.

I am not telling the tale of a buried event, but aiding to record what is passing under your eyes ; an instance of theory grounded on experiment paving the way for practice. Not experience is teaching us these things, but designed scientific experiment. It is this path of progress which our immortal Harvey bids me to-day exhort you to follow.* Arduous, indeed, it is, and tangled, yet leading always on, and much freer from pitfalls than that direct empirical method of trying remedies which Hippocrates has so emphatically pronounced "slippery". Science may guide us slowly, but she never guides us backwards.

In no direction does there seem a more favourable opening for experiment, at the present day, than in that to which the name of Harvey is for ever attached. The mysteries of the circulation are now open to be unravelled by new instruments of precision of yearly growing ingenuity. The improved microscope, the ophthalmoscope, the sphygmograph, and the dynamometer, may help lesser wits to make discoveries of which Harvey would have been proud ; while the use of chloroform removes the serious objection urged by humanity against experiments on animals. We are not asleep : our Sanderson is justifying his scientific surname by devoting to the increase of physiological knowledge months and years during which, with less labour, he might have heaped up wealth. I especially introduce his name here because the sphygmograph, which he has tried to make popular among us,† is the embodied acting up to a principle of great importance in Harvey's eyes—the ocular demonstration of scientific truth. I need go no farther than this room for an instance. Those brown boards over our heads,‡ in spite of time and neglect, exhibit the complete arterial systems of two bodies, dissected out and dried *in situ*. It is a work of months, if not of years ; and I doubt not but that some will denounce as sinful waste the employment of Harvey's fingers in such mechanical handicraft. He thought differently, and held no labour thrown away if spent in producing a lively mental impression, such as we gain from those preparations. Herein lies the great merit of the sphygmograph. The obscure feelings of the finger-tips are brought under the cognisance of the sense that most directly affects the mind—*oculis subjecta fidelibus*—so as not only to be shown, but "delivered in number and weight", as the son of Sirach advises all material things to be estimated. Do not think of the pulse portrait-painter, even as at present perfected, as a mere physiological toy. Had it done no other good deed, eternal gratitude would be its due for putting down the tyrannical imposture of the *tactus eruditus*—for no one has vaunted such erudition from the time when it could be tested in black and white. But I think a sphygmograph can do more than that ; it can tell us what really existing movements to feel for in the pulse. The tool may sharpen the wits that use it, and teach its pupils in the end to dispense with its services.

Since Harvey, the physiology of the sanguineous circulation has been pushed on by many distinguished men, but I do not know of any step more important than that made during the last two years by the French *savants* Messrs. Legros and Onimus. By an elaborate series of experiments they have deciphered the riddle which has puzzled Harvey and Hunter, Magendie and Claude Bernard—how the microscopic

arteries assist the current of the blood through the capillaries. Indeed, it puzzled the last-named physiologist so much, that he definitely confined the agency of the arterioles to resisting the force of the heart. To Messrs. Legros and Onimus this did not seem to accord with the economy of nature in working the way of fluids through other organic tubes. It was a wasteful expenditure of force. Spurred on by this thought, they sought, and they found, in the arterioles a regular peristaltic wave, an intermittent progressive muscular action, such as that which carries the morsels down the œsophagus, rolls the mass round and round in the stomach, and passes it along the ilia. With a microscope they were able to follow this newly seen wave in the frog's web, then to detect it in the transparent part of the rabbit's ear, then to see it with the ophthalmoscope in the human retina. It seems to me that a very wide field, indeed, for experiment is opened by these observations. A knowledge of the action of remedies on this peristaltic circulation generally would form a new standing-ground for rational therapeutics ; and the discoveries by Waller and Bernard of special systems of vasomotor nerves, governing special parts, might be made practically useful.

It seems to me, also, that our various mechanical and other means of observation have arrived at a degree of perfection sufficient to allow of prosecuting with advantage researches into the genesis of disease by direct experiment.

The most certain way of knowing how a thing is generated is to generate it yourself. The lower animals must of course afford the material on which the bulk of these experiments can be made ; and it is, therefore, of the utmost importance to know how their bodies and liabilities to morbid phenomena differ from those possessed by us, so that the necessary allowances may be calculated.

Most opportune to the gaining such knowledge is the prospect before the country of the permanent establishment of an institution for the study of the diseases of animals. I am in hopes that the certainty of advancing science, open to the staff of this institution, will make its offices an object of ambition to those among us whose age renders ambition still graceful. They will be able to feel, not only that they are promoting the selfish interests of mankind, but that they are repaying in a substantial manner the services of our devoted immemorial slaves. For it must be understood that the final view of the foundation is distinctly charitable, and that the cure of animal disease is the end to be attained by its study.

The bulk of these experiments must be doubtless carried out on inferior creatures, and, therefore, must wait upon a parallel prosecution of comparative pathology. But there are examples of the study of disease by entheses to which our own noble bodies have lent themselves—lent for an ulterior advantage, no doubt, and therefore I used a word implying no notion of sacrifice. The cases of vaccinia and syphilis may be especially cited as instances of a more than usual knowledge of a disease's etiology, being due to a study of it as artificially implanted.

All, however, cannot hope so usefully "to study and search out the secrets of nature." Many wise people, praiseworthy for self-knowledge, are aware that the quality of their intellectual powers, bodily weakness, education, or social duties, disable them for playing the part. Harvey bids me say a word to them too, when he enjoins the orator to hold up for imitation those who have ministered of their substance to our College.

The "Comemoration of all the Benefactors of ye sd College by name," has its place taken by those boards in the theatre on which even the smallest contributions are from time to time recorded. We have not forgotten even the window-cushions and table given by the unlucky Lady Arabella Stuart, though they perished in the fire of London, I suppose. Let us not think scorn of a care for the bodily comforts of those who are executing a trust for our benefit. Hospitality, of which these gifts are an humble form, is a high Christian virtue, and is all the higher for her humbleness. I feel very glad that of late years our College has itself resumed the exercise of this virtue by reviving, albeit in the somewhat sad shape of *conversazione*, that domestic feast which Harvey gave us money to pay for.* It had been omitted for many years ; not, I fear, from self-denial on the part of the Fellows, but because a proud and luxurious age despised the frugal festivities of its forefathers. To those simple souls, as to Sir Toby Belch, "cakes and ale" was a synonym for a merry-making. On less than that, indeed, the censors are expected to make merry once a month ;† and, doubtless, the annual joviality was equally wholesome and economical as that monthly repast. You, however, have degraded into a ballot-box the

* The commemoration of benefactors is to be accompanied "with an Exhortation to the Fellows and Members of the said College, to search and study out the secrets of nature by way of experiments."—Harvey's *Deed of Gift*, MS.

† In the Lent Lectures of 1869 at the College, and in his *Handbook of the Sphygmograph*.

‡ The Tabulæ Harveianæ in the gallery.

* "And that once every year there shall be a general feast kept within the walls of ye sd college for all ye ffellows yt shall please to come."—Harvey's *Deed of Gift*, MS.

† In accordance with Harvey's wish, a packet of cakes and coffee is provided for each Censor at their meeting.

punch-bowl given you by Dr. Freind and his co-censors (in 1719), and scorn to dine abroad unless tempted by French cookery and the costliest vintages. We have at any rate the grace to feel that gormandising would be misplaced within our walls; and, until prevalent habits become more moderate, I do not see that we could carry out Harvey's wishes in any mode better than by this *conversazione*. Let us, however, look upon it as a provisional feast.

Some of our benefactors are distinguished as the founders of sundry lectureships called after their names, with which you are familiar. Applied, as intended, to the ocular demonstration of physiological discoveries, these are still made useful.

Notwithstanding, I cannot conscientiously exhort you to a literal following of Croone, or Gulston, or Lumley. The date of a small volume in your library, published by William Caxton, at the bottom of the next street, in 1471, reminds you that four centuries ago there had begun a revolution which renders the foundation of new lectureships an anachronism. The printing-press has crushed the pulpit. It is wise to accept the fact, and to devote to the spread of knowledge by the newer mode, those funds in the disposal of which we may wish to rival the open-handed among our ancestors. There is no way by which a man shall more surely hand down his surname to futurity than by linking it with the publication of the researches of others in a more liberal form than their incomes allow. Remember that you have at your disposal not your own purses only, but that those of your patients will often open at your bidding. I read in the annals that the table and cushions I have alluded to were given "*suasu Doctoris Moundefordi*," and I commend the example to your imitation. Dr. Moundeford had been a kind friend to Lady Arabella during her struggle against the mean tyranny of James the First; and he apparently preferred that the graceful acknowledgment of his kindness should be paid to his college rather than to himself.

Those who like modern instances best, may find one in the noble contest last year between our co-fellow, Dr. Quain and Mr. Cunliffe, the banker, as to which should give £2,000 to secure the building of the Brown Institution for studying diseases of animals.

I have represented designed experiment as the sharpest spur to the progress of rational medicine. But doubtless the guiding vein is observing experience. And it is by experience alone that we can be led to the answer of the question which I asked at the beginning, namely, whether the view which influences modern therapeutics be true as well as new. Some hint as to the future answer may be gained from the more favourable prognosis we are now enabled to give in several diseases whose course is marked and import grave, such as rheumatic fever, pericarditis, pneumonia, typhus. But the final solution must be found after many years in a continuance of the physical improvement noticeable throughout our native population, in increased length of life and diminished liability to fatal sickness, as witnessed first by increase in the profits divided at insurance offices, and latterly by the lessened mortality of the whole population.

To the court of experience we are, one and all of us, called as jurors. There are millions of experiments performed daily by observers who can regulate their conditions. But how are we prepared for turning the experiments into account? What training does the medical student go through which shall enable him to exercise his franchise? I cannot but say that those of us who are teachers in schools have greatly failed of our duties in this respect. I have never yet, as examiner, come across a candidate for diploma, instructed in the art of systematically observing and recording the action of medicines. What an awful waste of raw material is here! Surely the chairs of *materia medica* would be better employed in training a class how to observe, than in discussing varieties of cinchona bark or the shape of senna leaves—a kind of knowledge which no one ever really gets from lectures, but, if he require it, either from a book or a warehouse.

To the court of experience we are one and all of us called as jurors, but more especially those who have the privilege of hospital practice. The duty of aiding in the decision of these questions, by communicating the knowledge gained from our patients, is one that cannot be evaded, and is incumbent upon us to the end of our lives. It can no more be thrown off than can the obligations of a crown, or of inherited wealth. I have sometimes been asked how it is that medical men seldom retire, and usually die in harness; and I say that their harness is their uniform, their decoration, their chiefest reward, and that they lay it aside only at the bidding of their commander-in-chief. When I was in Italy some years ago, on a holiday tour, enforced by a surgical operation, I hesitated whether I should not lengthen my holiday to the end of my life, and leave the race to the swift, the battle to the strong. "Were it not better done, as others use, to sport with Amaryllis in the shade, or with the tangles of Neæra's hair?" In visiting Pompeii, I stopped more than once at a sentry-box by the sea-gate, where there

were found the skeleton and arms of a Roman legionary set on guard eighteen hundred years ago. That nameless sentry, I thought, ignorant, sensual heathen, whose flesh lies mouldering among the *débris* of brothels of unmentionable atrocity and filthy wineshops, will yet to the resurrection-call answer "Adsum, Domine!" from a vantage-ground of dignity second to none in the universe—at his post, waiting for orders to leave. And so I turned and came home.

THE ANTISEPTIC TREATMENT OF WOUNDS.

By EDWD. DRUMMOND, M.D. Edin., M.R.C.S. Lond., Oldham.

AMONG four cases in the practice of the Liverpool Royal Infirmary (illustrative of the treatment of wounds on the principles laid down by Mr. Lister), published in the JOURNAL of May 6th, is one of strangulated hernia, in which the wound healed in three days. Having recently treated an almost identical case, with the result of perfect union by first intention, I think it not unworthy of mention.

K. S., aged 30, a member of a family hereditarily disposed to hernia, has been the subject of the oblique inguinal form for six years. I was summoned at six o'clock on the morning of May 3rd, 1871, the hernia having become suddenly strangulated. Having failed with the taxis, I performed herniotomy, the patient having been chloroformed by my friend Mr. Bromley. I opened the sac, and returned a knuckle of intestine and a large portion of omentum. At 6 P.M., I closed the wound with three silver wire sutures and strips of *emplastrum saponis*, placed a pledget of wet lint over the wound, and applied the usual bandage. Next day, she had passed a good night, and was doing well. The following night, the patient was attacked with abdominal tenderness and purging. I saw her at 6 A.M. on the 5th, and ordered two grains of opium immediately, followed by grain-doses every hour. At 9 A.M., the pain was almost gone, and the purging was arrested. At 7 P.M. (forty-nine hours after operation), I removed the dressings, and found perfect union by first intention. The patient got up on the fifth day.

This case shows that at least equally good results may be obtained without as with antiseptic precautions. I found the carbolic acid dressing in use in the York County Hospital in the summer of 1865, but was unable to see that it possessed any special virtue. Ever since the publication of Mr. Lister's views, I have carefully carried out the more elaborate treatment which he suggests in almost every case under my care, including amputations, resections, excisions of tumours, etc.; and the balance of evidence in my mind has been generally in its favour. For example, I removed recently a large fatty tumour by two semi-elliptical incisions eleven and a half inches in length. The wound, closed by fourteen silver wire sutures, and treated antiseptically, healed throughout in four days, without a drop of serum or pus. I am unwilling, therefore, to place myself among the number of those who disbelieve totally in the antiseptic treatment; but I cannot help thinking that the time has arrived when we may look for some authoritative settlement of the question. In medicine, and in a lesser degree in surgery, the tendency has ever been to exaggerate the benefits of new methods. We are all prone *jurare in verba magistri*—ever, let us hope, laudably anxious to be the pioneers of a new era in our art. Can we not, by treating parallel cases with and without carbolic acid dressing, definitely decide whether, on the one hand, the antiseptic method is all its enthusiastic advocates believe it to be, or, on the other, save ourselves from the opprobrium of unduly vaunting a means of treatment which will not stand the test of experience?

THE ENDOSCOPE IN MILITARY SURGERY.—The *Wiener Medizinische Wochenschrift* for June 24th contains a paper by Dr. Christian Fenger, of Copenhagen, in which he suggests the application of the endoscope in the examination of bullet-wounds. From experiments on horses, he last year came to the conclusion that, by means of this instrument, the surgeon may be enabled to see pieces of clothing that have been driven in, or bullets impacted in the cancellous structure of bones; and, having seen them, to remove them easily by means of proper forceps, etc., introduced through the tube of the endoscope. While attending one of the ambulances in France during the late war, he had no opportunity of examining wounds in the early stages; but, in several instances in which he made an examination some weeks after the receipt of the injuries, he was enabled, by introducing an endoscope, to see the interior of the wound distinctly. The introduction of the instrument caused no pain nor hæmorrhage, nor any subsequent irritation. To what extent the suggestion as to the removal of balls and foreign bodies can be carried out in actual practice on the human subject must, Dr. Fenger says, be decided by the future.

THE HASTINGS PRIZE ESSAY,

1870.

ON DIGITALIS: ITS MODE OF ACTION
AND ITS USE.

By J. MILNER FOTHERGILL, M.D.,

Senior Resident Medical Officer to the Public Dispensary, Leeds.

IN bringing forward a subject so debated as digitalis and its action, the only apology the writer can offer is, that for years he has studied its effects clinically, having had patients continuously under its use for no less a period than three years and a half uninterruptedly. He has tried to bring to the inquiry a mind free from prejudice on either side, and impressed with the wish to elicit the truth. Physiological experiment has been largely resorted to and carefully observed; and, finally, the writer has carefully striven to give his results honestly, and to record what he thinks digitalis can do, and what it cannot, and, further, why he thinks so. It may be desirable to commence with an account of the different experiments performed, and the results obtained; and all through the inquiry he will regard digitalis as a member of a group of agents, rather than as possessing any qualities which are unique or peculiar to itself.

On Plants.—Marcet and Brunton have separately tried the effects of digitalis on the haricot bean by watering the plant with an infusion, and found it to kill it by withering it up. The writer injected a strong infusion into the hollow stems of the ordinary bean without effect for days; in time, however, those so treated withered and died, contrasting with those not interfered with. Precisely the same results ensued from similar injections into the orange lily. A lettuce was frequently watered, in a dry season too, with a strong solution, without any perceptible injury to it either soon or late. Another was then dug up by the roots, and placed in a large basin containing a strong infusion of foxglove, and for a day or two grew amazingly; on the fourth day, it commenced to wither, and died in a day or two. The first effect of the drug was to improve the appearance of the plants to which it was administered; an impression to the same effect remains in the minds of friends who witnessed the experiments. Strong infusions were injected into the stem of the rasp, and into holes bored into a plum tree without apparent effect.

On Invertebrata.—Snails, when touched with the tincture or strong infusion, took a contractile spasm, threw off a coating of mucus, and passed on apparently unaffected. Earth-worms, when placed in an infusion for a short time, did not appear incommoded. Wasps were not affected by it when applied to them.

On Fishes.—Minnows, when placed in an infusion of digitalis, a very weak one, for some minutes were not affected; then commenced a rapid movement of the gills, which lasted till death; they were also drawn to one side in dying. After death, the ventricle was found firmly contracted and glistening like a speck of gristle; and, on being examined under the microscope, no cavity was visible. The auricle was distended and vainly tried to drive any blood into the tightly contracted ventricle, the blood merely regurgitating into the venous sinus behind, and then flowing back again, from the venous distension relieving itself on the auricular diastole. On pricking the venous sinus so as to permit the escape of the contaminated blood, the auricle soon also became firmly contracted, and no cavity was perceptible under the microscope. The quickened action of the gills was probably due to the accumulation of carbonic acid in the blood, giving rise to an increased necessity for breathing, while the firmly contracted ventricle prevented the flow of blood to the branchiæ, and cut it off from oxygenation.

On Birds.—About half a drachm of strong infusion of digitalis was passed down the throats of two sparrows, some being spilled during the process. The animals soon became unable to move much, and gasped for breath most vigorously. The hen died first, and the cock died hard in about half an hour. On opening them immediately on death, the left ventricle in each was found firmly contracted; the lungs so congested as almost to be hepatized; the right ventricle full of blood. It was evident that the condition of the lungs and right ventricle was due to inability to drive the blood into the contracted left ventricle. The gorged condition of the lungs accounted for the gasping respiration observed. Side by side with them, ten drops of Fleming's tincture of aconite were administered to a third sparrow, who became convulsed,

and died in about one minute and a half. In it, the lungs were pale, and the heart completely paralysed and distended, looking like a small Barcelona nut. The contrast between the two conditions was marked.

On Mammals.—Experiments have been made on the higher animals by Handfield Jones and Fuller, with similar effects as regards the state of the heart after death.

On Frogs.—These have purposely been put last, on account of the large number of experiments to which they have been subjected by various writers. Frogs have been made much use of by experimenters, on account of their great susceptibility to medicines, and the ease with which experiments could be carried on. Dybkowsky and Pellikan abroad, and Hilton Fagge and Stevenson in England, experimented largely on them, with uniform results as regards the state of contraction of the heart observed. The manner in which the writer experimented was this. The frog having been firmly secured to a piece of lath by a bandage, leaving the chest exposed, the chest was then opened with a pair of scissors up the middle; the heart usually appeared through the incision, and was readily cleared of its pericardium. It thus beat with much regularity, apparently not much affected by temperature or air. It may not be out of place here to state that, when thus exposed, the cardiac contraction was clearly seen to be a swiftly passing peristaltic action, commencing in the auricle (as first described by Schiff and corroborated by Valentin), and passing rapidly on to the ventricle. The complete distension of the auricle stimulated it to contract in the direction towards the ventricle; this action, driving still more blood into the already distended ventricle, produced such distension of it as stimulated it to contraction; after the systole came a period of muscular rest, during which the blood poured from the distended veins into the lax chambers, until the distension of the auricle led to a general systole. Digitalis was then administered by the mouth, or hypodermically, and its effects were quickly apparent. First, the contractions became somewhat quicker, and the contraction more complete; and here it may be stated that, whatever may be the normal state of the human heart in systole, certainly the frog's is not thoroughly emptied, and is still dark coloured from the colour of the contained blood, showing through the transparent walls, which are quite white when thoroughly contracted. Soon the peristaltic action became more marked, the systole being longer and more perfect. Then the distension became less complete, especially at the apex, which remained white and firmly contracted. Here and there were little sections, apparently belonging each to a separate cardiac ganglion, which did not seem affected, and in the general contraction pouched out, contrasting in colour, too, with the other contracted and whiter portions: these are the crimson pouches of Dybkowsky and Pellikan. The action of the ventricle became almost vermicular in its slowness, and the diastole was most imperfect, till the ventricle came ultimately to a standstill in firm contraction, the heart being much diminished in size—and in size, shape, and colour, much resembled an unripe apple-pip. The frogs did not seem much affected otherwise, the poison seeming to be confined, as regarded its action, purely to the heart. If released, they hopped about unconcernedly, nor did the removal of the contracted heart by scissors cause them any apparent inconvenience. They merely seemed to die ultimately from the arrested respiratory changes: a slow mode of death in cold-blooded animals. In accordance with the observations of the above mentioned experiments, my results were uniform as regards the contracted condition of the ventricle. To other frogs were administered belladonna, caffeine, strychnine, and aconite. The first produced rather marked contraction; caffeine somewhat less so. Strychnine produced no perceptible effect, contrary to anticipation. Aconite produced paralysis and arrest of the heart in diastole. A still more interesting series of experiments was performed. To some frogs, digitalis and aconite were administered, side by side, and the opposite actions contrasted. The experiment was then varied; and, after the action of each drug was well established, the other was administered—i.e., after the effects of digitalis were well established, aconite was administered; and to others, after the action of aconite was well brought out, digitalis was given. Over the action of digitalis, aconite certainly had an influence, but it could scarcely be called a marked one, and did not ultimately arrest the contraction produced, even when pushed. On the contrary, the administration of digitalis was followed by the most marked results, when aconite had been given, and the ventricle had become gradually more and more distended, and its contractions more and more imperfect, each contraction merely expelling a small quantity of blood off the top of the distended ventricle, the contractions becoming slower and slower, and less and less perfect, until a condition of advanced dilatation had been artificially produced; and even when the heart seemed to have given up all action, and remained in diastole, distended with blood and inert. When all action had apparently ceased, the first

effect was to produce an imperfect contraction at long intervals; then the intervals became shorter and the contractions more complete, some irregularity both as to time and amount of contraction being observed. Slowly and gradually, however, the distended ventricle recovered itself under the action of digitalis, the contractions being more rhythmical and perfect, and the distension less and less pronounced, until a return to normal contraction and distension was brought about. If the administration of digitalis were then continued, the same appearances were brought out as when no aconite had been previously given. This interesting experiment was frequently performed before other medical observers, and can be readily repeated. In all the experiments the ventricle was the most affected; in the frog, where there is only one ventricle, the auricle could only remain distended behind it, incapable of getting rid of its contents into the firmly contracted ventricle in front, and of course it could not contract unless its contents could be disposed of: if the venous sinuses behind were pricked, as in the case of the minnows, the auricles soon became contracted. As regards the effects upon the rhythm, the general results may be stated broadly thus: at first there were occasional slow beats, interposed without any exact order; and then, as the effect became more marked, the slow beats preponderated, until the contractions were only occasional before complete cessation in systole. During an experiment on a dog by Brunton and Gamgee, a temporary murmur was observed, which they concluded was due, and apparently with good reason, to an irregular action of the muscoli papillares, producing imperfect closure of the mitral valve.

In these experiments on the frog, sometimes the tincture of digitalis was used, and at other times the infusion. In some instances, a solution of digitalin was used, but its effect in producing increased contraction was certainly not so marked as when a preparation was used which contained the other principles. It is not intended that this statement should convey the impression that there exists any good reason for supposing that digitalin is not the active principle in digitalis; but such is the writer's experience.

Hilton Fagge and Stevenson found that, sometimes, the ventricle makes only one pulsation for two of the auricle, the number of its contractions being therefore lessened one half (*Transactions of the Royal Society*, May 1865, Conclusion 3). Reid seems to think that sometimes more than one auricular systole is necessary to produce such ventricular distension as would excite contraction. This seems in accordance with reason and fact.

Composition.—The leaves of digitalis have been subjected to repeated chemical examination, chiefly by foreign investigators. It has been found that there are various substances, which can be separated from one another, contained in them. The principal of these is digitaline. Indeed, by some it is considered the active principle; but of this I am not convinced; certainly it did not act on frogs so powerfully as the tincture of the leaves did. It is, however, frequently used. Digitaline is light yellow, inodorous, and crystallises with difficulty, and presents the appearance of very imperfect crystals, if crystals at all, under a pretty high magnifying power ($\times 250$). It does not contain nitrogen, nor does it neutralise acids. It is a principle, not an alkaloid. It is soluble in sulphuric acid, and also in hydrochloric acid. The solution in hydrochloric acid passes from yellow to a fine green. Homolle considered this reaction sufficiently delicate for medico-legal purposes. It is scarcely necessary to state that it is not generally accepted as being so. There are also digitalic acid, digitalin, digitalose, digitalide, of whose qualities we know nothing. There are also tannic acid, sugar, and a substance named pectin, chlorophyll, and woody fibre.

Chemical Characteristics.—A dark precipitate (tanno-gallate of iron—Pereira) is formed on the addition of sesquichloride of iron to the decoction, or to a mixture of the tincture and water. A solution of gelatine causes a scanty precipitate (tannate of gelatine). Tincture of nut-galls merely causes a slight turbidity. There is no reason to suppose that any of the active principles are affected by these combinations; or that the drug is rendered inert by anything that we know. For a fuller account of its principles, the reader, if curious, can consult Pereira, or the thesis of Brunton.

On the Blood.—Magendie and Thackrah thought the addition of a decoction of digitalis interfered with the coagulation of the blood. Davy states that the addition of a large quantity of watery extract to blood gave it the consistence of paste. So far as I know, no English observers have recently noticed anything peculiar in the blood of animals experimented upon. And in the large number of animals experimented on by me, there never was any appearance about the blood which made it different from any other blood. No scientific observations of any kind have yet been instituted as to the action of digitalis or any of its constituents on the blood, such as have been performed by Harley, Bernard, Fraser, and Crum Brown and Broadbent, on some other therapeutic agents, by which their action has been

much elucidated. At this point, it may be desirable, in order to elucidate the subject thoroughly, to take a bird's-eye view of the manner in which the heart's action is maintained: the manner of its disorder, the mode of production of its affections of its vascular walls, and the mode of action of the drug.

The Heart's Mode of Action.—The heart, as has been shown by Pettigrew, consists of several folds of organic fibre-tubing folded on each other; it is thus capable of distension and rhythmical contraction. For this purpose, a singular system of innervation, motor and co-ordinating, is provided. The real motor power of the heart is under the control of minute ganglia, each with a morsel of muscular fibre under its direction, which are alone capable of carrying on the action of the heart, but only in a tumultuous manner, as seen after section of the vagi. As with all other accumulations of organic fibre, the distension by contents leads at length to contraction in a more or less rhythmical manner. The vagus exercises over this a co-ordinating (von Bezold), or even an inhibitory action; *i.e.*, the application of a stimulus, as electricity, for instance, to the vagus, retards the cardiac contractions, and, if the stimulus be powerful enough, arrests the heart's action in diastole. The vagus then normally acts against the first impressions of distension, and only permits contraction when the distension is sufficient to produce uniform contraction, which then goes on in a truly peristaltic manner, but so swiftly as to be easily mistaken for a simultaneous general contraction. Thus, to some extent, distension and the action of the vagus balance each other; any disturbance of that balance, then, would produce irregularity, no matter in what direction the disturbance might lie. There lies, too, in organic muscular fibre, an inherent power of growth to meet demand; thus, if increased strain be thrown upon the heart, increased growth of muscular tissue, in health, takes place, and again the balance is restored between the blood to be driven and the power to drive it. When, however, from any cause, there is a deficiency in the compensatory nutrition, a species of balance is again struck, but of a lower form, by distension of the fibres, or, in other words, dilatation. In fact, there is planted in this comparatively simple cardiac innervation, a more complex one of contraction and reduction of the ventricular cavity on the one hand, and a species of normal distension on the other. These actions are regulated by nerves which have been dissected out in the rabbit, and experimented on by MM. Cyon, Claude Bernard, and others. The one which calls into action an increased action against obstruction is called the *accelerator nerve*; and the other, which admits a normal distension of the walls, is called the *depressor nerve* of the heart. Claude Bernard has even gone so far as to state it as his opinion that, through the action of the latter, a species of distension may so take place in accommodation to existing circumstances as to convert the cardiac chambers into temporary blood-reservoirs. This their construction as organic fibre would permit; for organic fibre permits great distension without abolition of function. Thus, while carrying on the circulation by expelling a quantity only of the contained blood off the top of the ventricle, and permitting a large portion to remain on each systole, this accommodation is allowed without bad results. This is undoubtedly no rare occurrence, if clinical observation were exact enough. Thus, between the ordinary balancing powers of the obstacle of the blood to be driven, and the muscular power to drive it, of the stimulating effects of distension in producing contraction, and the controlling action of the vagus, the heart's action ordinarily rocks; but, in addition to that, there is a more complex system of accommodating distension on the one hand, and an accelerating contracting action against an obstacle on the other: which exercise a regulating power according to special circumstances. Ordinarily, however, the action lies between the first set of nerves, with the driving power, and the work to be done. With their disturbances of balance, we are now more especially engaged.

Distension.—The first action of disturbance of this balance is engorgement or distension. When much blood has been located in the ventricles, and they are not capable of completely emptying themselves, a portion remains at each systole. At each diastole, however, an equal quantity of blood is again thrown into the ventricle, and thus at the next systole a larger quantity remains unexpelled; and this process goes on until death, or until some compensatory relief is attained. This relief is usually attained by congestion of the veins, and the system suffering. This distension or, if chronic, dilatation is produced in many ways, thus:—1. Pouring in of the blood under increased pressure, as in the enlargement of the left ventricle, which follows in time on mitral regurgitation, and increased action of the right ventricle and thickened pulmonary vessels; 2. Muscular failure from defective nutrition, as in fevers, in coronary atheroma, or pericardial adhesion; 3. Obstruction to the flow of blood forwards, as in deposit of fibrine on the semilunar valves, diseased vessels, etc.; 4. Disorder of innervation, as a disturbance of the balance between the sympathetic ganglia and the action of

the vagus; 5. Excessive exertion and consequent cardiac exhaustion; 6. Valvular insufficiency. This condition may pass on to permanent dilatation.

Mode of Repair.—The ordinary modes of repair of this condition are two: first, relief of the condition on which it depends, where practicable; and, second, hypertrophy, when it is due to increased difficulty in the flow forwards, or to valvular insufficiency, by that power of self-increase which is allowed to all muscular fibre, but with which organic muscular fibre is endowed *par excellence*. Restoration of the balance may take place in three modes, of higher and lower grades: 1. The highest, restoration of the cavity to normal size; 2. Hypertrophy, by increase in number of fibres (Forster) and thickening of existing fibres (Bamberger and Rokitsansky)—a compromise; 3. Dilatation, a permanent distension—the lowest restoration of balance, and entailing diminished vital capacity to a point proportioned to the heart's lowered power.

The signs of this disturbance of balance, or partial asthenia, are three—palpitation, irregularity, intermittency.

1. *Palpitation.*—The first evidence of failure of power is palpitation. It is undistinguishable from increased action, except in deficiency of results. When there is excited action, as in exertion or excitement, it is perceptible in the bounding pulse, or, with the sphygmograph, in the increased apex-beat. Palpitation is not so accompanied; and though to auscultation and percussion the heart-stroke may appear identical, it is in the results the real difference lies. Palpitation is a laborious heart-stroke, but not a stronger one. It is the evidence of effort, not of capacity. It is barren in result—a laborious stroke in place of a normal one, but not of more effect, not always of so much. It is intimately associated and commonly mixed up with the next form—irregularity. Palpitation may be engrafted on symptoms of chronic insufficiency as a temporary condition; as, for instance, in the palpitation of Bright's disease, or of slight exertion in a dilated heart from valvular insufficiency. Palpitation is a violent effort of the heart-walls to overcome the action of the vagus, *plus* the obstructed flow.

2. *Irregularity.*—Irregularity of the bulk of blood transmitted into the arteries is one thing, and is due to auriculo-ventricular incompetence. Irregularity in time is another. The latter is under consideration here. Irregularity of rhythm is not due to disordered innervation, but to obvious debility. It is an arrest in the commencement of the peristaltic contraction or heart-stroke. The controlling action of the vagus arrests the contraction until such time as the layers of fibres acting early on the systole ought normally to have acted; and then a sharp, almost simultaneous contraction takes place, with an increased thud against the chest-walls. This action is homologous with the increased action of the muscular fibres, under the control of the cardiac ganglia, when the systole has been retarded by stimulation of the vagus. Sometimes it appears as if the action of these layers, acting early in the systole, had been lost; and there is a perceptible change of action in the heart, as if the contraction were commencing from a new layer or set of fibres. Richardson has compared this to a change in order of a number of strikers on an anvil. It always reminds the writer of a horse changing its feet when cantering. This is a more serious evidence of over-taxation of the heart, and is often found mixed up with palpitation. It is often the result of over-exertion, and affords strong suspicion of ventricular distension. Chronic irregularity may have engrafted upon it a passing palpitation from an intercurrent additional disturbance of balance. Nervous irregularity and palpitation will be considered in a future section.

3. *Intermittency.*—This is sometimes purely nervous, and is inexplicable. When persistent, it is usually associated with an impaired first sound, defective apex-beat, and other signs of degeneration. The occurrence of palpitation during this condition sometimes clouds the diagnosis, and makes it very difficult. Intermittency of ventricular contraction is not identical with intermittency of radial pulse, though related to it. In some cases of intermittency of the radial pulse, if the stethoscope be applied while the pulse is held, a ventricular contraction will be distinguished when there is no evidence in the pulse; but it is a feeble contraction. In other cases, the ventricle does not perceptibly contract. Whether there is a very abortive contraction, or not, is doubtful. Certain it is, that in some cases the ventricular contraction can be detected when too feeble to produce a pulse wave; in other cases, no ventricular contraction can be perceived. Intimately connected with this condition, is true angina pectoris, and, finally, cessation in diastole.

After this brief *resumé*, we can now consider the mode of action of digitalis, in what manner it acts; and from that, again, get an idea of its therapeutical value.

[To be continued.]

CASES OF PLEURITIC EFFUSION MARKED BY VERY FÆTID EXPECTORATION.*

By JOHN C. THOROWGOOD, M.D.,

Assistant Physician to the Hospital for Diseases of the Chest, Victoria Park.

WHEN we read the descriptions of pleurisy given in our medical textbooks, we cannot well help coming to the conclusion that few diseases ought to be more easy of recognition than pleuritic effusion; and that any one who overlooks an effusion of fluid in the thorax, or who is unable to speak decidedly as to the cause of dulness on percussing the chest, must be quite behind the age in his medical knowledge.

Be this as it may, I expect I do not relate a marvel of medical experience when I say that I have known a case where the treatment of more than one competent man has been energetically directed to the patient's brain for the purpose of arresting convulsions, when after death this organ was found in every respect healthy, while the left side of the thorax was the seat of a well-marked diaphragmatic pleurisy, with copious deposition of lymph and effusion of fluid. This case was related to me by one of the attendants, himself an eye-witness of all the events. Incessant vomiting, followed by convulsions, drew all attention to the brain, and the chest was, it appears, entirely forgotten.

I have, doubtless like many others, been asked to see a case of continued fever, when an examination of the thorax has disclosed the novel fact of one side being dull as a brick from top to bottom. No complaint of pain in the side or of cough had ever been made, hence it had not been deemed necessary to examine the thorax.

In hospital out-patient practice, and in other than hospital practice, too, it is not rare to meet with patients who describe their symptoms in such a way as to lead us not to wonder when they tell us they have been told "it is all stomach" or "all liver", and yet examination shows us a thorax containing more or less of fluid effusion.

These matters teach us the importance of carefully examining every patient who may come under notice, and of not forgetting the precept of the late Matthew Baillie, that the physician, in his examination, should seek to turn his patient inside out before him.

Though ordinary painstaking care will do much to guard us against serious errors in the diagnosis of pleurisy with effusion, still there are forms of pleuritic effusion that come on so gradually and so imperceptibly, presenting also—prominently often—symptoms that we are accustomed to connect with other known forms of chronic pulmonary disease, that the correct diagnosis becomes a matter of peculiar difficulty.

The three cases of pleuritic effusion that I have made the subject of this paper, presented other than the ordinary signs of pleuritis, and hence seem worthy of notice.

In all the cases, the most marked and prominent symptom was extreme fœtor in the expectoration. When the patient makes this his great cause of distress and complaint, the first thought of the physician may tend to old-standing bronchitis with dilated sacculated bronchial tubes, or to chronic phthisis with old cavities and more or less fibrosis, or fibrification, of the surrounding lung-tissue. In the following cases, none of these explanations could be assumed as correct.

CASE I.—Mrs. S., aged about 40, was seen with the late Dr. Cregeen of Rotherhithe on May 11th, 1867. She had been ill five weeks with pain in the right side and cough. Lately this cough had increased, and been attended with some rusty-coloured, very offensive, expectoration. The right side below was dull, and at some parts a distinct rubbing sound was heard; very little respiratory sound was heard. The pulse was 80; the skin was not hot; debility was great. Considering the duration of the illness, and the recent occurrence of the fœtid sanious expectoration, I thought that there must be a subpleural abscess; and I told Dr. Cregeen that we might have hæmoptysis, pneumothorax, or both, as possible events of the future. On May 19th, the patient seemed dying, in a state of collapse, with shivering, profuse sweating, and finally very copious purulent expectoration. On May 21st, I saw her for the second time. She was better; pulse 88. The right side was dull; there was an ægophonic twang in the voice; a friction-sound was audible; there was no blood in the sputa. She gradually recovered. On May 7th, 1868, I examined the chest, and all that I noted was some impaired resonance on the right side and bronchial breathing. The treatment consisted of bark, with sulphuric acid and free nourishment. Carboic acid made her faint, and she would not continue it.

CASE II.—The notes of this case are fragmentary. The patient was a man in the Victoria Park Hospital, with much cough and expectora-

* An abstract of this paper was read before the Medical Society of London; and, in compliance with the expressed wish of the President, I here publish the paper in a more ample form.—J. C. T.

tion of very offensive sputa, rusty-brown in colour. The left side of the chest was dull, but some limited cavernous breathing was heard at parts. The heart beat in its usual position. This man had been long ill, and the case seemed one of cavities in the left lung, containing purulent offensive matter. On Sunday this man was in a state of great collapse and prostration, with copious foetid expectoration. On Monday he was better. On Wednesday he had rigors, clammy sweats, and very feeble pulse. On Thursday he died. The *post mortem* examination showed the left pleura quite full of stinking purulent matter, the lung being pressed back against the spine. There were some adhesions, and these were so arranged as to fix the pericardium and heart *in situ*. Had the adhesion been absent, the heart might have been pushed over to the right side and the diagnosis less obscure.

CASE III.—A respectable man engaged in a shop in Regent Street, aged 44, when seen by me at my house on August 1st, 1870, looked very sallow, but in no way emaciated; indeed, he said that he had been becoming rather corpulent of late. It seemed he had been ill about one month, and he believed he was suffering from stomach and liver derangement. He had a cough, and had been at the sea-side without deriving any benefit. My own faith in the restorative powers of pure sea-air in all complaints of mere exhaustion and debility is such that, when a patient returns from a month by the sea no better, or even worse, I suspect some seated disease in the system. The great complaint made by this man about his cough was, that for the whole month past he had, at times, coughed up sputum so offensive as to render the room in which he was quite unbearable. He had shortness of breathing; the pulse was 104; the tongue foul. An examination of the chest disclosed dullness at the right base up to the line of the nipple, and extending downwards a little below the ordinary limit of hepatic dullness. The respiration at the base of the right lung behind was bronchial, with some crepitation. In the left lung there was strong loud breathing. I advised him to inhale the fumes of carbolic acid from a vaporiser, and gave him quinine with dilute hydrochloric acid. A few days later, crepitation was marked at the right base, and a few crepitant rhonchi were heard at the left base also. Beneath the clavicle the respiration was weak. He went daily to his business. On August 12th, he called on me in great alarm on account of free hæmoptysis. An examination of the chest showed the breathing harsh and strong at both bases, and much less crepitant rhonchus. I told him to keep quiet at home, gave him opium at night, and creasote with acetic acid during the day. The foetor of the expectoration had almost totally subsided since he had used the inhalation of the vapour of carbolic acid from one of Savory and Moore's carbolic acid vaporisers. On August 22nd he was taking iron and quinine; the pulse was 84. There was less dullness over the right base, but some pain at times on the right side; and he said he did not think I need see him again. A few days later, I left town for three weeks. I heard no more of him till October 1870, when he called in consequence of a sudden attack of hæmoptysis, after taking a long walk and eating raw apples. His pulse was 88. There was dullness still at the lower right third of the chest; the breathing was very weak now, where before it was bronchial. At the left base there was strong full respiration; the sputa were not foetid. This was on November 19th. I next saw him in bed, in consultation with Dr. Brown, his regular attendant, on Sunday, January 22nd of this year. He said that on the previous Thursday, as he left the omnibus to walk to his house at Camden Town, he felt sudden severe pain in the chest; and when I saw him I found him lying in bed on his back, with no severe dyspnoea, respiration 40, pulse 132. The right back was perfectly dull; and when I moved him and listened afterwards, a distinct metallic tinkle was heard. I considered that a subpleural abscess must have burst into the pleura, causing a false empyema. The dyspnoea being by no means urgent, I prescribed some ordinary remedies, and suggested that it might be well for me to see him again should his difficulty of breathing increase; my intention under these circumstances being to propose paracentesis of the right chest. A week later (Saturday evening), a message was left at my house that the patient was dead. I called on the following afternoon, prepared with instruments for a *post mortem* examination. Dr. Brown soon came, and we together made the examination. When Dr. Brown cut through the cartilages on the right side of the thorax, at once a puff of very foetid gas escaped; and on opening the chest the right side was full of stinking grumous purulent fluid, which I ladled out to the extent of a chamber-pot quite full. The right lung was then seen as a mere thin skin pressed against the spine, leathery, airless, covered with creamy pus, and on spreading it in a plate we could trace a cavity, or rather sac, in its lower lobe. The left lung was voluminous and congested. Nothing like a tubercle was seen in either lung. The liver was large, but not unhealthy. I was interested in this point, for the very basic character of the disease in the first instance, the fact of the right side being affected, the sallow, but by no means emaciated, look

of the patient, made me think more than once of the case of a man admitted to Victoria Park Hospital many years ago with profuse purulent expectoration, where a *post mortem* examination showed that an hepatic abscess had ruptured through the diaphragm and been discharged by the bronchial tubes. Against such a probability in the present instance I set the rarity of hepatic abscess, the rarity of its opening through the diaphragm, and the fact of the dullness increasing rather upwards towards the axilla than downwards towards the abdomen. With respect to remedial treatment, the inhalation of the carbolic acid vapour I may describe as strikingly beneficial against the foetor, and the power of opium and also of digitalis over the attacks of hæmoptysis was unmistakably marked.

Inquiry into the early history of case III elicited nothing more definite than the statement that he had for a long time had cough and much expectoration every morning. Ulceration of the air-tubes must have taken place, soon after which event probably it was that the sputa became not only foetid, but mixed freely at times with blood. More than once during my attendance I mentioned this sequence of events as my opinion; and, in answer to inquiry, I decidedly negatived the idea of tubercle of the lung. During the last week of the patient's life, as well as for several weeks previously, there had been no return of the foetor in the sputum, which was tough, and greenish at times. The large amount of fluid found in the right pleura seemed to have increased rapidly during the last week of life, and must have been caused by the lung-mischief extending from within outwards.

The prospects of paracentesis in these forms of pleuritic effusion and false empyema are not promising: the question, however, is one on which more practical experience is wanted. My own opinion would be favourable to the operation, as one that would rid the patient of a dangerous and pernicious matter within the chest, and would thus afford him, at any rate, a chance of recovery which he would hardly have while he was carrying about, pent within his chest, an accumulation of offensive fluid.

In conclusion, I may observe that the events which I mentioned as probable, or rather possible, in Case I—viz., hæmoptysis and pneumothorax, actually did occur in Case III. The prominent symptom of the foetid expectoration is the one to which I would especially draw attention in reference to its relation to these forms of pleuritis.

EXFOLIATION OF THE BLADDER,

By T. SPENCER WELLS, F.R.C.S.,

Surgeon to the Queen's Household, and to the Samaritan Hospital.

DR. WARDELL'S interesting case reported in the JOURNAL of June 10th, with his paper and that of Dr. Phillips in succeeding numbers, have induced me to send to the museum of the College of Surgeons two specimens, which I have asked Mr. Flower to place where they may be conveniently inspected by any of the Fellows who may attend the College election next Thursday, and who may be interested in the subject. Another specimen (No. 1993 Pathological Specimen) in the museum referred to by Dr. Wardell, from the bladder of a man, which Mr. Liston opened by incision above the pubes, may be seen at the same time.

In one of my specimens, the uterus and bladder are seen, as well as the detached cast of the bladder, covered with a gritty deposit of urates and phosphates. The walls of the bladder are thick and contracted, the muscular fibres being distinctly visible. The detached mass which was lying loose in the bladder I described at the time as "degenerate epithelium holding together saline deposit. On boiling a piece of it in twenty parts of water to one part of acetic acid, much of the saline matter is dissolved, and some of the tissue becomes clear, looking like smooth muscular tissue which has begun to degenerate by the deposit of fatty or albuminous particles in its substance." (*Obstetrical Transactions*, vol. iii, p. 354).

The patient was twenty-two years of age. After a natural labour with her first child, the bladder was not emptied for sixty-two hours. Five pints of turbid bloody urine were then drawn off. Cystitis followed, incontinence of urine, and a train of distressing cerebral symptoms, ending in death two months after delivery.

The second specimen I exhibited at the Obstetrical Society on the evening of the day when it was voided by the patient, six weeks after a severe instrumental labour. The report may be seen in the third volume of the *Obstetrical Transactions*; and in the fourth volume there is an elaborate report on the specimen by Dr. Harley.

From the time of her labour the patient suffered from severe cystitis with nephritis. Three weeks after labour, the urine contained albumen, blood-corpuscles, pus-cells, chylous matter, and renal tube-casts.

The urine, when quite fresh, was loaded with carbonate of ammonia. A hard swelling had been felt through the anterior wall of the vagina; and on the day before the specimen was expelled through the urethra, Mr. Marshall, the surgeon in attendance, had observed shreds of sloughy membrane protruding through the urethra. After it came away, the health of the patient rapidly improved. I have lost sight of her; but Dr. Harley saw her in good health between two and three years after the illness.

My second specimen differs from the first in being a more complete exfoliation of the bladder. It is a bag of animal membrane—involuntary muscular fibres interlacing over its outer surface—the interior being a smooth mucous surface, covered with crystalline phosphates and urates.

The case referred to by Mr. T. Smith in the thirteenth volume of the *Pathological Transactions*, page 150, was, as I believe and said at the time, a similar case to these; but two very competent observers reported that they had “no doubt the membrane in question is the bladder of some animal, most probably that of the bullock; and that it has not been passed in the manner which the patient represented.”

It is evidently of great importance that the true nature of these cases should be recognised; for the recovery of my second patient would encourage us in a male patient to follow the example set by Mr. Liston, and remove the foreign body. In a female this might probably be done by forceps alone, and certainly if the urethra were previously dilated.

CLINICAL MEMORANDA.

CAN MERCURIAL TREMORS COEXIST WITH CHRONIC LEAD-POISONING?

THE two following cases may be interesting to the readers of the JOURNAL in regard to the above query.

George B., aged 26, a looking-glass silverer, came under my treatment in February last. He was a poorly nourished man, with a fair complexion, and was suffering at the time from severe muscular tremors. The muscles chiefly affected were those of the upper extremities; and in conjunction with the tremors there was great weakness of the muscles of the hands (especially of the extensors), so that he was totally unable to feed himself and perform various minor offices without assistance. With these symptoms pointing to the muscular system, he also had slight ptialism, sponginess of the gums, and great foetor of the breath. The anomalous part of this case, however, remains to be described. Along the edge of the gums surrounding the incisors of both jaws was a very distinct blue line; and in association with this phenomenon I may mention that he had griping pains in the abdomen, although the bowels were not greatly confined. He was treated with three-grain doses of the iodide of potassium three times daily, and was told to abstain from following his employment. I saw him afterwards at intervals of a week or ten days until May last. The muscular tremors, the foetor of the breath, and the sponginess of the gums, rapidly disappeared—not so, however, the blue line surrounding the incisors, and the partial paralysis of the extensors of the fore-arms: these symptoms still persisted, although in a modified degree, even at his last visit. In my inquiries concerning the nature of his employment, I elicited that the tin-foil used in silvering contained a considerable percentage of lead in its composition.

In May last, John C. came under my treatment suffering from colicky pains in the abdomen and constipated bowels. He had been employed for the last five years at tin-foil works. Upon examining his gums, I found a slight blue line beneath the lower incisors. There was no paralysis in this case. This patient also confirmed the statement of George B. as to the employment of lead in the manufacture of tin-foil. Cessation from work and small doses of Epsom salts, combined with diluted sulphuric acid, two or three times daily, rapidly relieved him.

From the symptoms present in the first case and their subsequent mode of retrogression, we must conclude, I think, that two poisons were simultaneously affecting the system; and, consequently, we must rather ascribe the blue gum line to the lead than to the mercury, although the black sulphide of the latter metal might, theoretically, be supposed to give rise to such a phenomenon.

53, Harley Street, W., June 19.

W. AINSLIE HOLLIS, M.D.

THE fatal cases of small-pox in London, which in the three previous weeks had been 257, 229, and 245, were 240 last week. The fatal cases showed an increase in the East of London, a decline in the West and South, and but slight variation in the North and Central Districts.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

NOTES ON THE TREATMENT OF GANGLION IN THE LONDON HOSPITALS.

THE treatment of the common affection called ganglion, simple as it may appear and is generally supposed to be, is still a subject on which a very considerable difference of opinion exists amongst surgeons, as may be seen by a perusal of the following notes. It was with the view of gathering the opinions of hospital surgeons on the various methods of treating this affection, that we thought of collecting a few notes on the subject. We have been by their kindness enabled to obtain a mass of valuable information, containing the experience of most of the London hospital surgeons; and shall endeavour to procure similar notes from provincial hospitals and from Scotland and Ireland. We shall be glad to receive at the same time short notes of interesting cases of ganglion, for publication, in connexion with our report on the general treatment of the affection.

KING'S COLLEGE HOSPITAL.

Mr. JOHN WOOD treats ganglion by the following plan. A spear-pointed needle, cutting on both edges, and mounted on a handle, is passed into the cyst, and made to transfix it again and again, so as to let out the synovial contents into the areolar tissue of the surrounding fascia. The needle is then made to scarify briskly the interior of the cyst, and is used pretty freely in dividing the cyst-wall at its opening of communication with the sheath of the tendon. Pressure is then made with both thumbs upon the tumour, so as to squeeze out completely its contents, partly into the subcutaneous areolar tissue, and partly out through the opening in the skin by which the needle entered. Iodine paint is then applied thickly over the surface, and upon it a thick pad of lint, over which firm pressure is made by a bandage. This is kept on for several days, after which the iodine paint is again applied, and the pressure readjusted. After a few applications in this way, the tumour seldom reappears; and, if it do so, a repetition of the process rarely fails to succeed. No case has been met with, out of many hundreds treated, in which suppuration or any bad results have followed this plan; but several cases in which a seton had been employed have given rise to much trouble and danger from erysipelatous inflammation and abscesses, followed by stiffening, and in some cases permanent impairment of the use of the limb.

Mr. HENRY SMITH meets with a large number of cases of ganglion in the out-patient department of the hospital. After having tried various means of cure, he has come to the conclusion that the most effectual is that of operation by the seton. He passes a single ligature-thread through the cyst, and allows it to remain according to circumstances. In some instances, severe inflammation and even suppuration will be produced in forty-eight hours, and then the thread is to be withdrawn. In the majority of instances, however, especially when patients are careful not to use their hand, the seton may be retained for a period varying from three days to a week or more, without producing any inconvenient symptoms; but, so soon as suppuration takes place, Mr. Smith withdraws the thread, and the cure is almost invariable. It is necessary to bear in mind in this treatment, that, in some constitutions and under certain conditions, the presence of the seton may produce very severe consequences; in fact, this is the only objection to the treatment. With care, this rarely occurs; and there has only been one instance amongst Mr. Smith's patients at the hospital where bad results did happen. This was in the case of an unhealthy man who applied with a ganglion as large as a crown-piece on the back of the wrist. Mr. Smith passed a seton. The patient did not apply until after four days, and in the meantime most violent inflammation and suppuration occurred. Free incisions were necessary, and the wrist-joint itself was threatened for a time; but the use of a splint and careful treatment prevented any mischief. The patient, however, was compelled to remain under treatment for several weeks.

Mr. ROYES BELL often finds that a ganglion is too tough to be burst by any reasonable amount of external pressure, or is so situated that this form of treatment is not applicable; and that it may be radically cured by a puncture with a grooved needle, squeezing out the contents as perfectly as possible, and rubbing the sides of the cyst together. Firm pressure must be applied by means of a pad formed of lead, gutta

percha, or a piece of money, tightly strapped and bandaged over the site of the ganglion. Should this treatment not succeed, he prefers lacerating the walls of the ganglion subcutaneously with a strong needle with cutting edges, to the use of the seton. He has seen many excellent results follow this method, which is less severe than the seton, though the latter no doubt is the more radical form of treatment. He has seen a severe case of ganglion connected with the flexor tendons of the wrist, and passing with them under the annular ligament, cured by laceration. Mr. Bell has also evacuated a ganglion by means of an incision, squeezing it roughly, so as to get rid of all its contents. In this case, the ganglion returned. These swellings have a tendency to recur; and in weakly persons, after a radical cure of one, another and a fresh one may form. For ganglia which resist these simpler plans of treatment, the seton remains, which Mr. Bell thinks less manageable than the other methods. In passing a seton through a ganglion at the back of the wrist in an out-patient, he advises the hand and wrist to be placed on a straight splint for the time being. In the severe form affecting the flexor tendons under the annular ligament, the patient ought to be in hospital, under constant observation and control, as out-patients are proverbially careless. The after-treatment by carefully applied pressure, to be kept up for several weeks, is of considerable importance.

UNIVERSITY COLLEGE HOSPITAL.

Sir HENRY THOMPSON applies, for ordinary and recently formed ganglia about the wrist, tincture of iodine for four or six weeks, usually with good effect. If they resist this, he passes carefully through the centre, with a sharp needle, a double thread of silk; ties the two ends in a knot, squeezes out the contents by the needle-opening, and leaves the thread in for three days, applying water-dressing. At the end of that time, if a purulent discharge be seen, and a little inflammation have taken place, Sir Henry removes the thread, and applies water-dressing. Almost always, there is no more trouble with the ganglion. If little or no action be produced by means of the tiny seton, he leaves it in a day or two longer. Sir Henry has never had occasion to regret this but once. An out-patient at the hospital, who did not attend at the end of three days, returned a week after the operation with erysipelatous inflammation of the arm. She did badly, and got some permanent stiffness of the hand in consequence. That is the only unfortunate event among a great many cases which Sir Henry has thus treated; and, had he seen her at the end of the three days, he has no doubt all would have gone well.

Mr. CHRISTOPHER HEATH finds ganglion affecting the extensors of the wrist to be a common affection among the out-patients of University College Hospital, and readily amenable to treatment. If the cyst do not yield to the pressure of the thumb steadily exerted for a minute or two, Mr. Heath is in the habit of puncturing it with a grooved needle, and evacuating the jelly-like contents. He has never seen any harm result from the practice, and finds the subsequent application of iodine paint for a few days apparently prevent the refilling of the cyst. Ganglion of the extensor tendons on the back of the foot is by no means rare; and within the last few months Mr. Heath has seen the disease in more unusual situations—viz., deeply in the ball of the thumb, in connexion apparently with the tendon of the flexor longus pollicis; and again behind the external malleolus, in connexion with the peronei tendons. In both instances, a puncture settled the diagnosis and concluded the treatment simultaneously; in the latter case affording great relief to the mind of the patient, who had been assured by a leading authority on deformities that the tumour was fibrous, and would require a serious operation for its removal. In the compound ganglion of the flexors of the wrist, where the swelling forms above and below the annular ligament, and the fluid contains bodies like rice or melon-seeds, Mr. Heath has evacuated the fluid by a puncture, taking care to keep the hand on a splint; and when this has failed, as it generally does, to effect a cure, he has employed the seton with success.

ST. BARTHOLOMEW'S HOSPITAL.

Mr. SAVORY treats those sacs filled with glairy fluid, which are so apt to form about the wrists and hands, by puncture, complete evacuation of contents, and firm, equable, and continued pressure, as described by him in the second volume of *St. Bartholomew's Hospital Reports*, p. 79. Mr. Savory treats ordinary cases of enlarged bursa over the patella and these ganglia in the same way.

Mr. THOMAS SMITH believes the best way to cure ganglion to be to rupture the cyst by forcible compression, if possible, (not by a sudden blow), and to keep a pad and bandage applied for some days afterwards. Even where the ganglion does not suddenly collapse, the effect of a hard squeeze may be to cause gradual absorption. When the synovial cyst is too tough to be affected by the previous plan, he is in the habit of making a subcutaneous section of the entire cyst-wall with a

fine tenotomy-knife, and keeping up pressure for some days. If, from any objection on the part of the patient, or from other causes, this cannot be done, he has occasionally cured the disease by blistering with ointment of biniodide of mercury. He has no experience of injecting, excising, or passing setons through ganglia.

Of the treatment of ganglion (as distinct from the recognised bursal swellings) at St. Bartholomew's, Mr. WILLETT says that attention must first be drawn to the frequency with which this affection is met on the dorsal aspect of the wrist and hand. For its cure, Mr. Willett relies on forcible dispersion, either by rupture of the sac by the thumbs (which, by the way, requires dexterous manipulation, rather than any great amount of force), or, this failing, by puncture with a Paget's knife. But, whether the ganglion be ruptured or punctured, the essential element of success lies in the complete evacuation of the cyst's contents; and, to ensure this being done, tolerably rough handling in the way of pressing and squeezing the sac may be employed. Then the application of a compress of lint and roller completes the operation. Mr. Willett believes that, when dispersion fails, the reason is, that the operator has been content with simply rupturing the cyst; but, if proper care be only taken to empty the ganglion thoroughly, this plan of treatment may be regarded as almost invariably successful. With regard to the so-called ganglion affecting the sheath of the flexor tendons at the wrist, Mr. Willett coincides with the opinion that, should operative measures become necessary, it is advisable to lay open the swelling above the wrist tolerably freely.

GUY'S HOSPITAL.

Mr. POLAND adopts every possible variety of measure, with success and non-success. Puncturing and emptying out the contents, with subsequent pressure, has had very satisfactory results, but not always so; and when failure has resulted he has laid open the ganglion, with a cure resulting.

The treatment of ganglion which Mr. HOWSE adopts varies with the nature of the cyst. If it be small and the cyst-wall thin, he thinks that forcible compression, so as to produce rupture, will give the best results. If, however, it be a large thin-walled cyst, close under the skin, without the distinct outline which such tumours generally present—tending, in fact, to become diffused—then repeated blistering nearly always gets rid of the affection. In cases of the above description, which are only slowly amenable to the blistering treatment, the cure may be much expedited by puncturing the cyst. There are, however, a certain number of cases which are not curable by any of the above methods; where the cyst-wall is thick and not capable of being ruptured, or where it is situated under dense fascia, as in the palm of the hand. Such tumours are often complicated by the presence of a large number of "millet-seed bodies". These are, he thinks, best and most expeditiously treated by excision of the cyst in the antiseptic mode. The usual objection to this plan of treatment is the fear of diffuse inflammation supervening. The antiseptic method, however, entirely obviates this objection, and with its aid he has no fear of opening the sheaths of the tendons even extensively. In this operation, Mr. Howse has found it no objection that the whole of the cyst-wall cannot at all times be removed. In spite of its presence, the wound will generally close by adhesion, and not a drop of pus be found. Even in puncturing a ganglion he would generally adopt the antiseptic method, considering it safer so to do. In most cases Mr. Howse prefers excision of the cyst to injection with iodine or any other irritant, having once or twice seen a good deal of inflammation set up by its means. For the same reason, treatment by setons is, he believes, not a very safe mode of procedure.

Mr. DAVIES-COLLEY's usual practice has been to disperse ganglia by pressure; and, if they are too hard to be treated in this way, to blister them.

ST. THOMAS'S HOSPITAL.

Mr. LE GROS CLARK treats ganglion when in the wrist by puncture subcutaneously with a narrow lancet, or broad, spear-shaped needle, and scratches the interior of the sac. He then presses out the contents beneath the skin, and subsequently applies a lead-compress for a few days. This rarely fails, is almost painless, and is, in his experience, unattended with risk. When on the hamstring muscles, over the great trochanter, etc., he finds repeated blistering the safest and most efficacious treatment, or a blister kept open with iodine-ointment. Opening these large ganglia is not unattended with risk. It is safer, if opening be intended, to blister first. On the front of the wrist, and extending into the palm, blistering may be tried. Mr. Clark has not often been successful when they are large in this position. If opened, it should be by a free incision in this position. He prefers this to seton. Mr. Clark has never injected a ganglion, nor has he found it necessary to dissect one out.

[To be continued.]

REVIEWS AND NOTICES.

INVESTIGAÇÕES ESTATÍSTICAS SOBRE AS DOENÇAS E MORTALIDADE DO EXERCITO PORTUGUEZ NO PERIODO DO 10 DE JULHO DE 1861 ATE 31 DE DÉCEMBRO DE 1867. Pelo DR. J. A. MARQUES, Cirurgão de brigada, etc. Pp. 125. Lisbon, 1871.*

NOTE STATISTIQUE DES GRANDES OPERATIONS FAITES À L'HOPITAL DE SAINT JOSEPH PENDANT LES DOUZE DERNIÈRES ANNÉES. Par M. A. BARBOSA, Médecin du roi, etc. Pp. 38. Paris, 1868.†

PORTUGAL would seem to display a special talent for statistical work, if we may judge by the productions which occasionally reach us. There are none indeed that repay attention better. The literary labours of Dr. MARQUES, so well known by numerous notices in our journals, are not confined to this class of inquiry, but he shines in them with an uncommon lustre. The mortality of the Portuguese army stands at 12.2 per 1000 effective annually, or 12.7 including cases of sudden death brought into hospital, amounting to about ten year by year. This figure would show improvement. The army comprises a body of veterans which might be estimated at a tenth or fifteenth of the standing force, among whom the mortality runs as high as 48.1 per 1000. There are a sort of relief corps, pensioners or *reformados*, which break the process of invaliding. They show one death to 5.3 sick, a very high proportion. Typhoid fever and phthisis, which are the standing plagues of armies, display a considerable aggravation from town or garrison life; indeed, the general mortality is much affected by the same cause, being highest on the whole at Oporto and next so in Lisbon, where the invaliding is more brisk than at the former city. Typhoid fever is most rife in these two towns, and also, curiously enough, in Algarve, the most southern province of the kingdom. It has been of late chiefly confined to one military division—Lisbon, Leira, and Santarem. The average for the troops from this cause is 2.5 sick and 0.83 deaths annually for every 1000 effective. As regards phthisis, Lisbon, with a garrison of about a quarter of the army, sends a third of the cases; and Oporto, with a garrison amounting approximately to a fourteenth part of the army, sends as high a contribution as one-sixth, viz., at the rate of 15.6 cases diagnosed in hospital to 1000 of the effective annually; while in country districts the proportion is but 5.2 per 1000.

Of the work of Dr. BARBOSA we shall say less, as it is written in an idiom more accessible to the general reader. It shows great enterprise in the surgical field, and gives room for very valuable conclusions, which may serve to correct some of our more hastily formed judgments. The Saint Joseph hospital is on a vast plan. We are particularly pleased to see the tonic treatment of surgical disease appreciated and carried out to a fair extent. The circular form of amputation is chiefly performed in Lisbon, according to a method by which less surface is exposed than by other procedures, and favourable conditions for healing are ensured. The method is particularly described. A proceeding of dressing the wound, revived from old Portuguese surgery, is in favour with Dr. Barbosa. It consists of spirits of camphor applied to the raw surfaces: the proportions are, alcohol, 2; camphor, 1—something like the application used by Nélaton. We wish a lengthened career and a happy employment of their powers to these distinguished authors, who are both in the flower of their age and the full tide of social distinction.

NOTES ON BOOKS.

THE language of panegyric has been almost exhausted in the various notices which have appeared of HOLMES'S *System of Surgery*, of which the fifth volume of the second edition (Longmans) is now in our hands. It is in all respects worthy of its high reputation. It does not easily lend itself to other than very detailed criticism; but we may say that this edition has been vastly improved by revision in most instances. Dr. Burdon Sanderson's essay on Inflammation is a masterly performance. It is not altogether satisfactory, however, that this part of the *System of Surgery* should be due to the pen of a physician, and that the physician should be compelled to have recourse almost exclusively to German authorities in describing recent additions to our knowledge of this fundamental pathological process. There are some parts of the fifth volume which

strike us as not quite satisfactory. If Sir Ranald Martin could not easily find the time to give the much needed revision to his article on Hospital Construction, it would have been wise to find assistance for the purpose, as has been done in other cases. The section on Surgical Instruments is admirable—as a liberal and well deserved advertisement of Maw's catalogue—but has really very little other merit. It is a pity it is not left out altogether, or entirely rewritten. Some of the observations (as on stricture-instruments) are almost puerile, and others are positively misleading. We should not advise any one to use the ear-speculum after the fashion shown in the woodcut. There is still room, therefore, for improvement; and the work must always remain one of considerable inequality; but it is not the less one of the highest grade of general merit, and permanently honourable to British surgery. We congratulate Mr. Holmes on the decided improvement of his *magnum opus* in this second edition, and tender thanks to the publishers for the judicious liberality which they have shown in the enlargement and illustration of this important standard work.

The third edition of WARING'S *Practical Therapeutics* (Churchill) has been altered and improved with great judgment, so as to introduce a satisfactory account of new agents—chloral, apomorphia, nitrous oxide, carbolic acid, etc.—without adding to the bulk. These additions are made with remarkable skill in condensation. This little manual, alphabetically arranged, with an excellent "index of diseases", is one of the best manuals of therapeutics yet in existence. It belongs, however, to a class of medical literature which is open to vast improvement, and even to revolution.

FURNEAUX JORDAN'S *Treatment of Surgical Inflammations by a New Method, which greatly shortens their Duration* (Churchill), is a book which must be tested by experience. It is the surgical apotheosis of counterirritation, which recent medical writers have declared to be a method without reasonable explanation or proved success. Mr. Furneaux Jordan carries the principle and practice far beyond the limits assigned to it by Mr. Higginbottom. He uses counterirritation in all inflammations, and endeavours to establish the best place and method. He thinks it should always be applied "over the next or another vessel or vascular territory." He has studied the subject with diligence and with originality; and if other surgeons, bearing in mind the natural history of local inflammations and their natural tendency to resolution, arrive at conclusions confirmatory of those detailed here, Mr. Jordan will leave a name among those who have extended our therapeutical resources.

SPENCE'S *Lectures on Surgery* (Adam and Charles Black, Edinburgh) and BILLROTH'S *Surgical Pathology* (Appleton, New York; Lewis, London) supplement each other. The eminent surgeons of Edinburgh and Vienna have minds and methods essentially different. Billroth's work is eminently satisfactory as a treatise on the principles, and Spence's as a demonstration of the practice, of surgery. The histological and pathological groundwork of surgical science is laid down by Billroth with admirable clearness. He shows a perfect grasp of the value of the investigations whose results he sums up, and an excellent appreciation of their bearing on practice. His diagrams of specimens are numerous and valuable; and so are Spence's descriptions and plates of operations and reports of cases. Mr. Spence's lectures are eminently clinical, and the fruit of extensive and successful practice. Both books are destined for a wide popularity amongst surgeons; and, to be just, we must recommend the purchaser of the one not to be content without acquiring the other.

Dr. WEST'S *Lumleian Lectures on some Disorders of the Nervous System in Childhood* (Longmans, 1871) are in many respects marked by an eminently conservative and reserved mental character. Flowing in style and judicious in psychological criticism, they will indeed be read with pleasure and profit; but they are hardly so solid, original, or precise a contribution to medical literature as a little more pains would probably have enabled their author to educe from the stores of a rich experience. There is a singular looseness of clinical phraseology throughout the text, and an almost incredible absence of precise pathology. The lectures treat of Epilepsy, Chorea, Paralysis, and Aphemia. But, for the author, Duchenne, Remak, Brown-Séquard, Broca, Hughlings Jackson, might never have written. This is to be regretted; for Dr. West displays in many passages a graphic power and keenness of observation which become and adorn precise erudition and exact clinical observation, such as we look for in a teacher of his reputation and ability addressing the mature intellects of his profession in the Lumleian course of lectures. It is not without regret that we write these few words of criticism of a monograph which sins chiefly in that it seems to aim at a far higher standard than it reaches.

* Statistical Investigations on the Diseases and Mortality of the Portuguese Army, from 1st July 1861 to 31st December 1867 inclusive. By Dr. J. A. Marques, Surgeon of Brigade, etc. Pp. 125. Lisbon: 1871.

† Statistical Note on the Great Operations performed in the Hospital of Saint Joseph during the past Twelve Years. By M. A. Barbosa, Physician to the King, etc. Pp. 38. Paris: 1868.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 1ST, 1871.

OUR LUNACY SYSTEMS.

III.

IN a former article, it was asserted that the knowledge of insanity and its treatment amongst the members of the medical profession is imperfect in consequence of teachers of Practice of Physic ignoring this class of diseases in their regular courses of lectures, and from the absence of any means for its clinical study. In a modified degree, it is true that the acquaintance with general physic is not so extended and accurate as it might be on the part of asylum-physicians; and the reason for this is not far to seek, if we trace the career of those who undertake the specialty. The young graduate who proposes to himself to exercise his vocation amongst the insane proceeds to his duty directly from the schools. So, certainly, does the general practitioner, but with this difference, that the nature of the majority of the diseases he is called on to treat is pretty accurately known; rules and principles of practice are laid down for his guidance; and his duty to his patients is purely medical. The young asylum-physician, on the other hand, finds himself in a semi-medical atmosphere; the professional half being of not the most attractive nature; the administrative half presenting no slight attractions.

We all know that few men enter on general practice without a feeling of diffidence as to their power of combating the more common forms of disease. They have seen most of the graver, but few of the slighter and more frequent, ailments which beset humanity; and it is not till after a year or two's experience that they feel any degree of confidence in themselves. In these early years of responsible practice, the acumen of the physician is developed—a quality which no multiplication of lectures, no number of terms devoted to "walking" hospitals, can ever evolve. It is in the wider field of common every-day disease that those powers of observation and ratiocination are developed without which no man can take a high position in the world of medicine. There are no diseases which desiderate more thorough exercise of such powers than those comprised under the generic term insanity. Their pathogeny, etiology, and pathology are obscure and difficult of demonstration; symptoms of physical diseases are masked in consequence of impaired reflex action; the most dire and dangerous ailments may exist without one single definite indication; their history is generally imperfect; in fine, they call far louder than all others for that medical common sense, that power of putting this and that together (a rough way of expressing the terms diagnosis and prognosis), which alone can be acquired by a work-day knowledge of general medicine. This is a faculty which asylum work is most unlikely to develop in any man, unless he be possessed of an intuition above the common. It is not that there are no adjuvants; it is that there are positive obstruants in the way. A false and impotent nomenclature of the diseases which come under the observation of the alienistic neophyte serves in no small degree to impair his medical vision. A false glamour of metaphysics assists to obfuscate him. He is called, or rather calls himself, a medico-psychologist. Of all the false euphemisms which hang about the specialty, none is more ridiculous or deluding than that which associates in terms the physician of insanity with psychology. It would be just as proper to call the doctor who treats dropsy a medico-hydrostatist, or the one who treats flatulence a medico-pneumatologist.

Superadded to these influences is the constant association with people

who are the subjects of very prominent and very peculiar symptoms. Unconsciously, the young man accepts these manifestations as actual forms of disease; and, following in the path of those who have gone before him, he treats them as such. Having no pathological basis to work upon, he adopts the psychological nomenclature, which is convenient in itself in so far as it saves trouble; and, to quote the words of Mr. Weller, "is easily adapted to the tastes and wishes of the speller". The much-vaunted moral treatment assumes a pre-eminent position in his mind, for he is encouraged—in fact it is one of his chief duties—to promote the employment and recreation of the patients, in which consists the principal article of the moral Pharmacopœia. When amusement becomes a duty, it is wonderful how well that duty is performed. So dances (balls they are called), cricket-matches, croquet-parties, theatricals, concerts, and pic-nics, are planned and carried out by the assistants, and duly recorded in the annual reports in glorification of the moral treatment of insanity. We are very far from desirous of slighting this system of amusements; they are absolutely necessary for the mobs of chronic lunatics who crowd our public and private asylums. What we deprecate is, that the time of the junior medical officers should be frittered away in the performance of duties in no way connected with their profession, and which might well be delegated to lay officials. The recent and curable cases must and do suffer from the attention given to the recreations of the chronic and incurable. The character of our asylums as curative hospitals suffers, and the assistant-physicians gradually imbibe the principle that administration is their first and chief duty.

The twig is bent; and when the assistant becomes superintendent, his proclivities are less those of the doctor than those of the autocratic ruler. We are thankful to be able to say, however, that to this there are many honourable exceptions.

There are two distinct classes of asylum-doctors—the medical superintendent and the physician-superintendent. The first regards himself as an executive officer, whose chief duty is to supervise the working of the whole concern apart from his profession; the second considers himself primarily as a physician to a hospital for the cure of insanity, and as such looks on the treatment of his patients as his first and most important duty. The "medical superintendent" is the product of the monster asylum system; "the physician-superintendent" is being gradually developed from amongst those who are ardently longing to establish so-called psychiatric medicine on a rational basis. Well do we remember the words of a distinguished German medical philanthropist, who has worked hard and successfully for the amelioration of the condition of the insane in his own country and in this, and who has done yeoman service in disseminating liberal ideas as to the treatment of mental disease: "Ah, my good sir, you are good in your country as to asylums; you have the pleasant houses, the nice grounds, and you do not have the *camisole* much; but I do see much to complain of in your asylum-doctor. There are two kinds: one kind very few, the other kind very often. The first is a doctor. *He* tells me of his patients as if I were in a common hospital; the second tells me not of his patients. He shows me his asylum and its *ménage*, his farm, and his pigs, and then he pulls a bag of corn out of his pocket, and says, 'Look here, my wheat is 63 lbs. to the bushel', but he tells me not how many patients he cures in the hundred." In this he may have put the position rather strongly, yet not very far from the truth; for the actual individuals idealised by our foreign friend are the "medical superintendent", and the "physician superintendent". We have known many superintendents who have won their spurs as administrators or farmers, few who have gained *kudos* as physicians; and when the *kudos* has been great, the material advantage has been small.

The disproportion between the rewards of successful management and of successful medical work being so great, it is hardly necessary to add that the majority address themselves more to the former than to the latter, for it tells more quickly and more forcibly on committees and boards of justices, and brings a quicker return. The administering superintendents are by no means reserved in the enunciation of their

theories ; but lately we heard one, whose opinion bears great weight, state his opinion that the medical superintendent *ought* not to undertake the medical treatment of his patients—that that should be left to the assistant or assistants, and should be merely supervised and not materially interfered with by the senior, for that he (the superintendent) had quite enough to do in managing the whole concern and all connected with it, from the members of the committee downwards. If this be a right view of the position, what necessity is there for the superintendent being a medical man ? The medical supervision of the assistants could be well enough performed by a visiting physician, and the administrative department might with perfect safety be committed to a layman. Is there anything more complicated in the management of a lunatic asylum than of a workhouse or prison ? of a manufactory or other large commercial concern ? If it be not a hospital, why have a physician as its ruler ? Such establishments as we have instanced are worked by men specially bred to business. If an asylum is to be a business concern, why should not a business man be appointed to supervise it ?

Most educated men understand the ordinary rules of hygiene. It does not take a lifetime to get up a knowledge of dietetics, nor yet to acquire those common-sense rules which guide the treatment of a crowd of pauper lunatics. There is nothing about the management of an asylum calling for more than the possession of ordinary tact and ability, *except the knowledge of medicine*. When the superintendent of an asylum sinks his medical below his administrative function, he abrogates the right of the institution to the title of hospital, and confers on it that of a prison for lunatics. As soon as he adopts this line of action he finds it necessary to produce some palpable evidence of the successful conduct of the asylum : this is best done by a goodly balance of money at the end of each year. To make money he must have patients (?), and those in no diminishing yearly ratio. No doubt all recent cases who get well (we do not say cured) are sent away as soon as possible ; but the eye is dimmed to the fact that, of those who are not positively perfectly sane, very many might be discharged to their own homes. But the business must be kept up ; a falling off of patients implies a falling off of revenue. An increase of profits does no harm to the medical superintendent.

Not only must the superintendent make the thing pay : he must keep up the style of the place, and, commensurately with its size, promote the magnificence of its entertainments, recreations, and furniture. Marble washhand-stands may be necessary and proper for pauper lunatics ; damask curtains may have some direct effect on the demented ; and expensive upholstery indicates a line of treatment. This we cannot see, any more than we can understand the propriety of the maintenance of brass bands and magnificent dancing-saloons. It has been our lot to hear Mozart's Masses played on a Sunday afternoon by a well conducted body of performers, for the amusement of some hundreds of paupers—who, however, were somewhat remotely placed for accurate hearing. We have seen some hundreds of the same class disporting themselves in a hall such as the county hunt never danced in, to the strains of a band such as the county hunt never danced to. The impression left on our mind was, that the lunatics would have preferred the squeak of a fiddle in a less sumptuous apartment, and that the whole exhibition was the *reductio ad absurdum* of the system. And so on with theatricals and fancy balls—wasted money on wasted minds. Give them what they like ; give them the fiddle or the comic song ; but Mozart by a brass band—the hearers cooped in an airing-court, and paying not half the attention they would have given to a grind-organ—was provocative of nought but sardonic laughter and contempt for the system.

Such absurdities are encouraged and fostered by authorities higher than the medical superintendents ; who, however, would soon exercise their influence in modification, were they more thoroughly imbued with the medical sense. These amusements are not for the curable, so much as the incurable. The incurable retard the recovery of the curable, in that they deflect the mind of the physician from his special

duty, and cause him to misspend his energies in a popular but non-professional direction.

It is impossible within the limits of the present article to offer suggestions which might possibly lead to reform ; they must be left to a more convenient season.

THE IRISH POOR-LAW SYSTEM.

THE Annual Report of the Irish Poor-law Commissioners, just published, is possessed of unusual interest. The introduction of a Poor-law medical relief system, based upon, but intended to be an improvement of, that which has already existed in Ireland for twenty years, is a subject that has for some time engaged the attention of most of the advanced Poor-law reformers of this country. In our remarks on Mr. Corrance's queries some weeks ago, we entered generally into the subject of the shortcomings of the Irish system and what was to be avoided in its introduction into England. We will now consider the advantages that have been derived from it, as set forth by the present Report, which is at once highly interesting and instructive.

Our readers are probably aware that the administration of poor-relief in England is limited to two classes—namely, those obtaining in-door relief in the various workhouses, and those in receipt of out-door relief. The recipients in England of any relief whatever in connexion with the Poor-law, whether medical or otherwise, become paupers. The cost per head in England for in-door relief, according to the last Report of the Poor-law Board, was £8:10; for out-door relief, £4:5. The number obtaining in-door relief was 157,740; out-door relief, 784,906. In Ireland, by the introduction of the Medical Charities Act of 1851, the poor were divided into three classes—namely, the in-door, or inmates of workhouses; the out-door recipients of Poor-law relief (both of these classes are paupers); and the recipients of Poor-law *medical* relief (these are distinctly, by Act of Parliament, not paupers). According to the Report of the Irish Commissioners now before us, the total number receiving out-door relief in Ireland for the year ending September 30th, 1870, was 53,885, at a cost of £59,181, or a little over £1 per head; and in the workhouse, 230,429, at a cost of less than £7 per head. Under the Medical Charities Act there were attended by the dispensary doctors 784,424 sick persons; and the total cost per head for medicines, rent of dispensaries, stationery, salaries of medical officers, apothecaries, midwives, vaccination, etc., was £129,936, or about 2s. 6d. per head. The number of inmates of workhouses has decreased during the year 1870 by 5,133. The number of persons obtaining out-door relief has increased by 4,602; and the Commissioners remark that “it is most probable that, as the country advances in prosperity, the out-door relief lists, which have steadily increased from 655 persons daily in 1855 to 25,363 in 1871, will continue to increase, subject though they are to certain limitations imposed by statute.” Under the Medical Charities Act, there was an increase for the last year of 1,694 dispensary cases, and of 7,403 attended at the homes of the patients. Although since the passing of the Medical Charities Act there has annually been an increased expenditure in the carrying out of this Act and the Vaccination Act, the decrease in the total poor-relief expenditure for the year 1870 was £7,681. The decrease of expenditure under the head of in-maintenance was £21,371, while the decrease in the number of persons relieved in the workhouses was 5,133. The total number admitted sick was 49,749, against 133,386 who were not sick, being a decrease of 4,270 as compared with the preceding year. The Parliamentary Grant for medical purposes for the year was £62,792. One of the objects of the Poor-law Medical Officers' Association is to have a similar amount removed from the rates, as Parliament pays but half of the medical expenses, and disease cannot be said to be localised.

An important suggestion is thrown out for the more effectual protection of Ireland against future invasions of epidemic disease. “Village hospitals should be attached to the dispensaries, and placed under the care of the dispensary doctor in each case”. These hospitals should com-

prise at least two wards for each sex, a ward being capable of containing from five to ten beds, according to the circumstances of the case. As regards the cost of these buildings, in the opinion of the Poor-law Commissioners, it should have a first claim on whatever surplus of the Irish Church Fund might become hereafter available for such uses.

During the last year, nineteen medical officers have obtained superannuation allowances, and in most cases receive two-thirds of their salaries—the highest award under the present merely permissive Act.

Under the head of vaccination, we find that the Poor-law medical officers vaccinated 140,220 individuals; and, according to the last Report of the Registrar-General of Births and Deaths (Ireland), the births for 1869 were 145,912. The country, therefore, must be very closely vaccinated; and the result is, that the total deaths from small-pox registered in Ireland for 1870, were only thirty-two. Most of these were traceable to, or caused by, importation.

During the year, one of the medical inspectors, Dr. Hill, to whose loss we referred at the time as being greatly deplored by all those gentlemen with whom, in the performance of his duties, he came into contact, was replaced by Dr. Burke, the dispensary doctor of the Islandcady District—a first step towards a system of promotion advocated by the Poor-law Medical Officers' Association at the time.

On turning to the statement of the dispensary districts, and reverting to the subject of the indiscriminate issue of dispensary tickets, we particularly draw attention to the outrageous facilities afforded for this abuse. We find that there are 14,668 members of Committees of Management, qualified to issue dispensary tickets to whom they please; that, besides these, there are an almost equal number of wardens; there are also about a thousand relieving officers; in fact, there are over thirty thousand irresponsible persons qualified at present to issue tickets to the eight hundred dispensary doctors, or about thirty-five for each. In Dublin South Union, they have one hundred and twelve each. Not only this, but many of these persons leave books of tickets signed, to be filled up by any one who chooses to do so—a member of the family, customer, clerk, shopboy, etc.; or very often they do not go to the trouble of signing at all, but expect it to be attended to nevertheless. This is a great abuse, and must be carefully watched in the introduction of a similar system into England. Of all these 784,424 tickets issued in 1870 to the dispensary doctors of Ireland, we find that but 532 were cancelled, showing the difficulty of getting over the flaw in the Medical Charities Act to which we before alluded—namely, that there is no definition of a "poor person" or scale of fees for those who are unable to pay one pound down.

The number of persons certified for as dangerous lunatics was 900; number of days' attendance at bridewells, 560; number of patients attended in houses of correction during the year, 332. These last three items are imposed on the Irish dispensary doctors "*without fee or reward*." There were 7,424 cases of scarlatina, 51 of small-pox, and 15,744 of fever, attended by these gentlemen during the year.

We have entered thus fully into the subject of the Poor-law medical relief in Ireland, as it is likely that the subject will be discussed in the House of Commons during the present session; and, as we have already said, it is one that affects directly one-half of the medical men of the United Kingdom and a very large number of our readers. We think it of importance that the matter, which is one of considerable intricacy, should be explained, as far as our space may permit. It may, in fact, be necessary to return to it.

SIR JOHN PAKINGTON has accepted the office of President of the Social Science Congress, to be held at Leeds in October next.

It is understood that Lord Belper will become President of University College, London, in the room of Mr. Grote, deceased.

A PERSON named G. M. Rauffer puffs and sells for three shillings, under the name of "lemonade for strengthening the memory", a fluid mixture of about 30 grammes, containing 15 parts of phosphoric acid, 15 of glycerine, and 70 of water. This is sold in Vienna.

A NOTICE issued by the Admiralty states that news has been received from Rio de Janeiro that the health of that city was "very excellent".

DR. GAVIN MILROY leaves this country in a few days for Demerara, Trinidad, and other West Indian Islands, on an official mission. He is sent out by Government to undertake further investigations regarding that frightful scourge, leprosy.

THE latest news from Chili report the prevalence of cattle-plague. Meetings had been held to discuss the question—"Is cattle-disease transmissible to the human species through the digestive organs?" The Chilian medical faculty had advised carefully abstaining from eating the flesh and drinking the unboiled milk of infected cattle.

At the Westminster police-court last week, Mrs. Ann Allen, of Manor Street, Chelsea, was fined £5 for letting a room in which a person had been suffering from small-pox to another person, without the apartment having been previously properly disinfected. In default the defendant was sent to prison for six weeks.

A SHEFFIELD correspondent writes:—A "Sheffield Medico-Ethical Society" has lately been formed, "having for its object the suppression of illegal practitioners. As there are so many loop-holes in the 1858 Act, and as we are likely to have a Medical Bill next year, I consider the formation of the Society in question to be somewhat premature."

THE BROWN TRUST.

WE are enabled to state that the conditions necessary to the completion of this Trust by the University of London have now been fulfilled. The University has been placed in possession of an excellent site, and abundant funds are forthcoming to carry out the objects of the Trust by founding an institution for the reception and treatment of sick and diseased domestic animals, which will afford invaluable opportunities for the advance of our knowledge of their diseases and their relation to those of man—a subject of scientific and national importance.

DROPPING THE SUBJECT.

THE proceedings at the recent meeting of the Durham Board of Guardians illustrate the hopelessness of expecting proper sanitary action to be taken in the prevention of zymotic disease by such bodies, under the present state of the law. Three things were admitted—that there was "a great deal of small-pox in the town; that there was no adequate hospital-accommodation for the reception or isolation of the patients; and no conveyance for moving them". The rest of the discussion was a hopeless maze of suggestions for enabling the guardians to avoid doing anything, and for getting other committees and bodies more or less concerned under various sanitary acts to do something instead of them. The end was characteristic; the subject dropped, and the small-pox went its way triumphantly.

THE GENERAL HOSPITAL IN VIENNA.

THE following statistics will be interesting in connection with the articles on the German medical schools, which have lately appeared in this JOURNAL. The report for 1869 of the General Hospital in Vienna, containing 2,000 beds, shows that the number of patients admitted during the year was 20,214—12,789 males, and 7,425 females. The average mortality was 12.6 per cent. The maximum number of male patients in hospital at one time was 1,070 in December, and of females, 812 in January. The average duration of each patient's stay in hospital was thirty-one days. The total number of cases was 1,097 more than in 1868; the death-rate was nearly the same, having for ten years oscillated between 11.4 and 13.3, except in 1866, when cholera was prevalent, and the deaths amounted to 14.4 per cent. Among the cases were 792 of ileo-typhus or enteric fever, and 27 of exanthematic typhus; 332 of intermittent fever; 1,458 of pulmonary phthisis; three fatal cases of hydrophobia; and two of dissection-wound, which re-

covered. There were also four cases of cerebro-spinal meningitis, all in males; 729 of pneumonia, the disease affecting both lungs in 121 cases; 495 of gonorrhœa, 410 of syphilitic chancre, and 1,286 of secondary syphilis. Among the operations were 95 amputations, 36 resections, 187 cases of removal of tumours, 10 cases of lithotomy, and 9 of lithotrity; 7 ovariectomy cases (of which 6 were fatal); 305 operations for cataract, and 249 iridectomies. The total expenses for the year amounted to 589,611 florins (about £56,470).

PHARMACY LEGISLATION.

A DEPUTATION of chemists and druggists from various parts of the kingdom, introduced by Mr. E. Baines, M.P., and accompanied by many members of the House of Commons, last week had an interview with the Right Hon. W. E. Forster at the Privy Council Office, to lay before him reasons why the amendment of the Pharmacy Act should be delayed until time has been given to consider the subject in all its bearings.

THE BERLIN EINZUG.

BEARING in mind the importance justly attached to the cases of sun-stroke in the "fatal marches" of last year, it is not uninteresting to note that our special correspondent in Berlin reports twelve cases of sun-stroke among the German troops at the *Einzug* or triumphal entry into Berlin; three cases being immediately fatal, and the others giving little promise of recovery. Prince Albrecht, the Emperor's brother, was seized with paralysis after leaving parade. Our correspondent—himself formerly a distinguished medical officer of the British army—observes, however, that the casualties amongst British troops subjected to similar fatigues, with their present clothing, would inevitably have been by far more numerous. He is struck by the want of "stiffness and smartness" of the men as compared with those of the *élite* of the British army; but, as a medical officer of a crack corps of British soldiers, and therefore accustomed to see the men "fall out by scores after an ordinary drill", he recognises the fact that in the German army "the best material is there, unhampered by the paralysing influence of over-tight clothes", so that, after a long and exhausting walk, and being more than ten hours under arms, the men mostly stepped along with a spirit and freshness which was surprising to him as a medical officer accustomed to watch a class of British troops in whom efficiency is still in no small degree sacrificed to tautness and smartness of equipment and clothing.

VACCINO-SYPHILIS.

THE Committee appointed by the Royal Medical and Chirurgical Society to investigate the cases recently brought forward by Mr. Jonathan Hutchinson, in which symptoms apparently syphilitic had followed vaccination, presented their report at the meeting of the Society on Tuesday evening. The report stated that the Committee had examined the vaccinifer and several of the vaccinated persons in each series of cases—those related by Mr. Hutchinson at the meeting on April 25th, and those brought under his notice by Mr. Waren Tay and reported to the Society at the adjourned discussion on May 9th. An account of the appearances presented by the several individuals examined was given. With regard to the first series, the Committee stated that at the date of their examination, on May 16th, there were no symptoms of constitutional syphilis, and there was not conclusive evidence of the conveyance of the disease by vaccination. As to the cases in the second category, they considered that there were distinct evidences of constitutional syphilis in the persons vaccinated. With regard to the fluid used in vaccination, they had been unable to obtain any further evidence than that which had been given to the Society by Mr. Hutchinson.

A VICTIM OF GEIST.

THE Vienna newspapers report a remarkable and startling trial for mal-praxis, which presents considerable interest. A surgeon, sixty-three years of age, in a case of difficult labour, proceeded, after waiting a couple of hours, to deliver by means of a bent lever. After great exertion, which bathed the doctor in sweat, the child was brought to light

with injuries inflicted on the head, which, according to the official jurist, had caused death. The court submitted that the use of the instrument was unjustifiable according to the opinions now taught; to which the doctor vainly retorted that the instrument had been recommended to him in the year 1832 by the then professor, and that he had since used it frequently with success. The court decided that he should be deprived of his licence to practise midwifery till such time as he should prove by a new examination that he had made up his way in professional knowledge. The judge offered some very admirable advice to the unfortunate practitioner, observing that when a man devotes himself to a branch of science or of art he dare not remain stationary, but he must advance with the spirit of the time and keep pace with the progress of science.

SMALL-POX IN FLORENCE.

FROM May 20th to June 10th there were 134 cases of small-pox in Florence, with 12 deaths. Eighteen patients suffering from the disease were a few days ago in the Hospital of S. Maria Nuova. Our contemporary *L'Imparziale* urgently protests against this, as the hospital is a general one, and is situated in a thickly populated part of the city.

MESMERISM AND ABORTION.

AT the Lambeth Police Court, on the 22nd June, Charles de Badderley, described as a medical botanist, and Sarah, his wife, residing at Exeter Villas, Kennington, were brought up on remand, charged with selling various noxious drugs, knowing that the same were to be used in order to procure abortion. Mr. Poland prosecuted; and Mr. Fullagar defended the prisoners. The attention of the authorities having been drawn to an advertisement stating that "the celebrated Madame de Badderley, clairvoyante, could be consulted daily at 4, Exeter Villas", they placed the matter in the hands of Inspector Clarke, of the Detective Department, for investigation. That officer employed a woman named Hansard to go to the address given, and, representing herself as the aunt of a young woman who had got into trouble, to ask for something which should induce a miscarriage. On the occasion of Mrs. Hansard's first visit, the female prisoner said she could say nothing until put into a state of clairvoyance by her husband. This was agreed to; and the male prisoner, having made several passes with his hands, declared Madame to be asleep. After some conversation, the female prisoner was recovered from her supposed clairvoyant state, and then gave Mrs. Hansard some pills and herbs for the niece, charging half a guinea for them. A second visit was paid, at which the same kind of formality was gone through, and more herbs given to Mrs. Hansard, who again paid half a guinea. It was, however, stated by the female prisoner that, when in the mesmeric condition, she had discovered that the case was a very critical one, but that she could give some effective medicine for £5. Accordingly, Mrs. Hansard took a £5 note, marked by Inspector Clarke, and, on paying it to the prisoners, received from them some powders and other medicine. On analysis, they were found to contain injurious and powerful drugs. Mr. Ellison sent the case to trial at the Central Criminal Court, but consented to take bail of £150 for each.

DR. PANTALEONI.

AN action for libel was tried some days ago in the Bail Court before Mr. Justice Lush, in which the plaintiff was the well-known Italian physician Dr. Pantaleoni, and the defendant Dr. Vaughan, proprietor of the *Tablet*, a Roman Catholic newspaper. The gist of the libel was that Dr. Pantaleoni had taken two surgeons from the galleys, to which they had been sentenced for attempted murder, and reinstated them in the San Gennaro Hospital. Dr. Pantaleoni informed the editor that he was exiled from Rome at the time alluded to, and knew nothing of the matter. The *Tablet* persisted in the truth of the assertion, and hence the action. Dr. Vaughan withdrew the libel, for which he admitted there was no foundation, and apologised. A verdict was then taken for the plaintiff by consent—damages £250, to cover costs.

ACTION OF IODATE OF POTASSIUM.

ACCORDING to M. Melsens, the poisonous action of even comparatively small doses of iodate of potassium cannot be merely due to chemical action—that is to say, to a kind of combustion, whereby organic matter present in the body of animals is destroyed. It appears that the centres of the nervous system are acted upon in a peculiar manner, and that the organised structure of the blood is destroyed, that liquid itself becoming chemically altered at the same time.

THE SPREAD OF SMALL-POX.

A DEPUTATION from the National Association for the Promotion of Social Science waited on the Marquis of Ripon on Tuesday last, to urge the Government to put into force the Diseases Prevention Act, 1855, with a view to the suppression of small-pox. The following gentlemen were present:—Dr. Brewer, Dr. Lankester, Dr. Mouat (Bengal), Dr. Bain, Dr. Sarvis, Dr. Stewart, Dr. Hardwicke, Dr. Ramsay, Dr. Wyld, Dr. Ballard, Mr. Liddle, and Mr. Pearse, Secretary to the Association. The Marquis of Ripon, having been addressed by the deputation, said that the observations to which he had listened were exceedingly interesting, although they tended rather to the amendment of the law than the putting in force the provisions of the Act in question. With regard to carrying out the latter object, he thought it would be the means of giving them all the power which was desirable. He might say, in reference to a point touched on by Dr. Lankester as to the appointment of vaccination officers and a more complete isolation of cases, that Government had at present before Parliament a Bill which tended in that direction. The law at present made it optional; but in the Bill before Parliament it was intended to make it compulsory. He hoped that the Bill would be passed in the present session. Of course in all these cases it was necessary to regard public opinion. Many persons considered attempts of this kind an infringement on their private rights. Most unreasonable observations had been made in reference to the carrying out of the Vaccination Act. That very fact showed the necessity of proceeding carefully and with deliberation. He assured the deputation that their observations should have the most careful and anxious consideration.

SPURIOUS TEA.

THE subject of the importation into this country of spurious and unwholesome tea again engaged the attention of the City Commissioners of Sewers at a recent meeting. The Sanitary Committee, to whom the matter had been referred, reported that, after inquiring into the proceedings which had been instituted by them in similar cases in 1866 and 1870, and the unsatisfactory results of the various efforts made to bring the offending parties within the power of the law, they deemed it useless to attempt any like proceedings against the persons who had offered the spurious tea for sale last month. They accordingly determined to lay the matter before the President of the Board of Trade; and, at an interview with him, they endeavoured to impress upon him the necessity for empowering the Customs' officials to take steps for the seizure and destruction of spurious tea, on receiving a certificate from persons duly authorised that it was unfit for human food. Mr. Chichester Fortescue, after affording them every opportunity for the expression of their opinions, requested them to furnish him with a written statement of all the facts in connection with the previous cases, and with copies of the reports of the solicitor and medical officer of health, which they had done. These, the Committee believed, were required to be submitted by the President to the Treasury for consideration; and they hoped in the end such steps would be taken by the Government as would put a stop to the discreditable traffic which still continued—a large cargo of rotten tea having recently arrived in London under consignment to various persons for sale in this country. Mr. Daw, the chief clerk, read a communication to the effect that, on the 21st instant, a ship arrived in the docks from Shanghai with five thousand chests of the mixture. The Commissioners approved of the steps taken by the Committee, and referred the matter to them for further consideration.

THE STRASBOURG SCHOOL.

LYONS is not, it seems, to gain without contest the honour of reviving the Strasbourg School for France. A claim on behalf of Nancy has been put in; and several deputies of the east and north-east have laid before the National Assembly a Bill for transferring to that town the several faculties of the Strasbourg University.

WESTERN COUNTIES IDIOT ASYLUM.

Mr. GIBBS of Tyntesfield, near Bristol, has offered £1000 towards the sum required for commencing the building on condition that £600—the additional amount required—be collected by Michaelmas. Dr. Blackall, and Mr. Divett of Bovey Tracey, have each contributed £50 towards this object.

WESTMINSTER HOSPITAL.

THE vacancy which will be caused by the translation of Mr. Francis Mason to St. Thomas's Hospital will not be declared until Mr. Mason has formally sent in his resignation.

CHILDREN'S HOSPITAL, BIRMINGHAM.

DR. JAMES SAWYER and Dr. Edward Mackey have been appointed Extra Acting Physicians to this Hospital, and Mr. D. C. Lloyd Owen has been appointed Ophthalmic Surgeon to the Institution.

ST. MARY'S HOSPITAL.

WE understand that the medical Staff of St. Mary's Hospital have agreed to support the candidature of Dr. Nunneley for the appointment of Assistant-Physician. The other candidates will, it is expected, now retire. Mr. Owen, who was the only candidate for the vacant Assistant-Surgeoncy, has been recommended for election. Mr. Howard Hayward, Assistant Dental Surgeon, will be elected to fill the vacancy caused by the retirement of Mr. Sercombe from the Hospital.

ST. GEORGE'S HOSPITAL.

IT has been decided by the authorities of St. George's Hospital to cancel the appointment of Resident Medical Officer, lately rendered vacant by the resignation of Dr. Jones. There will be two resident house-physicians instead of one as heretofore. No change will, however, be made in the appointments of house-surgeon; there will be two as before. The salary voted for the Resident Medical Officer will now go towards defraying the cost of the resident appointments, for each of which the sum of fifty pounds was previously charged.

INDIAN MEDICAL NEWS.

THE reports of severe inroads of cholera in Cashmere are, says the *Homeward Mail*, unfounded. There have been no signs of the epidemic in the Happy Valley. Cholera has, however, made its appearance at Allahabad, where small-pox and measles are also prevalent. At the instance of the Inspector-General of the Indian Medical Department, the Government of India has decided to appoint supernumerary assistant-surgeons to officiate for permanent uncovenanted medical officers in civil stations.

THE CONJOINT EXAMINATIONS.

THE Conjoint Examination Committees are continuing their work, and will meet again this (Friday) evening at the Royal College of Physicians. If they could succeed in completing their scheme before the conclusion of the session of the General Medical Council, it would redound alike to the credit and advantage of the corporations. If these negotiations should fail, the responsibility which will weigh on those who may cause the failure will be heavy, and will not be forgotten by the profession or the Government in the day of reckoning. Every consideration of duty, wisdom, and interest, should induce the English corporations to compose their differences, and, by a system of wise concession, to adjust their difficulties. An uniform minimum examination is the inevitable freight of time, and by arranging it among themselves the corporations are likely to fare better than in a less elastic arrangement which may be, and no doubt will be by and bye, forced upon them.

THE UNIVERSITY OF LONDON.

It is a curious answer to disappointed parents and certain of our contemporaries who take exception to the severity of the preliminary examinations of the University of London, that six hundred and twenty-six gentlemen have entered for the matriculation examination now going on at Burlington Gardens—a number which, notwithstanding the popularity of the examination for some years, has never been at all equalled. It is, indeed, a fact that the percentage of rejected candidates, large as it is at the University of London, is below the preliminary examination of the much maligned College of Surgeons. There is, of course, a very considerable difference between the two examinations, as to the standard and variety of knowledge required; but it always has been the object of the University of London to encourage, and it has always required, a specially high and varied preliminary examination. It has aimed at ensuring a sound general education at the outset amongst those who aspire to its honours, and has set its face against the special study of a few subjects only, to the exclusion of others considered to be highly desirable. That the result has been acknowledged to be satisfactory, the very large and increasing numbers entering for the matriculation examinations bear ample testimony.

THE BRIDGEWATER VACCINATION CASE.

At the Quarter Sessions held last week at Bridgewater, before the Recorder, Ernest Reed, Esq., Bovett and Roberts were each fined £5, having been adjudged guilty of misdemeanour in not attending to the summonses of the Mayor and refusing to have their children vaccinated. A demurrer was pleaded by Mr. Murch for Bovett. No appeal was allowed.

THE SMALL-POX EPIDEMIC.

DR. LANKESTER recommends that a short Act of Parliament could be passed to meet the necessity of the case. Such an Act should provide for compulsory vaccination and revaccination, under proper superintendence, of every person in a town or district where small-pox is known to exist. A small-pox officer should be appointed for every town or district, whose duty it should be to isolate every case of small-pox, and superintend the disinfecting of the house where small-pox occurs. Wherever small-pox breaks out, the occupier of the house or the medical attendant should declare the existence of the disease to the small-pox officer.

THE THEORY AND PRACTICE OF SKIN-GRAFTING.

At a meeting of the County Medical Society of New York (reported in the *New York Medical Journal*, April 1871), Dr. Benjamin Howard presented a case in which he had practised grafting with success for the healing of an extensive ulcer of seven years' standing, the result of a grape-shot which carried away the calf of the leg. Dr. Howard observed that in the reports which he had read all seemed agreed on one point, that epithelial cells in the graft are an essential element of success.

To aid in determining the correctness of this view, he had conceived the experiment of ingrafting a tissue which should contain no epithelium. Therefore, finding a few days previously that the reparative action in the wound seemed to be arrested, he, with the assistance of Dr. Hinton, had excised a piece of muscle from the middle of the biceps of the patient's arm, cut it into three pieces, about the size of the skin-grafts before used, and implanted them in the ulcer, just as those had been implanted. On examination twenty-four hours afterwards, each piece was found completely and firmly adherent in the bed cut for it, and was level with the surrounding surface. The whole surface of the wound had already taken on a new action, and covered itself with florid granulations. The edges had shared the fresh impulse; and even a part of the ulcer completely cut off from that portion where the muscle-grafting was made, by a bridge of cicatricial tissue, had felt the same stimulus and begun afresh the process of healing. From this moment the progress of the cicatrization had been as marked as when the skin-grafts were employed. The doctor wished to inquire whether the acceleration of the process of repair, so noticeable in the original margins of the ulcer, might not be due less to the *quality of the tissue* introduced than to the

vital process of adhesion established at a given point in the sluggish wound, which became a centre of increased vitality to the surrounding parts. Dr. Stein thought that the credit apparently due to the muscle-grafts ought to be given to the skin-grafts previously used. He had himself succeeded by simply sprinkling epithelial scales, some of which, doubtless, were not wholly deprived of germinal matter, over the surface of an ulcer.

OVERCROWDING AND MORTALITY.

THE valuable report of Dr. Trench on overcrowding as a cause of mortality has had practical results. The Earl of Derby presided lately at a meeting held at Liverpool for the purpose of forming a society for the erection of labourers' dwellings on a self-supporting basis. In opening the proceedings, the noble earl said that the excessive disease and mortality of Liverpool were chiefly due to overcrowding, it being estimated that no less than one-third of the population lived, in average families of six, in single rooms. He thought that the evils of drunkenness would be obviated much more effectually by the erection of better houses for the labouring population than by teetotal lecturing, for the discomfort experienced by men and women from overcrowding was generally the incentive to drunkenness. One most satisfactory feature of the society was, that the tenants would pay a fair rent, and thus their self-respect would not be lessened by any consciousness of living in almshouses. From his experience of such societies in London, Lord Derby anticipated very favourable results to the new society. In this anticipation, we have furnished grounds for inducing our readers to join. We may again refer to some figures and observations on this subject in the *JOURNAL* of April 15th, and repeat the appeal then made to our readers to use their local influence in this direction.

SCOTLAND.

DR. ALLEN THOMSON, Professor of Anatomy in the University of Glasgow, will preside over the Section of Biology at the annual meeting of the British Association for the Advancement of Science, to be held in Edinburgh in August.

DR. CHRISTISON.

DR. CHRISTISON's bust, which Mr. Brodie has just completed, was to be presented on Thursday to the Chancellor and Senatus of the University of Edinburgh in the upper hall of the College Library. It is intended to present a replica of the bust to Dr. Christison's family.

ANNUAL REPORT OF THE COMMISSIONER IN LUNACY FOR SCOTLAND.

THE thirteenth Annual Report of the Board of Lunacy has been issued. The total number of lunatics in Scotland, of whom there was official cognisance on January 1st, 1871, was 7571; of these 1295 were maintained from private sources, 6227 by parochial rates, and 49 by the state. But there were some 2000 additional insane persons maintained by their friends in private dwellings. Altogether since 1858 there has been an increase of 1664, either to be ascribed to the growth of lunacy or the increased number of lunatics in asylums. On an average of ten years, 1861 to 1870, of every 100 patients sent to asylums, 26.1 were private and 73.9 pauper. In ten years the proportion of pauper lunatics in the general population has increased from 180 to 202 in every 100,000. In the whole of Scotland the total expenditure has increased more than a third. The total number of patients relieved during 1870 was 7284. The mortality of patients in private dwelling houses was 5.6 per cent. against 8.2 per cent. in public asylums, 8.9 in private asylums, 10.2 in parochial asylums, and 8.7 per cent. in lunatic wards of poorhouses. The Commissioners express the opinion that many patients are unnecessarily if not improperly sent to asylums. Of the accidents, fractured bones and dislocations occurred in 26 cases, from falls or from struggles with other patients or with attendants.

BABY-FARMING IN SCOTLAND.

THE Select Committee of the House of Commons appointed to inquire into the subject of baby-farming met a few days ago, under the chairmanship of Mr. Walpole, when evidence as to Scotland was given. Mr. W. Cameron said he had closely investigated the question of baby-farming, both in Edinburgh and Glasgow, and the result of his inquiries was that he believed the rate of infant mortality was largely increased by the negligence of those who undertook the care of children. Baby-farming prevailed in both towns to a very large extent, and he invariably found that the children were in a squalid, miserable, and emaciated condition, without proper food, and sometimes without a bed to lie upon; while the nurses, in many cases, lived a life of gross intemperance. In one house at Portobello he found eight children under the care of two old women, and he had reason to believe that there were many similar cases in Scotland. There was the greatest difficulty in getting access to those houses unless, as was the case with him, he led the occupants to infer that he was there for the purpose of doing business with them. He had no hesitation in saying that children were taken in with the deliberate intention that, by a course of neglect, their lives should be sacrificed; and, as in many cases a lump sum was paid down to the baby-farmer, this result was not long delayed. Dr. Cameron, of Glasgow, gave similar evidence. He expressed his belief that there was a great deal of criminal or culpable neglect which resulted in the death of the children which were accepted by baby-farmers. In cases where weekly payments were made for the children, it invariably happened that the amount paid was not sufficient to provide healthy food, and the child therefore had to put up with unwholesome food until it succumbed. The procuration of abortion prevailed very largely in Scotland, particularly in Glasgow; and he urged the necessity of compelling the registration of still-born children, and a system of inspection of all houses where children were taken in to nurse. The inquiry was adjourned.

IRELAND.

THE Surgical Travelling Prize has been this year awarded in the School of Physic of Trinity College, Dublin.

THE degree of LL.D., *honoris causa*, was on Wednesday, the 28th June, conferred by the University of Dublin on Mr. Charles Lever, the novelist, who graduated as Bachelor of Medicine of the University in the year 1831.

THE NEW QUALIFICATION IN STATE MEDICINE.

THE first examination under the new regulations of the University of Dublin for granting qualifications in State Medicine, was held on June 12th, 13th, and 14th, when four candidates, Mr. Moore, Dr. Foot, Mr. Yeo, and Mr. Todhunter, presented themselves and passed. The examination papers contained questions in Law, Hygiene, Chemistry, Vital Statistics, Medical Jurisprudence, Meteorology, Pathology, Engineering, and State Medicine. The institution of this examination does great honour to the University of Dublin; and it is to be hoped that the example thus set will be followed by the other Universities of the United Kingdom.

DR. GORDON AND "A CONSULTING PHYSICIAN".

DR. GORDON, of Dublin, charges our "nameless correspondent" of last week, "A Consulting Physician," with misquoting his letter of June 10th, and therefore thinks it right to state for himself that "he has never on any occasion knowingly consulted with any unqualified practitioner". Our "nameless correspondent" is "a consulting physician", as he signs himself, and of the very highest official, scientific, and personal position. If he preferred appending a general designation rather than his personal signature (which, of course, he forwarded to us), it was probably because he considered himself to be making a protest in the name of the class to which he belongs against the particular statement which he conceived Dr. Gordon to make. It was certainly o part of his or our intention to "vilify the profession in Dublin"; and,

if Dr. Gordon desires his name, we have no doubt that he will be perfectly ready to give it. We very readily give publicity to Dr. Gordon's statement that, "in all matters of medical etiquette, the Irish branch of the medical profession is immeasurably in advance of the profession in England;" and that "such matters as partnerships, club-attendances for sixpence or threepence a head, and all such other trade-partnerships as are every week to be found in the pages of the JOURNAL, are utterly unknown to respectable practitioners in Ireland". His first letter on the subject of irregular consultations was therefore the more unfortunate, and he owes us thanks for giving him the opportunity of presenting this more accurate and favourable picture of the facts, which he was previously less happy in depicting. His present sketch does, indeed, entirely accord with that honourable and brilliant picture of the status of the profession in Ireland which we have always drawn. The letter of "A Consulting Physician" is an evidence how much the statements of Dr. Gordon in his first letter were calculated to give an erroneous impression; and, in presenting his present correction, we purposely avoid printing some expressions accompanying them which might easily induce an irritating controversy.

ROYAL IRISH ACADEMY.

AT a meeting of this Society, held on the evening of the 8th of May last, the Rev. J. H. Jellett, B.D., Senior Fellow of Trinity College, Dublin, President, in the Chair, Dr. J. M. Purser read the second part of his Report on the Researches of Professor Cohnheim on Inflammation and Suppuration. That distinguished physiologist believes that the two following propositions are established as the result of his investigations. 1. In an inflamed part, the white corpuscles of the blood pass through the walls of the vessels in great numbers, and, having become free in the tissue, constitute the cells of pus. 2. The cells of the inflamed part itself have no share in the formation of pus; they persist for a time unchanged among the emigrated blood-corpuscles, and, if the inflammation last long enough, or attain a great intensity, they undergo a series of changes of a purely regressive or degenerative nature, ending in their death or destruction. Dr. Purser, in the first part of his report, read twelve months since, stated that his own observations fully bore out Professor Cohnheim's views as enunciated in the first of the above-quoted propositions. So far back as the year 1846, Dr. Augustus Waller had described the passage of the leucocytes of the blood through the walls of the vessels. With regard to the second proposition of the German physiologist, however, Dr. Purser found that the experiments conducted by himself gave negative results, and in them he was borne out by the opinions of Virchow and of Goodsir. Having described Professor Cohnheim's mode of procedure in experimenting on the corneæ and tongues of frogs, Dr. Purser proceeded to give in detail the results which he had himself obtained. His observations were also made on the corneæ and tongues of frogs. Inflammation was excited either by cauterisation with nitrate of silver, or by the insertion of a seton. In some instances, the occurrence of a spontaneous ulcerative keratitis obviated the necessity of causing irritation. Phenomena, essentially the same in kind, but varying much in degree and as to the time of their development, showed themselves in every case. On no occasion did the connective tissue-cells remain unaltered among the pus-corpuscles. The first well-marked change observed in the former consisted in a tendency to become elongated, and, in doing so, to lose their equally stellate shape. Their nuclei underwent a similar modification of form, and the protoplasm assumed a more decidedly granular appearance than in health. In the next stage of the inflammatory process, the cells have completely lost their primitive form, and have become perfect spindle-shaped bodies, while the number of nuclei increased, and amounted sometimes to four or more in a single cell. The third change consisted in the division of the spindle-shaped corpuscles. These first assumed an hour-glass appearance, and finally divided across in one or more than one place. Sometimes the spindles did not divide, but formed movable, multi-nucleated masses, like those described by Stricker. Dr. Purser believed, too, that the researches of this physiologist on inflammation confirm his own observations.

THE EVOLUTION OF DISEASE.

MR. S. MESSENGER BRADLEY of Manchester writes:—In your editorial comments last week upon Professor Tyndall's recent lecture on "Dust and Disease", you point out the mistake which the lecturer makes in taking the No-man's-land of the *Origin of Life* for the legitimate possession of the vitalists; and, in a few pregnant sentences, show that the doctrine which he treats in quite an axiomatic way, of "the immutability of disease", is really not only unproved, but likely soon to be altogether disproved. Will you permit me to add to your remarks some arguments which, I think, tend to prove that diseases are indeed subject to the same law of gradual evolution which dominate the animate creation? For obvious reasons I only speak now of contagious and confessedly transmissible diseases.

The arguments in favour of the evolution of disease may be ranged under six heads. 1. Well-defined diseases present many prominent and important changes in different epidemics. 2. New diseases appear during epidemics from time to time, which ever after assume a persistent type. 3. The same transmitted disease sometimes differs in its manifestations in parent and child. 4. Zymotic diseases are correlated. 5. Diseases are sometimes artificially induced, which afterwards become hereditarily transmissible. 6. It is demonstrated, in one instance, that the same poison-germ, or "seed", has given rise to (at least two) widely different diseases, which now reproduce themselves as surely as "the fig comes from the fig, the grape from the grape, or the thorn from the thorn". (Professor Tyndall on "Dust and Disease").

1. *Well-defined diseases present many prominent and important changes in different epidemics.*—The truth of this statement is borne out by the experience of all observers of zymotic diseases. Epidemics of scarlatina are at one time largely fatal, at others scarcely so at all. Some epidemics are accompanied with prominent throat-symptoms, from which others are almost free. Epidemics of measles are sometimes observed in which catarrhal symptoms play no part; while in others they are the most pronounced and lethal symptoms. Sir Thos. Watson says: "I am firmly persuaded, by my own observation and by the records of medicine, that there are waves of time through which the sthenic and as sthenic characters of disease prevail in succession, and that we are at present living amid one of its adynamic phases". (*Principles and Practice of Physic*, 4th edit., note, p. 234.)

2. *New diseases appear during epidemics from time to time, which ever after assume a persistent type.*—The origin of cerebro-spinal meningitis may serve as an example of the truth of this statement. This disease was not recognised till late on in this century. It sprang into existence during an epidemic of typhus, from which it now differs as distinctly as typhoid, and, so far as experience has gone to prove, it now always 'breeds true'; i.e., reproduces itself, never showing any tendency to reversion towards the parent stock. Again, there is strong evidence to show that so well defined and easily described a disease as small-pox did not exist prior to the seventh century: there is no mention of it earlier than this, Paulus Ægineta amongst others not alluding to it (J. F. Marson). At the same time, it must be remembered that diseases which can only have been rarely witnessed, such as hydrophobia, were very minutely and accurately described many centuries before this period. The first recorded outbreak of yellow fever does not date further back than 1647. How far the comparatively recent origin of scarlatina, diphtheria, or syphilis, might be proved, I have no space to more than hint at.

3. *The same transmitted disease sometimes differs in its manifestations in parent and in child.*—From the numerous illustrative diseases which might be adduced to support the truth of this statement, I select syphilis. Inherited syphilis differs from acquired syphilis in the occasional presence of certain lesions which are never met with in the acquired form of disease; of this, interstitial keratitis is an example. It also differs in the coexistence of secondary and tertiary symptoms—the tertiary symptoms sometimes even preceding the secondary, as in congenital syphilitic albuminuria. Let me add one more illustration in support of this proposition. A parent dies from tubercular phthisis, leaving three children; of these, one dies during his second year from arachnitis, another at the age of fifteen from caries of the spine, the

third at twenty from peritonitis. Granted that in each of these cases we have a pathological product called tubercle, which we can thoroughly examine, and, examining, find it to be the same in all four cases; is it not, to say the least of it, highly probable that if we are ever able to examine the "seeds" of the different zymotic diseases, we shall find them exactly alike; i.e., so far as our senses enable us to judge? At the same time it will be admitted that in nearly all its features arachnitis differs as widely from peritonitis as small-pox does from typhus.

4. *Zymotic diseases are correlated.* By way of illustration, I will first mention the correlation observed between remittent and intermittent fever. "A remittent fever," says Dr. Maclean, "may, after a time, pass into one or other types of an intermittent, and conversely, an intermittent may assume the graver form of a remittent, either under the influence of a fresh charge of malaria, or, as I have frequently observed, under the stimulus merely of exposure to a higher temperature" (W. C. Maclean, M.D., in *Reynolds's System of Medicine*, p. 609). The next illustration is an example of zymotic disease exhibiting a tendency towards reversion to a former type. Dr. Gavin Milroy writes thus, on the correlation of typhus to the plague, etc.: "That glandular swellings, and occasionally also carbuncles, may be present in other forms of pernicious fever, malarial or not, besides the plague, has been frequently noticed by writers of different countries. For example, the endemic fevers of the Danubian Principalities, which were so terribly destructive to the Russian armies in the campaign against the Turks in 1828-29, as on all former occasions, and which were sometimes called putrid typhus, and at other times pernicious intermittent, are described as being often accompanied with buboes, carbuncles, and purple blotches of the skin. In the earlier part of the year dysentery with ordinary intermittents and remittents, were very common and fatal, the latter insensibly lapsed into the pestoid fever. The worst cases were evidently undistinguishable from that of the plague." Sydney Ringer alludes to a correlation between measles and whooping-cough. "The one disease apparently predisposes to the other;" and again, "it is stated that persons with pulmonary disease, such as bronchitis, are especially apt to catch the disease." Diphtheria is so closely correlated to croup, that the former is often spoken of as an epidemic form of the latter. Trousseau remarks, "In point of fact, we see many more who are attacked by this disease (diphtheria) die from croup than from malignant sore throat" (*Clin. Med.*, translated by New Sydenham Society, vol. iii, p. 475). It has often been noticed that relapsing fever prevails during epidemics of typhus, and that it is most marked during the decline of the latter disease.

5. *Diseases are sometimes artificially induced, which afterwards become hereditarily transmissible.*—The well known experiments of Brown-Séquard afford sufficient evidence of the truth of this proposition. He mechanically induced epilepsy in guinea-pigs, and afterwards bred from them. The disease had become hereditarily transmissible, the offspring proving epileptic.

6. *It can be demonstrated in one instance that the same poison-germ or seed has given rise to (at least) two widely different diseases, which now (as is generally believed) always reproduce themselves.*—The instance to which I refer is syphilis. The proof of my statement is as follows. The contrast between the two forms of syphilitic sore and their respective significance is as well and sharply drawn as anything in surgery. The one is a local lesion, the other a constitutional malady; the one leaves no trace behind, the other for years poisons the fluids, infiltrates the viscera, and evolves from itself a long list of diseases, which become hereditarily transmissible—such diseases, e.g., as scrofula (Diday, etc.), phthisis, albuminuria, epilepsy, paralysis, etc. In the hands of numerous experimenters, the non-infecting chancre has proved auto-inoculable. The inoculability of the infecting sore also now rests upon an equally irremovable foundation. But what evidence is there as to their ever interchanging? At the annual meeting at Plymouth this year, I hope to be enabled to demonstrate the fact that the soft sore is sometimes directly produced from the hard infecting sore, and this in a system previously unsyphilitised. For some time, syphilographers (even including the great dualist, Ricord) have admitted that in syphilitised individuals the soft sore is sometimes transmitted from the hard, but maintain that this is never done in an uncontaminated constitution. This I believe I shall be able to disprove. At present, I can only say that, after numerous inoculations with scrapings from hard chancres, I at length succeeded in producing a soft chancre in the ear of a kitten, while I had syphilitised her sister with virus from the self-same sore. If space permitted, I would add much testimony on this point, but must content myself with saying that, without being in possession of such direct experimental evidence in favour of the original unity of the poison as the above, Mr. Savory argues powerfully in favour of the oneness of origin in last year's *Bartholomew's Hospital Reports*; and a similar belief is held by many other writers on the subject.

Superficially as I have, from necessity, treated each separate argument, I have perhaps said enough to show that there are arguments which speak strongly in favour of the doctrine of the evolution of disease. To many, indeed, I doubt not, it will occur, as it does to me, that if the principle of selection were not, for obvious reasons, carefully excluded, diseases might be bred with the same accuracy as that with which we breed a flower or a sheep; and that, if any peculiar symptom were required, it could be exalted into a persistent type, just as surely as the markings upon a Mrs. Pollock geranium have been by the selection of the horticulturalist.

THE BRITISH MEDICAL ASSOCIATION.

SIR,—I have the honour to request publication of the accompanying correspondence. I am, etc.,
SAMPSON GAMGEE.
18 Broad Street, Birmingham, June 26th, 1871.

18, Broad Street, Birmingham, June 24th, 1871.

My dear Sir,—The more carefully I consider the notices of motion for the next Annual Meeting of the Association, published in your name in the *BRITISH MEDICAL JOURNAL*, the more deeply am I impressed with the sense of their great importance. The laws of the Association are, I believe, twenty-seven in number, and of these, no less than twelve are affected, several radically, by your notices of motion. I think our Associates might be assisted in forming a correct estimate of the changes you propose to effect, if you deemed it advisable to direct the publication, in an early number of the *JOURNAL*, of the laws as they are now in force, and as they would be if your notices of motion became law.

It appears that you propose that the Secretary shall no longer be a member of the Council or of the Committee of Council, but that such officer shall henceforward reside in London, and devote the whole of his time to the business management of the Association and of the *JOURNAL* office. Without venturing to express any opinion on the advisability of effecting such a change, I submit that it is not merely an administrative alteration, but deeply affecting the fundamental principles on which the Association was founded.

When it was deemed advisable to change the name of our body from the Provincial to the British Medical Association, it was generally felt to be in the interest of the profession to maintain the independence of the Association, from those metropolitan influences which have hitherto centred so powerfully in the medical corporations, and have militated in favour of the few, against the general interest of the great body of practitioners throughout the country. The events of late years have not detracted from the cogency of arguments, formerly held to be valid, in favour of an independent organisation of the profession.

It has been stated that, as at present administered, the British Medical Association has become practically a great joint-stock enterprise for the publication of a weekly journal, which absorbs nearly the whole of the Association's income. Hitherto, the independent action of the Secretary, a medical practitioner residing in the provinces, and having a seat on the Council and the Committee of Council, has secured to the great body of practitioners an official representative not under the control of the *JOURNAL*; but if the Secretary is to be reduced practically to the position of a paid clerk residing in London, and charged with the business management of the *JOURNAL* office, as well as of the Association, he must be subordinate to the Editor, or, in business matters, be co-ordinate with him in authority; the latter alternative would be incompatible with good government, while the former would inevitably lead to such a centralisation of power in the Editor of the *JOURNAL* as to render him practically, for the time being, the Master of the Association.

I do not observe that you contemplate making any alteration in Law 23, concerning the audit of accounts. Hitherto it has been held, though by no means unanimously, that the independent position of the Secretary and the Editor acted to some extent as a check in the financial arrangements. If, however, you propose to make the Secretary a clerk in great part subordinate to the Editor of the *JOURNAL*, an official public auditor of the accounts could scarcely fail to give very general satisfaction, the more so, since no official denial has been given to the rumour, current on very good authority, that the funds of the Association have lately suffered materially from the action—which I do not attempt to characterise—of one of its subordinate servants.

The British Medical Association has adopted a policy with the avowed intention of influencing the Legislature in the reform of the Medical Acts. Five of our most distinguished Associates, amongst the leaders of the medical profession in the three kingdoms, have recently resigned all connection with the Association on a question vitally affecting its management. Is it too much to presume that you have taken those facts into full consideration with your colleagues on the Committee of Council, before giving the notices of motion to which I refer? If this assumption be correct, is it not reasonable to look to you for a statement of the reasons which have led you, at so critical a period in its history, to propose such extensive organic changes in the management of the Association?

Since your proposals open up the whole question of the government of our body, it is essential that full opportunity be given for discussion; and I suggest that you give notice of a special meeting during the approaching Annual Meeting, for the discussion of your notices of motion. I intend forwarding copies of this communication to the medical journals, but shall not do so before the 27th instant, so that I may transmit with it a copy of any reply with which you may favour me.

I am, dear Sir, faithfully yours,
SAMPSON GAMGEE.
William D. Husband, Esq., F.R.C.S., J.P., President of the Council of the British Medical Association.

36, Bootham, York, June 26th, 1871.

My dear Sir,—The most important alterations in the laws, of which I have, at the request of the Committee of Council, given notice in the *JOURNAL*, will only be proposed at Plymouth, if the members agree to the proposal which will be submitted to them to improve the business working of the Association and *JOURNAL* office.

The Committee of Council will fully submit to the Council, and, if the Council approve, to the meeting, the reasons which have induced it to recommend the proposed changes in the working of the Association. These changes can in no way lead, as you fear, to metropolitan or editorial supremacy, as the election of the governing body by the members generally (so vast a proportion of whom reside in the provinces) will not be affected.

The meeting must decide when the discussion on the report of the Council shall be taken.

I had, before receiving your note, taken steps to have the proposed alterations in the laws printed in the *JOURNAL*, in a form which will render them more intelligible to the members.—I am, yours very truly,
W. D. HUSBAND.
Sampson Gamgee, F.R.S. (Edin.)

18, Broad Street, Birmingham, June 26th, 1871.

My dear Sir,—I lose no time in thanking you for your prompt and kindly courteous acknowledgment of mine of the 24th inst. I regret that I cannot attach the importance which I generally do to your opinions—to the statement that the changes you propose “can in no way lead to metropolitan or editorial supremacy, as the election of the governing body by the members generally (so vast a proportion of whom reside in the provinces) will not be affected.” The government of the Association, professedly based on representative principles, has, so far as I am informed, no parallel in any representative assembly or society in the world. The nominally supreme Council has no control over the constitution, as a distinguished Associate once cogently put it, during a recess of three hundred and sixty-one days in the year. Whatever be the theory of our constitution—a most legitimate matter for difference of opinion—the practical effect is scarcely open to question. Take, for instance, the ensuing year, hopefully looked forward to by medical reformers; who will wield the power of the Association when its President resides in Plymouth, the President of the Council at York, the Treasurer at Bath, and the members of the Council will be scattered in units over the three kingdoms? while 37, Great Queen Street, or some such central office in the metropolis, will be the head quarters of the editor and of his subordinate officer, who will combine the functions of business manager of the *JOURNAL*, and of Secretary of the Association. A fact not to be forgotten is, that no provision is made in the laws, or in your notices of motion, either for a public audit, or for substantial security being given by paid servants who may have the handling of the whole income of the Association.

I am happy to think that this discussion is not with yourself personally, for whom I have always entertained most sincere respect. You have confirmed my anticipations that the notices of motion of the most important alterations of laws have been given at the request of the Committee of Council, and I therefore hold myself at liberty to promote, or take part in, such measures as may be deemed necessary for bringing to an issue, on public grounds, questions which, however solved, cannot fail to exercise an important influence on the future of the Association, and on the best interests of the medical profession. According to previous intimation, I forward copy of our correspondence to all the medical journals.—I remain, very faithfully yours,
William D. Husband, Esq., etc.
SAMPSON GAMGEE.

*** One at least of “all the journals” to which Mr. Gamgee sends this correspondence will, no doubt, be duly grateful to him. We cannot but think, however, that his zeal for other medical journalistic interests which he represents locally has in this instance caused him to forget the considerations which would ordinarily prevent a member seeking the true interests of the Association from looking for sympathisers in his attack outside the pale of his fellow-members, and addressing it to those who will read it without having the opportunity of reading the answer. Without discussing this hostile proceeding, we feel called upon to observe that the letter swarms with mischievous fallacies. To one, of which he makes himself the echo, we ought perhaps to reply. The British Medical Association has not now “become practically a great joint-stock enterprise for the publication of a weekly journal” in any sense other than it has been ever since the Association, many years since, found it possible and desirable to secure for its members fifty-two weekly journals instead of one annual publication. The weekly publication has become of late years more and more powerful as an organ of medical opinion, and by the larger amount of advertisements which it has attracted it has been found possible to give the associates a progressively larger return for the same subscription, and, without raising that subscription, to supply them with a journal which, with the great majority, supersedes the necessity of their subscribing an additional twenty-five or thirty shillings a year to some other journal also. The real grievance of Mr. Gamgee's journalistic clients is not that the Association has a journal, but that, with an annual subscription so low, it is now able to secure to itself an organisation which is more extensive, more powerful in the state, more thoroughly localised, more influential in the profession, and more representative than ever it was, and at the same time to supply its members with a weekly journal, which an honourable London contemporary has candidly described as equal to any, and which also published foreign judgment—in which, it is said, one hears the voice of posterity—has pronounced to be at the head of British journalism. If this *JOURNAL* were less complete, that which Mr. Gamgee represents would have less to say against the Association. If it collected no news, so that the associates had to look elsewhere for current intelligence; if it omitted to report the proceedings of the societies of London, Edinburgh, and Dublin; if its interest could be destroyed; or if it could be reduced to its former dimensions, and thus the members of the Association could be compelled to subscribe to another journal also, nothing would remain to be said. If the Association were reduced to its original position of holding an annual meeting and publishing a volume of *Transactions*, it would then be as opprobrious to describe it as practically a joint-stock company for publishing *Transactions*, as it would be to describe the Clinical, Pathological, or Obstetrical Societies in similar language; but, as for the same subscription it is now practically able, by securing an advertisement fund, to issue fifty-two weekly serial papers, and to ensure constant communication between all its members throughout the year on all professional, political, scientific, and social questions, the writers of whom Mr. Gamgee has become spokesman choose to ignore the Medical Reform Committee of the Association, its State Medicine Committee, its Parliamentary Committee, its Poor-law Committee, its ubiquitous local scientific and social gatherings, its great annual meetings, its power, prosperity, and growth. They choose to conceal, under a plausible cry, their real gravamen that the members of the Association do now secure for themselves, at the cost of about sixteen shillings, what private proprietors wish to sell them at about double the price; and that they make this economy the means also, and the servant, of a great power—the power of unity, of professional concord, and of common co-operation in the working out of the ends of a great and united profession. If the Association goes on in the next few years as it has in the past few years, it threatens to spread over every corner of the land; to unite the whole profession in one bond; and to speak, through its *JOURNAL*, its Branches, its Committees, and its annual meetings, with a voice which will be irresistible. To some of Mr. Gamgee's friends this prospect is very alarming, but we doubt whether he is altogether wise to make himself their spokesman. As to the business matters which Mr. Gamgee discusses, we have only to observe that the duties of the Secretary are wholly distinct from those of the Editor, whom the place of residence of that officer cannot in any way concern; that the proposed changes emanate entirely from the provincial members of Council, aim solely at securing a more effective scheme and economical conduct of the business and financial matters of the Association, and in no way alter or affect the duties and relations of the Editor.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
ANNUAL MEETING.

THE Thirty-ninth Annual Meeting of the British Medical Association will be held in Plymouth, on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th of August next.

President—E. CHARLTON, M.D., D.C.L., Physician to the New-castle-upon-Tyne Infirmary.

President-elect—JOHN WHIPPLE, Esq., F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital.

An *Address in Medicine* will be delivered by GEORGE JOHNSON, M.D., F.R.C.P., Professor of Medicine in King's College, London.

An *Address in Surgery* will be delivered by JOSEPH LISTER, Esq., F.R.S., Professor of Clinical Surgery in the University of Edinburgh.

Notices of Motion.—The following notices have been given.

The PRESIDENT OF THE COUNCIL: Rule 4. To insert "President-elect", and to omit "Secretary".—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting."—Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary".—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District", and to erase the words "the Secretary of the Association".—Rule 9. To omit the words between "The President of the Council" and "shall be elected"—Rule 10. To omit the words between "The Treasurer" and "shall be elected".—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office". To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting".—Rule 13. To erase the words "Secretary shall call", and to substitute "President of Council shall direct to be called".—Rule 14. Between "shall" and "be recommended", to insert "express his desire in writing, and shall be".—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea". To erase the words after "each member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding".—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association".—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and".

Dr. STEELE (Liverpool): Election of Committee of Council. Every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: "I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed) ———." Together with a nomination-paper signed by six members of the Association, in the following terms: "We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association." The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the BRITISH MEDICAL JOURNAL not later than months prior to the Annual Meeting of the Association.

Mr. NICHOLSON (Hull): To alter Law 16, line 2. For "three", insert "two".

Dr. WADE (Birmingham): In Law 8, Paragraph No. 3, of the duties of Council, to alter "ten" into "twenty-five"; and to omit the words "and one Secretary from each Branch".

Gentlemen desirous of reading papers, cases, or any other communications, are requested to give notice of the same to the General Secretary at their earliest convenience.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary*.
13, Newhall Street, Birmingham, June 13th, 1871.

NORTH WALES BRANCH.

THE twenty-second annual meeting of the above Branch will be held at the Castle Hotel, Ruthin, on Tuesday, July 4th, at 12 o'clock; J. R. JENKINS, M.D., *President*.

The dinner will take place about 4 P.M., at the usual charge.

Gentlemen having papers or cases to communicate, and who intend dining, will much oblige by sending *early* intimation to the Secretary.

D. KENT JONES, *Honorary Secretary*.

Beaumaris, June 14th, 1871.

WEST SOMERSET BRANCH.

THE annual meeting of the above Branch will be held at the Royal Clarence Hotel, Bridgewater, on Tuesday, July 4th, at 2 P.M.; J. CORNWALL, Esq., Ashcott, retiring President; W. H. AXFORD, M.B., Bridgewater, *President-elect*.

The dinner-hour is fixed at half-past five o'clock. Tickets 5s. each, exclusive of wine and waiters.

Gentlemen intending to be present, or wishing to read papers, are requested to inform the Secretary on or before the 30th instant.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, June 14th, 1871.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE first annual meeting of the above Branch will be held on July 5th, at the Swansea Hospital, at 1.30 P.M.: *President*, GEORGE PADLEY, L.R.C.P.Lond.

Dinner will be provided at the Mackworth Hotel at 5 P.M. Tickets, 6s. 6d. each.

Members desirous of reading papers or notes of cases, are requested to communicate the titles at as early a date as possible to one of the undersigned.

A modification of Rule No. 2 of the Branch will be proposed at the meeting.

The Council will meet at 12.30 P.M.

Members of the Branch may introduce members of the profession to the annual meeting and dinner.

All members intending to join the latter, will oblige by sending to one of the Honorary Secretaries a communication to that effect on or before the 30th inst., so that arrangements may be made and tickets reserved.

A. DAVIES. } *Honorary Secretaries*.
A. SHEEN, M.D. }

June 14th, 1871.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held on Thursday, July 13th, 1871, at the Institution at the top of Park Street, Bristol, at 4.45 P.M., when C. BLEECK, Esq., will resign the Chair to CROSBY LEONARD, Esq., *President-elect*, who will deliver an address.

Members having any communications for the meeting are requested to give notice of them to the Secretaries.

Members who have not paid their subscriptions, are requested to do so to the Local Secretaries at or before the annual meeting, in order that the accounts may be made up before the anniversary meeting of the Association.

The dinner will be held at the Royal Hotel, College Green, Bristol, at 6.30 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. Wines at moderate charges.

It would help the arrangements at the Bristol annual meeting, if those gentlemen who intend to be present at the annual meeting of the Association in Plymouth would kindly inform the Secretaries.

The Bristol Secretary particularly requests that those members who intend to be present at the dinner, will send him their names before Monday, July 10th, in order that the necessary arrangements may be completed.

E. C. BOARD, Clifton. } *Honorary Secretaries*.
R. S. FOWLER, Bath. }

CUMBERLAND AND WESTMORLAND BRANCH.

THE third annual meeting of the above Branch will be held at the Bush Hotel, Carlisle, on Wednesday, July 12th, at 1 o'clock. *President*, Dr. P'ANSON, Whitehaven; *President-elect*, Dr. ELLIOT, Carlisle.

Dinner will be provided at 4.30, at the usual charge.

Gentlemen having papers or cases to communicate, will greatly oblige by sending early intimation to

HENRY BARNES, M.D., *Honorary Secretary*.

Carlisle, June 20th, 1871.

METROPOLITAN COUNTIES BRANCH.

THE nineteenth annual meeting of this Branch will be held at the Castle Hotel, Windsor, on Friday, July 14th, at 3 P.M. *President for 1870-71, T. HECKSTALL SMITH, Esq., F.R.C.S.; President-elect for 1871-72, J. RUSSELL REYNOLDS, M.D., F.R.S.*

Dinner at the Hotel at 5.30 P.M.

A. P. STEWART, M.D.

ALEXANDER HENRY, M.D.

} *Honorary Secretaries.*

75, Grosvenor Street, June 13th, 1871.

THE PROPOSED ALTERATIONS IN THE LAWS.

As many members of the Association may not have ready at hand the means of understanding the modifications proposed to be introduced into the Laws of the Association, we subjoin a copy of those laws which it is intended to alter, together with the alterations which will be submitted to the annual meeting. The words enclosed within brackets, in the ordinary Roman type, are to be omitted; the bracketed words in italics are to be inserted. In all cases, except where otherwise specified, the alterations are brought forward by the President of Council, at the request of the Committee of Council.

4. *Council and Officers.*—The Association shall be governed by a Council. The officers of the Association shall be—1. A President; [2. A President-elect]; 2. Vice-Presidents; 3. President of the Council; 4. Treasurer; [5. Secretary.]

6. *Vice-Presidents.*—[The Vice-Presidents of the Association, who have been appointed after fulfilling the office of President, shall continue to enjoy the office for life; and the office of Vice-President shall be hereafter conferred, as an honorary distinction for life, on the retiring President, by a vote of the members at the Annual meeting.] [*Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting*]

7. *Council.*—The Council shall consist of the President, the President-elect, the President of Council, [*the Vice-Presidents, and*] the Treasurer [and the Secretary of the Association], together with those members who shall be elected annually, according to Law 8. Its meetings shall be held at the time and place of the Annual Meeting, and at other times and places, if summoned by the President of the Council, or by the Committee of Council, or by a requisition signed by twenty members of Council.

8. *Election and Duties of Council.**—Each [District] Branch shall, in such manner as they think fit, before the General Annual Meeting, elect members who shall represent the Branch in the Council for the ensuing year, according to the following scheme. In a Branch consisting of not less than twenty members, one member shall be elected as representative, in addition to the Honorary Secretary. If the members amount to more than twenty, for every number of twenty additional members, each Branch shall be entitled to choose one additional representative. A complete list of the Members thus chosen shall be sent to the Secretary at least a fortnight before the Annual Meeting, and they shall continue in office till the close of the official year, when they may be either reappointed or superseded. The duties of the Council shall be:—1. To agree upon a Report to be presented to the Annual General Meeting of the Association. 2. To nominate a President, to be submitted for election to the Annual Meeting. 3. To elect by voting papers [ten] [*twenty-five*]† members of the Council, who, together with the President of the Association for the year, the Vice-Presidents, the President-elect, the President of Council, the Treasurer, [the Secretary of the Association], [and one Secretary from each Branch]‡ shall constitute the Committee of Council for the ensuing year. 4. To propose the place of meeting of the Association for the ensuing year. 5. To nominate gentlemen to read such addresses as may be deemed expedient at the Annual Meeting of the ensuing year. 6. To determine the order of business of the General Meeting, so far as that is not determined by the laws relating to General Meetings.

9. *President of the Council.*—The President of the Council [shall be, in the first instance, Sir Charles Hastings, permanently; and on any vacancy occurring, the President] shall be elected by the Council, at the Annual Meeting, for a term of three years.

10. *Treasurer.*—The Treasurer [shall be, in the first instance, Sir

Charles Hastings, permanently; and on any vacancy occurring, the Treasurer] shall be elected at a General Meeting of the Association, and shall hold his office during pleasure.

11. *Secretary.*—There shall be one paid Secretary [resident in some convenient locality, so as to communicate readily with the President of the Council and the Committee of Council] [*who shall reside in London, and devote his whole time to the business management of the Association and the Journal office*]. His duties shall be to be present at the meetings of the Association, of the Council, and of the Committee of Council; to record their minutes; to conduct the correspondence of the Association; to superintend the collection of subscriptions, and the enforcement of the laws as regards those in arrear; and [otherwise] to obey the directions of the Council and the Committee of Council. The Secretary shall be elected at [an Annual or Special] [*each Annual*] Meeting of the Association. The offices of Secretary and Editor of the JOURNAL shall not be held by the same person.

12. *Committee of Council.*—The Committee of Council shall manage the affairs of the Association in the intervals between the General Meetings; they shall meet not less than twice in the year, and shall be presided over by the President of the Council; or, in his absence, by a Chairman appointed by the meeting. The Committee of Council shall appoint the Editor of the JOURNAL, who shall be responsible to them for its management: they shall direct any other publications of the Association, and shall take cognisance of any matter which may require immediate decision. Five members to be a quorum. [The Secretary shall call a meeting of the Committee] [*The President of Council shall direct a meeting of the Committee to be called*] at any time on receiving a requisition from five of its members, the object for which the meeting is called being specified.

14. *Admission of Members.*—Any qualified medical practitioner, not disqualified by any bye-law, who shall [*express his desire in writing and shall*] be recommended as eligible by any [three] [*two*]* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch; provided he shall have the votes of three-fourths of those present.

15. *Subscription.*—The Subscription to the Association shall be One Guinea annually; and each member, on paying his subscription, shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary, on or before the 1st of December previous. If any member's subscription remain unpaid twelve months after it shall have become due, the publications of the Society shall be withheld from such member [until his arrears be paid] [*so long as his subscription remains unpaid, provided due notice shall have been given of such withholding. Members may be admitted on and after July 1st in each year; and the subscription for such part of a year shall be half a guinea*].

16. The name of no member shall remain on the books of the Association, whose arrears extend over three years; but the omission of the name from the list of members shall not be deemed, either in honour or equity, to relieve any member from his [liability for the subscriptions due for the period during which he has availed himself of the privileges of membership] [*liabilities to the Association*].

24. *Publications.*—The JOURNAL, under the title of the "BRITISH MEDICAL JOURNAL: BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION," shall be published weekly in London, and shall be conducted by a paid Editor, who shall be responsible for all that appears in its pages, except such matter as may be printed by direction of the Council or Committee of Council. The JOURNAL shall contain papers on medical science, and shall be considered the medium of communication between the members of the Association. In it shall be inserted all intimations of places and times of meetings, whether of the Association or the Branches; notices of motions, etc.; at least once in each year a list of the members of the Association [*and a copy of the Laws*]; and any other Association business that the Council or Committee of Council may direct. *Transactions* shall be published occasionally, if the funds of the Association permit.

COMMITTEE ON PARLIAMENTARY BILLS.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held on Wednesday, June 28th, at 37, Soho Square: Present, Mr. Michael, in the Chair; Mr. Lord, Dr. Stewart, Dr. Henry, Dr. Davey (Bristol), Mr. Ernest Hart, Mr. Benson Baker.

The Vaccination Act Amendment Bill, the Pharmacy Act Amend-

* The alteration proposed by Dr. Steele (see preceding page) must be read in connection with this Law.

† Dr. Wade.

‡ The omission of the words "and one Secretary from each Branch", is proposed by Dr. Wade.

* Mr. Nicholson.

ment Bill, and the Registration of Births Amendment Bill, were considered. The following resolutions were unanimously passed.

It was moved by Dr. STEWART, and seconded by Mr. LORD—"That the purchase of immunity from the operation of the Act provided by Clause 10 of the Vaccination Amendment Bill, is vicious in principle, and that such clause should be expunged."

It was moved by Dr. STEWART, and seconded by Dr. DAVEY—"That, considering the expected action next year of the Government in reference to the recommendations of the Royal Sanitary Commission, and the anticipated adoption of a comprehensive plan of sanitary organisation for the whole kingdom, it is inexpedient to create a new class of health-officers with permanent claims, and that the appointment of vaccination officers should therefore be limited to one year from the commencement of the Act."

Regarding the Pharmacy Act Amendment Bill, Mr. LORD moved, and Mr. BENSON BAKER seconded—"That it is desirable that provision should be made for the due carrying out the regulations for keeping, dispensing, and selling of poisons, and that for this purpose a clause should be introduced providing inspectors to ascertain that they are carried out."

The Registration of Births Amendment Bill was considered and approved; but it was stated that it would be opposed this year on the ground that it was piecemeal legislation, and that a larger measure, including it was under consideration, and expected to pass next year.

The Secretaries were directed to forward copies of the above resolutions to the Lord President of the Privy Council.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ANNUAL MEETING.

THE seventeenth annual meeting was held at the Great Western Hotel, Birmingham, on Friday, June 16th, at 3 P.M.; OLIVER PEMBERTON, Esq., President of the Branch, in the Chair. Seventy-eight members and visitors were also present. Dr. Thomas Underhill, in resigning the chair to his successor, Mr. Pemberton, thanked the members for their courtesy during his year of office.

Vote of thanks.—A cordial vote of thanks was passed to Dr. Underhill for the ability, energy, and courtesy with which he had discharged his duties of President of the Branch during the past year.

Report of Council.—Mr. T. H. BARTLEET, Honorary Secretary, read the report of the Council of the Branch. "The position of the Birmingham and Midland Counties Branch of the British Medical Association again justifies your Council in congratulating its members on its continued progress and success. The Branch now contains 252 members. During the past year, forty new members have been elected; thirty-one have either resigned, left the neighbourhood, or been erased for non-payment of subscriptions, and four have been removed by death. Of these, Mr. Chesterman of Banbury, and Mr. Coleman of Wolverhampton, were old and respected members of this Branch, the latter having for many years been a member of its Council. Mr. Llewellyn Summers and Dr. Lumley Earle were recent members, and their early death is deeply regretted. During the past year, six general meetings and one special meeting of the Branch have been held; and at no previous period has more interest in the proceedings and more good feeling among the members been displayed. The list of papers, etc., shows the work of the session; but a categorical statement in no degree describes the scientific value of the papers, or the vigour of the discussions which followed their reading. [The report here contained a list of the papers read.] The pathological and clinical section has continued its important work. It is a great help to the Branch meetings, at which time often failed for the exhibition and discussion of pathological specimens and living cases. It has moreover, gathered to itself a *clientèle* of active and enthusiastic workers in pathology and clinical medicine and surgery.

"Your Council warmly acknowledges that this success is in no small degree due to the energy of the Chairman and Secretaries of the section.

"Your Council suggests that, should its resources permit, some portion of the funds of the British Medical Association should annually be set aside for the encouragement of original research in medicine, surgery, and the allied sciences; and it desires earnestly to represent to the Council of the Association the eminent claims of one of our Branch members, Dr. Richard Norris, to such a recognition of his labours. The able original work of Dr. Norris in the investigation of the Physiology of the Blood is well known to the scientific world, and to this Society in particular, by the elaborate and interesting experimental demonstrations which he has more than once given at our Branch meetings.

"Your Council desires to allude to the invitation sent by this Branch—called together at a special meeting—to the British Medical Association to hold in Birmingham its annual meeting in the year 1872. The

Committee of Council of the Association has expressed its approval and gratification, and there is every probability that the invitation will be accepted by the Association at its annual meeting at Plymouth in August next. In order to make the annual meeting, should it be held in Birmingham, thoroughly successful, the cordial help and support of all the members of the Branch will be essential. And your Council, whilst confidently relying upon this, assures the members of the Branch that no efforts on its part and on the part of the officers of the Branch will be spared to lead the meeting to an eminently successful and satisfactory ending.

"Your Council desires to impress upon the members the necessity of increasing the members of the Branch and of the Parent Association. To aid this, special lists have been prepared of qualified medical practitioners residing in this and the neighbouring counties, who do not as yet belong to the Association; and to these, to the number of five hundred, a special address, signed by the President, the President-elect, and the Honorary Secretary of the Branch, has been forwarded, and with it our list of members, an invitation to our annual meeting, and a form of proposal for membership. In the early part of the session, nearly a hundred special circulars were sent to members of the Parent Association who were living in the district, and who were not members of our Branch. By these means the advantages of our Association and Branch will have been widely disseminated; but your Council feels that much more success is likely to follow the personal representation by its members of these advantages to such professional friends as they can influence, who as yet do not belong to the Association. Such influence your Council urges its members to exert, until hardly a member of the profession in this great district is to be found outside our ranks.

"Your Council desires to report that it has carried out, to the best of its ability, the wishes of the Branch in regard to the election of its Council and officers.

"In conclusion, your Council has every reason to anticipate in the coming year a session of activity, energy, and interest, in no way less than that displayed in former years."

The Treasurer, Mr. T. WATKIN WILLIAMS, read his report, which showed a balance in hand of £12:7.

The reports of the Council and of the Treasurer were received, adopted, and ordered to be entered upon the Minutes.

Officers and Council.—Dr. FOSTER read the report of the Scrutineers appointed to examine the voting papers for the election of the officers and Council of the Branch. *President-elect:* Thomas Ebbage, Esq., Leamington. *Treasurer:* T. Watkin Williams, Esq. *Secretary:* T. H. Bartleet, M.B. *Country Members of Council:* F. I. Bennett, L.R.C.P.Ed., Droitwich; G. Fowler Bodington, M.D., Sutton Coldfield; W. C. Garman, Esq., Wednesbury; A. J. Harrison, M.B., Walsall; J. H. Houghton, Esq., Dudley; Vincent Jackson, Esq., Wolverhampton; E. Malins, M.D., Cradley; J. Manley, Esq., West Bromwich. *Town Members of Council:* M. H. Clayton, Esq.; A. Fleming, M.D.; B. W. Foster, M.D.; T. P. Heslop, M.D.; J. Hickbotham, L.R.C.P.Ed.; Furneaux Jordan, Esq.; A. Oakes, Esq.; James Russell, M.D.

Representatives of the Branch in the Council of the Association: Alfred Baker, Esq.; M. H. Clayton, Esq.; A. Fleming, M.D.; B. W. Foster, M.D.; J. S. Gamgee, Esq.; J. Manley, Esq.; C. A. Newnham, Esq. (Wolverhampton); Oliver Pemberton, Esq.; J. Russell, M.D.; J. Vose Solomon, Esq.; F. Turton, Esq. (Wolverhampton); Thomas Underhill, Esq. (Great Bridge); T. H. Bartleet, Esq., *ex-officio*.

Votes of Thanks.—The cordial thanks of the meeting were tendered to Dr. Foster and Mr. Manley, the Scrutineers appointed by the Council; also to Mr. Alfred Baker, the Chairman, Dr. Foster and Mr. Vincent Jackson, the Honorary Secretaries, and Mr. Furneaux Jordan, the Treasurer, of the Pathological and Clinical Section. Votes of thanks were also passed to the retiring Council, to the Representatives of the Branch in the General Council of the Association, to the Treasurer, Mr. T. W. Williams, and to the Honorary Secretary, Mr. T. H. Bartleet.

President's Address.—Mr. OLIVER PEMBERTON, the President, then delivered an able and interesting address, in which he referred to the rise and progress of this Branch, which from fifty members in 1855 had increased to two hundred and fifty, representing every branch of the profession in Warwick, Stafford, and Worcester. The gradual narrowing of the gulf which once existed between the physician and the general practitioner, the proper government of hospitals, and other topics, forced upon Mr. Pemberton in the daily working of his medical life, were touched upon in the address, the reading of which was well received.

On the motion of Mr. CARDEN, of Worcester, seconded by Mr. FURNEAUX JORDAN, the best thanks of the meeting were given to the President, Mr. Pemberton, for his courtesy in the chair, and also

for the interesting and able address, with a request that it might be published.

Dinner.—The members and visitors, to the number of fifty-four, afterwards dined together at the Great Western Hotel, Mr. Pemberton occupying the chair, and Mr. Ebbage the vice-chair.

SPECIAL CORRESPONDENCE.

BERLIN.

The "Einzug" or Triumphal Entry.—The Small-pox Wards of the Charité Hospital.—Ergotine in Epistaxis.—Addison's Disease.—Defective Sanitary Conditions.

THE "Einzug," or triumphal return of the troops to Berlin, although somewhat wanting in colour and effect, was a great and deserved success, but the intense heat must have made it a trying business for those more immediately employed. The men marched with wonderful steadiness, and with a spring and vivacity very creditable after a hard and hot walk of nearly six miles. I saw one poor fellow, however, go down as if shot, and have since learnt that twelve cases of sunstroke occurred during the day's proceedings, three of which have died, and the rest are not expected to recover. In addition to this, Prince Albrecht, brother of the Emperor, was seized with paralysis shortly after his return home, but is, I believe, in a fair way towards convalescence. Now, if these disastrous consequences happened to the Prussians, who are in first-rate war condition, and dressed with some regard to freedom of movement, how terrible would have been the mortality among an equal number of British troops. The uniforms of our men fit them with the exact precision of tailors' dummies; all variety of form is lost in tightness and padding, and if they look "smart" on parade, it matters little how useless they are in the field. As a consequence of this, they fall out by scores at the most ordinary drill, and, when occasion demands some more extraordinary exertion, we are horrified by the elaborate comments of our newspapers on the "fatal march" to this or that place. Now although, when we meet a soldier here, our first impression is that he wants the perfection of military bearing to which we are accustomed, closer inspection shows that the best material is there, unhampered by the paralysing influence of over-tight clothes. And, as I said before, after a long and exhausting walk, and being more than ten hours under arms, the men stepped along as though they had just left their barrack-rooms.

Another source of danger lay in the very slippery state of the streets. When the cavalry swung rapidly round out of the Linden to mass up in the open platz, horse after horse fell, and many others were seen skating about as though on ice. Not fewer than a hundred must thus have gone down in the course of the day; and although it would seem almost inevitable from the confused way in which man and beast struggled helplessly on the ground, that some bad accident must occur, every trooper, without exception, remounted and rode on to join his comrades; and I must say that the activity displayed under such trying circumstances, was among the most notable features of the affair.

A day or two ago, I paid a visit to that portion of the Charité Hospital devoted to the treatment of small-pox. It is a small detached out-house behind the main building, and about as little adapted for the accommodation of infectious disease as we can well imagine. Some of the rooms are mere garrets, and much over-crowded; and were it not for the enlightened views of Dr. Zuelzer, who keeps the windows open night and day, we might expect to hear of very bad results. As it was, however, the wards were perfectly sweet, much more so, in fact, than those of the main hospital, which are invariably "stuffy," and very often offensive from the smell of perspiration. The cases which I saw were mostly slight, but one very well marked instance of the so-called "scarlatinous small-pox" had been admitted that morning, exhibiting an eruption hardly to be distinguished from true scarlet fever. It was evidently a form of the hæmorrhagic variety of the disease, as petechial spots were appearing on the skin, and both sputa and urine consisted of almost pure blood. The treatment usually adopted consists of the wet sheet with cold affusion, and insufflation of alum for throat-complications: the ratio of success has hitherto been very favourable.

I see in your impression for June 3rd, a case by Mr. Jamieson, of hæmoptysis treated by subcutaneous injection of ergotine, as recommended by Dr. Balfour. It may, therefore, be interesting to mention that Professor Traube not long ago prescribed this application in very obstinate epistaxis, the result of secondary purpura after typhoid fever.

An interesting example of Addison's disease had lately occurred in the practice of Professor Frerichs. A woman was brought to his *clinique*, suffering from weakness, pain in the back, anæmia, and loss of appetite; her only previous illness being intermittent fever, traces of

which still remained in some enlargement of the spleen. Observing a marked amount of uræmic pigmentation of the skin, especially about the angle of the mouth and forehead, the diagnosis was made accordingly, the Professor inclining to the theory which explains the progressive feebleness by an implication of the solar plexus. At the necropsy, which soon afterwards took place, both suprarenal capsules were found to be infiltrated with caseous deposit in a very marked degree, and the sympathetic nerves entering their substance were thickened.

The heat is now becoming very considerable, and the smells so bad that I am seriously considering whether it is safe to remain any longer here. At every turn, and even in the best neighbourhoods, we are met by the most sickening stench; and, however these may affect the acclimatised inhabitants of the place, they must exert a lowering and depressing influence on strangers. A friend, who is staying here just now, has been quite knocked up by them, and matters are not mended by the very unsanitary water-closet arrangements prevailing in Berlin. If such things exist even in the more modern parts of the town, what must be the state of affairs in the dwellings of the poor? What power of resistance can they have against the ravages of epidemic disease?

Berlin, June 22nd.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

VACCINATION IN THE LANCASTER UNION.

DR. BEARD, the Privy Council's Inspector of Vaccination, has been engaged several days in making a most careful investigation with regard to vaccination in the Lancaster Union. At a meeting of the Guardians, he expressed his satisfaction with the careful manner in which the law had been carried out by them. The following statement by the Clerk clearly exemplifies the success of their efforts to render the practice of vaccination universal in the Union.

During the two years ended June 30th, 1870, 2,120 children were born. Of these, 158, or 7.45 per cent., died before successful vaccination; 52, or 2.65 per cent., ceased to reside in the Union; 1,897, or 96.69 per cent., were, according to medical certificates, successfully vaccinated; and the remainder—only 13, or .66 per cent.—are still unvaccinated on account of unfitness, insusceptibility, etc. Deducting ten deaths and removals, the proportions per cent. are: successfully vaccinated, 99.32; unvaccinated, .68.

The result of the constant attention of the Guardians to vaccination has been most successful. The deaths from small-pox in Lancaster during the three years 1838, 1839, and 1840, were 54. The Guardians were charged in 1840 with the execution of the vaccination laws, and have strictly carried them out ever since; and there has not been a fatal case of small-pox in Lancaster since June 1862.

VACANCIES.

GUISBOROUGH UNION, Yorkshire—Medical Officer for the Danby District.
HOLSWORTHY UNION, Devon—Medical Officer and Public Vaccinator for District No. 4.
WIRRAL UNION, Cheshire—Medical Officer and Public Vaccinator for the Upton District.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, June 19th.

LUNACY REGULATION AMENDMENT BILL.—On the order for the third reading of this Bill, Lord Cairns said he looked upon it as a somewhat dangerous measure, for it introduced a new state of things into legislation with regard to lunacy, by declaring that persons of weak mind should come within its operation. That was a somewhat vague and indefinite term, and it might lead to very disagreeable, or even improper action. He hoped the noble and learned lord (the Lord Chancellor) who had charge of the bill would pause before he determined to carry it out.—The Lord Chancellor was surprised at the course taken by the noble and learned lord, who had never before given any intimation of the least objection to the bill. The bill was intended to remedy the defect in the existing law occasioned by the fact that people in a middle state of mind, who could not be said to be insane, but who yet were unable to manage their own property, and who could not give receipts, were not legislated for. The measure could not have any very dangerous effect, for property could only be dealt with for six months

under it, and he thought it was extremely desirable that such a measure should be passed.—The bill was then read a third time and passed.

HOUSE OF COMMONS.—Thursday, June 22nd.

THE VACCINATION ACT AMENDMENT BILL was read a second time.

OBITUARY.

OLLIVE SIMS SHAW, M.R.C.S., OF STOCKPORT.

ANOTHER death has to be deplored in the person of this promising young surgeon, whose career has been prematurely cut short by typhus fever. Originally articled to a general practitioner at Stockport, and a pupil of the Infirmary of that town, Mr. Shaw finished his curriculum at Guy's Hospital; and, after being Assistant Medical Officer at the Gloucester Asylum, became House-Surgeon to the West Derby Union Hospital at Liverpool, where, overtaken by physical labour consequent on the severity of the present epidemic, he fell victim, after a few days' illness, to typhus fever—the disease which he was called upon to treat in others. Of amiable manners, frank and intelligent demeanour, untiring assiduity in his work, and strictly conscientious in his relations towards others, Mr. Shaw carried with him to the grave the affection and sympathy of all surrounding him.

ROBERT DAUN, M.D., EDINBURGH.

DR. ROBERT DAUN, Deputy Inspector of Hospitals, was born at Inch (Aberdeenshire) on the 16th of April, 1785, and was the eldest son of the clergyman of that parish. He received his early education at the Grammar school of Elgin, and pursued his medical studies at the University of Aberdeen. He passed his examination in London, and entered the royal army as assistant-surgeon at the early age of nineteen, almost his first service being in India, when he was attached to the 22nd Light Dragoons, and afterwards to the 59th Foot. On his return to England in the year 1814, he exchanged into the Scots Greys, and with them was present at the battle of Waterloo, and afterwards with the army of occupation in France. He went to India a second time about 1820, and served there for some years; returning finally to Europe in 1825. His great experience in the treatment of cholera caused his selection as government inspector, in which capacity he was sent to Sunderland and the other infected districts on the occurrence of the first great epidemic of the disease in 1831-32. For his services on this occasion he received the thanks of government and sundry other honorary distinctions. He was also frequently called into consultation on cases apparently hopeless, and in two instances at least succeeded in restoring the sufferer by the use of saline injections. He then retired into private life, from which he did not again emerge, residing successively in London, St. Andrew's, Aberdeen, and latterly in Edinburgh.

In private life his conduct and character were of the most amiable type; which, added to judicious benevolence, rendered his society most attractive to those who were fortunate enough to enjoy his intimacy. His reasoning powers were of a high order, his favourite pursuits being the higher mathematics and theology.

Dr. Daun was, at the time of his death, one of the Senior Fellows of the Royal College of Physicians in London, Fellow of the Royal Society of Edinburgh, and a member of various other learned societies.

MEDICAL NEWS.

THE GENERAL MEDICAL COUNCIL.

WE believe that Dr. Gull has been nominated by the Crown as one of its representatives in the General Medical Council, in the room of Dr. Rumsey, resigned. Personally, the appointment will be viewed with favour; but we must express regret that a provincial member of the profession and one more intimately acquainted has not been chosen as the successor of Hastings and Rumsey.

THE SESSION OF THE MEDICAL COUNCIL.

THE General Medical Council of Registration and Education will commence its annual session on Tuesday next, at the Royal College of Physicians. The business on the paper includes little of importance beside the Report of the Committee of Council on Education. There are some names to be struck off the *Register*; one or two petitions for

restoration to the *Register*; communications from Sydney, as to the foundation of a School of Medicine; and other matters of minor importance.

UNIVERSITY OF CAMBRIDGE.—Second M.B. Examination, Easter Term, 1871. Examined and approved.

Hood, Caius
Kilner, B.A., St. John's

Lees, B.A., Trinity
Maxwell, B.A., King's

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received his certificate to practise, on Thursday, June 22nd, 1871.

Ellis, Edward Thomas Charles, Bexley Heath, Kent

As Assistants in compounding and dispensing medicines.

Dunn, Henry, Shipley, near Leeds
Tomlin, Albert Roberts, Barnsley
Williams, Jabez Vivian, St. Ives, Cornwall

MEDICAL VACANCIES.

THE following vacancies are announced:—

BOYLE UNION, co. Roscommon—Apothecary to the Workhouse.
BROADMOOR CRIMINAL LUNATIC ASYLUM—Assistant Medical Officer.
CUMBERLAND AND WESTMORLAND CONVALESCENT INSTITUTION, Silloth—Medical Attendant.
DUNDEE ROYAL INFIRMARY—Surgeon, West District.
DUNSHAUGHLIN UNION, co. Meath—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Killeen Dispensary District.
GATESHEAD DISPENSARY—Resident Medical Officer.
GENERAL LYING-IN HOSPITAL—Physician-Accoucheur.
GREAT YARMOUTH, Norfolk (Parish of)—Medical Officer for the North District.
HUDDERSFIELD and UPPER AGRIGG INFIRMARY—Physician.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
KILKEEL UNION, co. Down—Medical Officer for the Workhouse and Fever Infirmary; Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilkeel Dispensary District.
LANCASHIRE LUNATIC ASYLUM—Assistant Medical Officer.
LEEDS PUBLIC DISPENSARY—Junior Resident Medical Officer.
LIVERPOOL ROYAL INFIRMARY—Physician.
LURGAN UNION, co. Armagh—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Waringstown Dispensary District.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Assistant-Physician.
MIDDLESEX HOSPITAL—Physician; Assistant-Surgeon.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Lecturer on Physiology, including Practical Physiology.
RATHDOWN UNION, co. Dublin—Medical Officer for First Division of the Kingstown Dispensary District.
QUEEN'S COLLEGE, Birmingham—Joint Professor of Anatomy.
ST. MARTIN'S-IN-THE-FIELDS—Medical Officer of Health.
ST. MARY'S HOSPITAL MEDICAL SCHOOL—Medical Tutor and Pathologist.
ST. THOMAS'S HOSPITAL—Assistant-Surgeon.

[For Poor-law Vacancies see Poor-law Department.]

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

McKECHNIE, Daniel, L.F.P.S. Glasg., appointed Medical Officer and Public Vaccinator for the Escomb District of the Bishop Auckland Union.
MANSON, R. T., M.R.C.S.E., L.R.C.P.Ed., appointed Medical Officer and Public Vaccinator for the Howden District of the Bishop Auckland Union.
*NICOLSON, David, M.D., late Assistant Medical Officer to the Convict Prison at Portland, appointed Assistant Medical Officer to H.M. Invalid Prison at Woking.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

MILES.—At Plympton Maurice, Devon, on June 26th, the wife of *George Miles, Esq., Surgeon, of a son.

DEATHS

ASBURY, Jacob Vale, Esq., Surgeon, at Enfield, aged 79, on June 21st.
*BEALE, Lionel John, Esq., Surgeon, at 108, Long Acre, aged 74, on June 23rd.
*DUNDAS, Robert, M.D., at 14, Gloucester Place, Hyde Park, on June 25th.
GOWING, William G., Esq., Surgeon, at Alfred Place West, South Kensington, aged 79, on June 12th.
HILL, Thomas, Esq., Surgeon, at Portobello, Edinburgh, aged 68, on June 10th.
LAMBE, Lacon W., M.D., of Henwood, Dilwyn, Herefordshire, at Torquay, aged 73, on June 20th.

FOR the future, the operations at Charing Cross Hospital will take place on Saturdays from 1 to 2 o'clock.

THE Infirmary of the Spalding Union Workhouse is to be enlarged at an expense of £1297.

DERBYSHIRE GENERAL INFIRMARY.—It is proposed to increase the medical staff by the appointment of a resident assistant house-surgeon, two dental surgeons, and a non-resident dispenser.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.

WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.

THURSDAY ... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.

FRIDAY Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY ... St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 1 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London. 7.15 P.M., Council Meeting. 8 P.M., Dr. Tilt, "On the Diagnosis of the least known varieties of Uterine Inflammation"; Dr. Copeman, "Notes of Cases of Interest"; and other papers.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

A YOUNG MEMBER.—The Midwifery Board of the College of Surgeons will not meet again until August, unless there should be several candidates desirous of obtaining the "L.M." Inquire at the College after the ensuing "pass" examinations, if that month is not early enough for you.

DR. KIDD writes: "I think there have been very many cases of death from chloroform noted in the journals where it has been specified that the tongue has been drawn forwards with artery-forceps, but all to no avail."

A STUDENT'S GRIEVANCE.

SIR,—I think it is a great shame that some men should be allowed to pass their preliminaries piecemeal in Scotland, while those who go to London have to pass all their subjects at once. I know two or three cases where a youth has gone to Glasgow or Edinburgh and passed in two or three subjects, and gone again next year and passed some more, and so on; and I do not consider it at all fair to those who pass at London, where it is a harder examination, and they have to pass it all at once; and I think it is a thing which ought to be noticed.

I am, etc., ONE WHO PASSED IN LONDON.

F.R.C.S.—On inquiry, we find your address is not known at the College, hence the cause of your not receiving the usual notice. You will, however, be able to record your votes. There are four vacancies.

ARMY MEDICAL OFFICERS.

SIR,—Mr. Cardwell has stated in the House of Commons, in the discussion on the Army Regulation Bill, that in future the promotion of combatant officers is to be by selection for merit, and not by seniority. The rule at present, as regards medical officers of the army, is to let promotion, up to the rank of Surgeon-Major, depend on seniority, except in some very exceptional cases. Would it not be an act of justice to army medical officers if the Government would consent to apply the principle of promotion by selection to the medical as well as to the combatant officers? If you were to lend your aid in advocacy of this principle, probably it might be admitted when the Bill is under the consideration of the Lords.

I am, etc., T. S.

MR. G. B. SHAW writes:—"A 'Member' will find the formula of preparation of the syrup of phosphate of iron, quinine, and strychnia, in Squire's *Companion to the British Pharmacopæia*, 7th edition.

DEATH FROM CHLOROFORM.

MR. G. C. COLES, in a note with which he favours us, referring to the death from chloroform at the Great Northern Hospital, of which we have already given an account, states that: "The child's tongue was immediately seized with a pair of artery forceps, pulled forwards to the right side of the mouth as far as possible, and retained in that position the whole time."

A COUNTRY FELLOW.—The election of Fellows into the Council of the Royal College of Surgeons on Thursday next will not close at 3 o'clock; and, as ten minutes must elapse after recording the last vote, you will no doubt be in time. Mr. Spencer Wells polled 80 votes last year, including 9 plumpers; 234 Fellows voted, about 70 less than the previous year.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

F.L.S. (Sidmouth).—If the result of the recent Arts examination should be unfavourable to your son, perhaps he may be more fortunate at the September examination at Apothecaries' Hall, in which case he could enter on his hospital studies the following October, as you propose.

A STAFF-SURGEON.—Not having signed the Bye-Laws since your election as a Fellow of the College, you will not be allowed to record your votes at the annual election of Fellows into the Council of the College; you can, however, attend the festival the same evening. Mr. T. Carr Jackson is the Honorary Secretary.

PRUDENTIAL PREVENTION OF DISEASE.

SIR,—It has given me very great satisfaction to see, by your issue of June 10th, that Dr. Acland has, in a recent lecture at the College of Physicians, called attention to the all-important question of over-population, as the main cause of infantile mortality, disease of children, and early death. I have long felt persuaded that all our efforts in the direction of the prevention of disease must be confined to benefiting the very few, until we doctors begin to understand the neutralising effect on all progress of the reproductive natus, which we, in common with all other animals, are the subjects of. Dr. Acland has well-shown that overcrowding and all the concomitants of under-feeding, bad air, and the like, are the inevitable consequences of the present "struggle for existence", so clearly seen in our midst by any observer who is acquainted with the theories of Malthus, Mill, and Darwin. When we are aware that, from 1790 up to 1815, the population of the United States doubled its numbers in twenty-five years, due allowance being made for immigrants and their offspring, from the mere powers of fecundity inherent in the human race (when it can get food, clothing, and shelter), we can easily imagine what an intense pressure there must be of population against capital in our little islands, or throughout Europe. Ignorance of these facts, as Dr. Acland truly observes, completely confuses those who wish to reason clearly upon questions appertaining to the prevention of epidemics, or the cure of pauperism; and my own acquaintance with medical men has revealed to me that but a very few of our body are at all aware of the existence of any such "law of nature" as that discovered by Malthus about the commencement of this century. The disease of poverty is the chief of all human diseases; because it causes infantile mortality, phthisis, scrofula and fever, besides being the main source of crime and misery. Yet many writers on medical subjects seem not to have made this diagnosis, or only imperfectly to have seen it occasionally. As to what should be the therapeutics of this malady, I am not so certain. Some persons, like Dr. Acland, as it seems to me in his lecture, following Malthus, recommend prudence, or late marriages; but, then, late marriages surely often lead to prostitution, and end, in both sexes, in the lunatic asylums. Emigration, as Professor Fawcett says, is a delusion and a snare. The French prefer to limit their families to two children. Where is truth to be found amid such a mass of remedies? Discussion alone can answer us this query; and I do hope that Dr. Acland's example will tempt some equally able man to hazard a solution of this difficult question—How are over-population, and poverty and diseases thus caused, to be avoided?

I am, etc.,

CHARLES R. DRYSDALE, M.D.

99, Southampton Row, W.C., June 10th, 1871.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, June 24th; The New York Medical Record, June 15th; The Boston Medical and Surgical Journal, June 15th; The Madras Mail, April 17th; The Shield, June 24th; The Philadelphia Medical Times, June 7th; The Philadelphia Medical Independent, June 10th; The Lancaster Observer and Morecambe Chronicle, June 3rd; Supplement to the Isle of Man Times, June 17th; The Glasgow Herald, June 24th; The North British Daily Mail, June 23rd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. T. K. Chambers, London; Dr. J. Crichton Browne, Wakefield; Dr. Heaton, Leeds; Dr. Day, Torquay; Mr. G. Jones, Birmingham; Mr. R. T. Manson, Howden; Mr. G. C. Matthews, Moate; Mr. E. Gaylor, Belper; Dr. D. Nicoll, Bradford; Dr. C. Kidd, London; Dr. Farquharson, Berlin; Dr. Protheroe Smith, London; Mr. Spencer Wells, London; Dr. W. Ogle, Derby; Mr. Warren, Northampton; Mr. Donelly, Dublin; Dr. Clothier, London; Dr. Underhill, Great Bridge; Mr. S. J. Knott, London; Dr. Wade, Birmingham; Mr. Sewill, London; Dr. C. J. B. Aldis, London; Mr. Moody, London; Dr. R. Elliot, Carlisle; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Our Dublin Correspondent; Mr. William Adams, London; Mr. Holthouse, London; Mr. G. Miles, Plympton; Dr. T. T. Pyle, Sunderland; Mr. Edwin Pears, London; The Secretary of the Obstetrical Society; Mr. F. Pollard, London; Mr. J. Sampson Gamgee, Birmingham; Dr. A. W. Edis, London; Dr. Littleton, Plymouth; Dr. Skinner, Liverpool; Dr. Venables, Blackheath; Mr. Lawson Tait, Birmingham; Dr. Nicolson, Woking; Mr. Campbell De Morgan, London; Mr. Nunn, London; Mr. E. Bellamy, London; Mr. R. H. B. Wickham, Newcastle-on-Tyne; Dr. J. B. Tuke, Cupar Fife; Dr. Gordon, Dublin; Mr. B. Shaw, Battersea; Mr. C. R. Price, St. Leonard's-on-Sea; Mr. Maunder, London; Mr. Collier, Ripon; Mr. Fairlie Clarke, London; Dr. Blandford, London; Mr. G. C. Coles, London; Dr. E. Waters, Chester; Dr. Hilliard, Birmingham; Mr. W. B. Blanchard, London; Mr. T. Watkin Williams, Birmingham; etc.

BOOKS, ETC., RECEIVED.

The Second Annual Report of the West of England Sanatorium or Convalescent Home for 1869-70. Weston-super-Mare: 1871.
The Modes of Origin of Lowest Organism: including a Discussion of the Experiments of M. Pasteur, and a Reply to some Statements by Professors Huxley and Tyndall. By H. Charlton Bastian, M.A., M.D., F.R.S. London: 1871.

THE HASTINGS PRIZE ESSAY,

1870.

ON DIGITALIS: ITS MODE OF ACTION
AND ITS USE.*

By J. MILNER FOTHERGILL, M.D.,

Senior Resident Medical Officer to the Public Dispensary, Leeds.

Manner of Action.—We have seen in a previous section how the administration of digitalis in physiological experiments is followed by increased contraction. It is obvious that this can only take place in one of two ways, viz., by stimulation of the cardiac ganglia, or by paralysis of the fibres of the vagus. These are, then, the two theories which exist. We will consider, first, the theory of Traube—that of paralysis of the pneumogastric fibres.

1. *Theory of Traube.*—This theory took its rise in the tumultuous movements which result from the section of the vagi. When both vagi were cut, tumultuous and irregular vermicular action was observed to result. That is, the nerve-force was still passing into the sympathetic, which were in full activity, while no longer was there any co-ordinating power in action. It must be admitted on the side of Traube, that certainly digitalis did not act so rapidly on animals where the vagi were cut (see the experiments of Handfield Jones); but, on the other hand, it is more difficult, on his theory, to see how it could act at all after that. Also, section of the vagi only produces death slowly, and that by hepatisation and disorganisation of the lungs; and the most complete paralysis could not be more effective than section. Now, the administration of digitalis in full doses brings the heart to a standstill as a primary action, and that, too, at an early period. There is no apparent connexion between the administration of digitalis and section of the vagi, except an increase in arterial tension, as tested by the hæmadynamometer—the test used by Traube. Winogradoff, from a similar series of experiments to those of Traube, came to opposite conclusions. Niemeyer states that he has clinically been compelled to emancipate himself from the bonds of Traube's theory.

2. *Theory of Stimulus to Cardiac Ganglia.*—This theory was announced by Dybkowsky and Pelikan abroad, and supported by Handfield Jones, with Fuller and others, in this country. This theory is, that digitalis acts as a stimulus to the cardiac ganglia, and thus produces the increased muscular contraction. It is almost needless to remark here, that in no way could the stimulus to the nerve-ganglia manifest its results except in muscular energy—i.e., increased action of the muscular fibres under their control. The increased action and irregularity can as easily be conceived to result from a disturbance of balance through over-action of the cardiac ganglia, as in paralysis of the opposing fibres of the vagus. That this irregularity does result, is unquestioned by either side. In order to settle the question of these opposing theories, Eulenberg and Ehrenhaus took out the heart of a frog, and dipped the lower end, or apex, into a solution of digitalin; the rhythmical action which goes on under the action of the cardiac ganglia, when the heart of a cold-blooded animal is cut out of the body, and when no longer any nerve-force is coming in from vagus or sympathetic fibres, and which contrasts with the tumultuous action which follows section of the vagi when the other nerves are intact, was interfered with; if the solution were weak, the action was rendered slow and irregular; if strong, the motion was stopped. Some light, too, is thrown on this intricate subject by observing the effects of digitalis on other organs where no inhibitory action of the pneumogastric exists. Dickinson found the action of digitalis beneficial in menorrhagia, from its contractile effect on the arterioles. Malan watched the contraction of the capillaries (to dispute whether they are capillaries or arterioles would be out of place here) of a frog's foot under the microscope—an experiment corroborated by the writer. On the application of an aqueous infusion of digitalis leaves, a contraction of the vessels of the web was found to follow, and to proceed to such an extent as to interfere materially with the circulation, bringing it nearly to a standstill: of this some further account will be given in the section on the action of digitalis on capillaries. The inhibitory action of the pneumogastric could have no place in these last named observations. And from the obvious difficulty attending Traube's theory, and the direct evidence in favour of the other, I am led to unhesitatingly side with the latter. The action of the

stimulated cardiac ganglia is too much for the action of the vagus; and thus, instead of an almost synchronous contraction, as is normal, the action is seen to be distinctly vermicular. A long peristaltic contraction is followed by an imperfect diastole and distension, until a state of permanent systole is attained, exactly corresponding to the process of the application of electricity to the sympathetic, and in no way analogous to the results of section of the vagi—than which no paralysis could be more complete as regards abolition of function. The results, too, of the administration of digitalis after aconite poisoning had been established, would necessitate the theory of aconite acting as a stimulus to the fibres of the pneumogastric, if Traube's theory of the action of digitalis were true—a conclusion which is not warranted by what we know of aconite.

Action on Capillaries.—The action of digitalis on the capillaries, as observed by M. Malan and the writer, is in unison with the above mentioned theory of its action on the cardiac ganglia. From the same portion of the splanchnic system arise the vaso-motor system of nerves, regulating the size of the lesser arteries and arterioles, but not capillaries. Be this as it may, and granting that capillaries do not possess the power of contraction, and that, therefore, the vessels must have been arterioles if they contracted, unquestionably the application of infusion of digitalis to a frog's foot produced contraction of the vessels of the web. While the corpuscles had before been coursing down them in single file, they were now arrested and passed with great difficulty, in many parts of the field being arrested altogether. The flow through the capillaries was no longer a continuous flow, in which the impulse of each ventricular contraction was lost; the circulation was by pulses corresponding to each beat of the heart, during which each corpuscle moved about twice its own diameter forwards. On the application of digitalis systemically, consequent increased ventricular contraction became conspicuous, each corpuscle now travelling about four times its own diameter; but the general condition was not altered. Further observations as to its effect on the capillaries may lead to further knowledge; and the writer regrets that circumstances have interfered with his prosecution of this branch of the inquiry. Enough, however, has been observed to demonstrate that digitalis has a direct action on the minute vessels; and in practice that fact must not be forgotten when digitalis is administered for the sake of its effect on the muscular walls of the heart, and the condition of the vessels between the heart and small vessels—viz., the arteries—is registered.

General Observations as to its Effects when Administered Clinically.—It may be well to give a summary of the effects of digitalis when clinically watched, before proceeding to instances of particular disease. The early administration of digitalis was conducted on the theory of its being a cardiac sedative. The reason for this theory was, that palpitation and irregularity were relieved by its administration; and hand in hand with this went on the theory of these derangements, especially palpitation, being over-actions of the heart. That in reality they are evidences of deficiency rather than excess of power on the part of the heart, we now all know. With the exception of excitement, which is visible in its effects on the pulse, we now know that there is no such thing as over-action of the heart. Hypertrophy is, without exception, a compensating growth to overcome some obstacle; though Niemeyer would except one class of cases where he considers it a mere result of plethora. We can no more imagine a heart undergoing spontaneous uncalled for hypertrophy, than we can fancy a similar action going on in the bladder or bowel. It is too obvious that the increase in muscular tissue is called forth only by a necessity for it. Palpitation may occur with hypertrophy; but it merely gives evidence that that hypertrophy is sufficient. Palpitation is an evidence of over-taxation, whether it occurs in hypertrophy or in dilatation. Nevertheless, the administration of digitalis is followed by a quieter action, but that is by its restoration of the conditions to the norm, or an approach to it. Under digitalis, the pulse becomes steadier, firmer, and less compressible; the excited stroke of palpitation is steadied into the normal, quiet, effective contraction; the system is relieved; dyspnoea, the external witness of pulmonary congestion, is abated; the deficient secretion of urine, which tells us that the pressure on the glomeruli of the Malpighian bodies is lessened, is improved, and free secretion takes its place: dropsy is thus often relieved. The general condition of cyanosis is abated; there is evidence of a better circulation throughout the system generally. Frequently, the gradually widening circle of troubles which are involving the patient's existence, gradually diminishes after an improvement is inaugurated in the circulation. The spell which bound the system in a load of ever-increasing fetters is broken by the administration of a drug whose action is unquestionably to produce better, more complete, ventricular contraction; and in that, and that only, I believe the magic lies. When we consider the extreme tendency there is for a condition of cardiac engorgement, or distension to

* Continued from page 7 of last number.

result from any prolonged debilitating cause, or acute disorder, and that, too, especially in the right or truly venous side of the heart; when we consider how that again tells on every excretory organ, from the lungs in front to the kidneys behind, and how that leads directly to non-excretion, and how blood-poisoning is engrafted on partial blood-stasis; how the left side of the heart is encumbered between the two burdens of poisoned blood and venous congestion—we can readily appreciate a drug which will enable these chambers to more completely empty themselves, and thus to direct better blood-propulsion, and can understand its extreme therapeutical importance. It is of the utmost importance that we really understand in the administration of digitalis what we can fairly expect of it, what it may be fairly presumed to be able to do, and what experience tells us it has done before. It is obvious that when all is well, neither we nor any patient would wish to administer it or any other drug; we now know that there is no deviation from health except in a downward direction. It is obvious that the most perfect action of the heart is when we are unconscious of its labours. It is equally obvious that those symptoms which tell us that it is at work, are really evidences that the heart is labouring, in both senses of the word. It is for a condition of inability on its part that the physician is consulted by the patient; and though it is possible that now and then its efforts can be strangled by a sedative, or allayed by a narcotic, it is equally obvious that neither can be styled a scientific treatment; for permanent relief we must look for something which will really aid its efforts; and to this, and for the condition under which digitalis ought to be administered according to the experience of the writer, the next section will be devoted.

General Considerations continued.—The conditions under which the physician finds his patient run somewhat in this fashion. The patient complains of a feeling of anxiety about the precordia, with a general unaccountable anxiousness—a sense of difficulty of breathing, which is notably increased upon exertion; he has fluttering about the left breast amounting to palpitation upon effort or exercise; the pulse is irregular, or may be regular but compressible; then come a dusky complexion and impeded respiration. Here, then, is a condition of cardiac engorgement which would scarcely be disputed, whether as a passing condition or as one in a series of similar attacks. On examination of the case, there can usually be found a feeling of diffused impulse on palpitation, a large mass apparently being thrown into contact with the thoracic walls; percussion reveals an increased general dullness, frequently in the direction of the right side of the sternum. Auscultation communicates to us the further information that there is a short slapping sound, with or without irregularity, or, perhaps, evidence of laboriousness—a heaving swell with obvious effort, which, however, is not followed as effect by that impression on the arteries we might look for; and, finally, there is a something beyond this utterly undecipherable by words: a peculiar significant information conveyed, which experience and repeated observation alone can understand or interpret. Those who have made heart disease a study will readily understand and supply that which I feel incompetent to convey. Or, in other circumstances, the patient has a tickling cough, feels short of breath on exertion, has a slight attack of bronchitis, or may be no particular ailment; the pulse is small or feeble, but, on casually applying a stethoscope, there is found a state of cardiac excitement with some irregularity in time—action, like imperfect palpitation, but without any evidence on the radial pulse. It is nevertheless there, and percussion soon demonstrates that there is increased dullness to the right side of the sternum, and auscultation reveals corroborative information in adding a marked accentuation of the second sound at the pulmonary valves. The aggregation of sounds demonstrates that there is embarrassment and also laboriousness in the right ventricle; it is not likely to be accompanied by any effect on the radial pulse; and even the discriminating sphygmograph is thrown out, for there is no increased arterial tension anywhere where it can be applied. The trouble is going on in the right side, the diminished amount of blood passing into the left ventricle is insufficient to allow any impression to be made on the arteries even if, as is very probable, the left ventricle is acting somewhat excitedly. From the number of fibres which belong equally to the right and left ventricles, and can be traced into each (see the works of Searle and Pettigrew), such community of action, even where there is no call on the left ventricle, is almost unavoidable. These conditions, and more so the latter one, are common enough when searched for, especially among the out-patients of a public institution; in fact, we are learning that a condition of engorgement of the cavities of the heart is quite usually met with; and, in fact, if we are to believe MM. Cyon, von Bezold, and Claude Bernard, a special innervation is in action to permit it. How far this condition may be a necessary one in the present state of science, we are unable to determine; we can, however, readily discover this condition, and more easily calculate the amount of mischief which

is actually present therefrom, or likely to result from its continuance. Without entering here into the troubled waters of a consideration of the existence and importance of a condition of temporary distension in acute disease or passing conditions, which is reserved for a later section, we are familiar enough with this condition when fully established as dilatation, with or without hypertrophy. A permanent enlargement of the ventricular cavities, and more commonly so of the right one, is a condition the reverse of rare. While frequently found among persons advanced in life, it is far from uncommon among younger people. These are the conditions which physiological research has pointed out as suitable for the administration of digitalis as a therapeutic agent; and clinical observation confirms the view. It is proposed, then, to consider the general condition of distension or dilatation; the manner in which the drug acts; the other conditions, causal or consequential, with which the condition is connected; and the especial circumstances in each condition which would encourage or forbid its use.

Mode of Action in Distension or Dilatation.—It is in this condition of distension that the advantages of the administration of digitalis are most evident. In this condition of deficiency of expulsive power, the heart-walls yield. The heart is distended, and in contraction only gets rid of a little blood off the top, remaining more or less full in systole. It is more or less full before the distended auricle and veins behind pour in their contents under the increased pressure of distension. It is in the partially filled condition of the ventricle that the difficulty lies essentially. If the ventricle were not partially full, the auricle and veins would be somewhat relieved; but there is what would fill well an empty ventricle waiting to be discharged into one more or less full to begin with. The action may be moderately regular on quiet being maintained, but it is at once disturbed on motion, especially if this be at all active; and then we get palpitation and irregularity, or even intermittency, the regular action being again restored by quiet. There is a constant contest going on between the stimulus of the contained blood and the inhibitory action of the pneumogastric fibres. The distension excites the muscular walls to overcome the restraining influence; for, without the stimulus of distension, the walls could never overcome the inhibitory action of the pneumogastric, the *vis inertiae* of the blood to be driven; and action still further deranges the balance by making still greater calls on the muscular walls. In fact, the heart is in a state of over-distension, and in a condition both analogous to, and homologous with, an hypertrophied bladder attempting to overcome the obstruction of an enlarged middle lobe of the prostate. The over-distension goads the organ to such a contraction as shall relieve that over-distension, but only so far, and no further; there is no complete contraction. An incessant play goes on between the condition of over-distension and the restraining fibres of the vagus; the balance between the muscular walls and their work remaining confessedly disturbed. In this condition, the administration of a drug whose physiological action is to stimulate the sympathetic ganglia, and thus the muscular fibres under their control, into excessive contraction, is almost the only means of restoring the equilibrium. This is beautifully exemplified in the heart of a frog, when paralysed and almost brought to a standstill in diastole by aconite; the heart is distended, globular, and, in every respect but that of chronicity, in the condition of a dilated or distended heart. Then administer digitalis, and watch the result. The distended globe, just pumping painfully a little off the top of the contained blood, and that at long and irregular intervals, begins to contract with more vigour; each ventricular systole is more and more complete; and the bulk of blood remaining unexpelled—and that is the great point—becomes less and less in quantity. Shortly, the distension in diastole is shortened, the distension and contraction come gradually back to the norm, the irregularity in time is lessened, and a complete restoration results. But if the experiment be carried still further, spasmodic contraction or the condition of concentric hypertrophy sets in, irregularity again makes its appearance—for the balance is now disturbed in the opposite direction; in fact, the symptoms of digitalis-poisoning are brought out, and ultimately the heart is brought to a permanent standstill in systole. Thus in a distended heart, only a longer time is requisite, and, of course, the cause of the original distension must be overcome; so that the conditions are scarcely equal, and longer time and an artificial compensatory hypertrophy is necessary to maintain the balance thus temporarily restored. When this condition of distension is only of short duration, as seen in people who have been overworked and overtaxed for a short period only, but presents all the appearances, signs, and symptoms of cardiac dilatation, the restoration of the natural balance by digitalis may be quick and withal permanent. Certainly I have seen such cases. The experiments of W. T. Gairdner on Groux, the man without a sternum, show that the ventricular chamber undergoes a certain amount of expansion under passing circumstances, a normal distension in fact; for distensibility without abolition of function is a peculiar property of

involuntary muscular fibre; but when distension is excessive, or the tissue degenerate, however, abolition of function may, and certainly does, take place. The experiment may be tried on any thin muscular man—viz., place the tip of your finger on the exact apex-beat, and bid him hold his breath; the right ventricle dilates until the apex-beat is lost behind the distended ventricle, which acts like a water-cushion between the left apex-beat and your finger. Still keeping your finger in its place, tell the man to breathe again; the distended condition passes away, and soon no trace of it remains. Now, all the time the heart has been beating away, and there has been no abolition of junction. Claude Bernard has gone so far as to suggest that a normal distension of the heart takes place through the action of the depressor nerve of the heart of Cyon and Ludwig, and that the heart can undergo a certain amount of accommodation to the blood-vessels, and by dilatation become, for the time being, a regulating reservoir. Without endorsing the theory of Claude Bernard, it must certainly be admitted that the condition is unquestionably common enough, and is not detected because, probably, it is not sought for: it is intimately related to the short, weak, fast pulse, which in a remarkable manner is rendered slow by digitalis, with great improvement in the systemic symptoms. Now, what has gone on? The condition is one of distension; the ventricle, just at the point of distension always, from inefficient contraction, soon becomes so over-distended as to be excited to contraction in spite of the vagus; the pulse-wave is feeble, for only a small quantity of blood is thrown into the aorta, and the elastic walls are not sufficiently distended to bring out a good pulse; the needs of the circulation are not properly supplied, and the body generally partakes of the feebleness of the circulatory centre. Then administer digitalis, and soon the pulse falls, say from 130 to 72; the radial pulse is much improved, being fuller and more sustained, and relief of the system is attained. Sometimes, but rarely, we read of a curious irregularity of rhythm accompanying the alteration, viz., sometimes a series of beats at the rate of 130 per minute, and then another series at the rate of 72; it seems as if it were some time before the old habit was broken. Never having met with such a case, I cannot explain the condition. The slow pulse is due to the ventricle making a more complete contraction, taking up, of course, more time over it, and requiring longer time for distension again. In fact, to again use our old simile of the bladder, the condition of distension is like the bladder behind the enlarged prostate, only contracting to the extent of over-distension—soon full, because never empty; while the altered condition bears more resemblance to the normal bladder capable of complete contraction, and consequently requiring longer time for distension. The heart in distension is incessantly at the point of over-distension, and is acting unnaturally quickly; the administration of digitalis, by producing more perfect contraction, relieves this condition of irritable, or, rather, irritated distended ventricle, while, at the same time, more complete contraction produces more thorough aortic distension, and thus brings out more thorough arterial recoil or systole; that, again, gives relief generally to the systemic symptoms, and also permanent benefit as an ulterior result. It must be borne in mind here that the contraction of the ventricle fills the vessels and distends them; the recoil of the elastic arteries completes the propulsion of the blood. The series of altered actions consequent upon increased contraction, run in the following order or sequences; and it may be desirable for the sake of lucidity to arrange them in a series of propositions, each depending on the one before, like a logical syllogism. The effects of increased contraction are, then:—

1. Increased arterial distension and tension, which give relief to the systemic symptoms, and further causes
2. Increased arterial recoil. This is the propelling power for the coronary arteries; and thus arterial recoil means
3. Increased or improved coronary circulation; and that, in its turn, produces
4. Increased nutrition of the heart, which results in
5. Compensatory hypertrophy. In connection with these, we have also to consider
6. Atheroma and fatty degeneration of the heart-fibres.

[To be continued.]

PLUGGING THE NOSTRILS AS A PRECAUTIONARY MEASURE.—M. Verneuil, in a paper published in the *Bulletin Général de Thérapeutique* for May 30, recommends plugging of the posterior nares as a precautionary measure in all cases of operation on the face where there is danger of the passage of blood into the pharynx. Besides preventing this as long as the soft palate is uninjured, the plugging also, M. Verneuil says, enables chloroform to be given during the whole operation. It ought to be done before the induction of anæsthesia is commenced.

HOW TO REFORM OUR PROFESSIONAL GRIEVANCES.*

By W. OGLE, M.A., M.D.Cantab., F.R.C.P.Lond., Physician to the Infirmary, Derby.

GENTLEMEN,—By accident rather than by my deserts I find myself in the honourable position of President of the Midland Branch of the British Medical Association. It is impossible that any one can forget—least of all that I should not be painfully conscious—that one who has gone to his rest was elected by you to preside on this occasion. Mr. S. W. Fearn occupied a first position in the profession in this locality; and no less for his ability as a surgeon than for his sterling worth and high professional character, we all should have rejoiced to see him in the Presidential Chair. An all-wise Providence has decreed otherwise, and upon me, by your favour, has devolved the difficult and almost impossible task of worthily succeeding him.

I crave your indulgent hearing of the remarks that follow. They are the result of much earnest thought, and, so far as they shall be worthy of your acceptance, are the outcome of conversations that I have had with many of my seniors. Throughout my professional life it has been my happy privilege to be thrown much among my elders, and with them I have frequently discussed questions which, for lack of a better term, I may call our “professional grievances”. I venture to think that our time will not be misspent if I take up some of these grievances and invite you to look at them in their different lights, and ask you to consider whether the day has not arrived for us to get rid of some of them. If, with your assistance, I succeed only so far as to break the ground for future more skilful cultivation, we shall not have met in vain. Who is there among us that has no grievances? Is the parish-doctor free? or the club-doctor? or the general practitioner? or the physician? There are not wanting those who feel it something of a grievance that there should be this classification. Why should the title of “Physician” be restricted to a few? or, if restricted, be a more honourable one than any of the rest? I for one, as one of the privileged class, am quite prepared to see the distinction removed, if only the levelling be a general upraising, not a general depressing, of the profession. In the work of attending upon the poor as a servant of the state, still less of attending on the poor under an arrangement made by themselves, as the fruit of their own forethought and self-dependence, and in the arduous and responsible duties of “family doctor”, there is no necessary inferiority. The physician who says that there is, does not know the true dignity of his own position. But we are dealing with things as they are, and are, therefore, accepting these distinctions merely for convenience of illustration.

Accordingly, I begin with the parish doctor, subject to the control of men who, to a proverb, “have no idea beyond that of keeping down the rates”. There are, no doubt, honourable exceptions in Derby, perhaps, and elsewhere, which will occur to every one; but none know better than parish doctors that a board of guardians is an acknowledged type of parsimony, and exceptions here or elsewhere only serve to make the rule more palpable. From these his masters he receives in many cases scarce enough to cover the cost of drugs; he has, moreover, an acreage of duty so extensive as to make his work impracticable. Yet he is obliged to hold on for fear of leaving an opening for a rival; and after all he gets from the public often not even thanks. There are those among the poor who call him “blessed”; but when the time comes that he wishes to retire from his onerous duties, the public makes little or no sign of gratitude or of sympathy.

Take next the case of the club-doctor, striking a bargain with the committee at the “Fox and Goose”. He receives a small capitation fee on each member, with the chance of attending the member’s wife and children. This is the bait held out to the young, and too dearly purchased to be given up by the old, though they have long since found out the truth of the proverb, “All is not gold that glitters”. The capitation fee is to include everything—no extra fees, no charges for physic, no protection against the admission of well-to-do tradesmen, small farmers, with the publican himself, at whose house, and for the good of whose house, the club meets—of many, in short, who join the club for nothing else than to be able to claim medical attendance and physic at a nominal cost when they are sick. And, worst of all, to an honourable, high-minded man, there is the degradation of being in the eyes of the public, of the profession, and of even the members themselves, “only a club-doctor”.

But leaving these the so-called lower ranks of the profession, how fares it with the general practitioner—the man who perhaps eschews parish work and will not condescend to club-practice?

* President’s Address, delivered at the annual meeting of the Midland Branch, 1871.

Even the busy, thriving man, the envy of many, who has perhaps bought a good practice, and is able to keep it together; or has, by steady probity, perseverance, ability, and tact, worked his way up to be one of the five or six leading men in a populous thriving town—even such an one has something to recount as a serious set-off against his seemingly enviable position. Even assuming that his receipts are considerable, he has in the first place the nuisance of dispensing, which he cannot afford to give up; there are also not a few bad debts, as well as heavy expenses; his charges, also, with “particulars if required”, are scrutinised more than is pleasant to a sensitive, honourable-minded man; and for one patient that treats him as a friend and a gentleman, from two to ten will look upon him as a kind of upper servant who must be kept in his place, or as a sort of “ogre” who is to be avoided as long as possible and dispensed with as speedily as possible. However eagerly and peremptorily he may be summoned when his presence seems to be a necessity, he is liable at any moment to be dismissed, to find himself supplanted, to have his best endeavours forgotten, or even misunderstood and turned to his own disadvantage. And at best he is exposed at every hour of the night as well as the day, without any extra protection against needless calls, so that he is a stranger for weeks and months together to the comforts of family life. A social dinner like the one which we have in prospect, or a quiet evening with his wife and children, and the hallowed rest of a Sabbath day, are to him unknown luxuries. Surely the gains of such labour must be great! some great inducements in the shape of honour or emolument must be in store! But no; experience can quote few who can afford to retire upon their earnings. A visit to the office of the Royal Medical Benevolent College would undeceive many who talk about doctors’ profits; and as to honour, medicine obtains no such recognition as either divinity or law. Who, then, can be surprised to hear even the well-to-do practitioner declare that no son of his shall enter the profession—that he would sooner (as I have heard it said more than once) “see him break stones upon the road”?

But, again, suppose the means are not wanting, and that *per saltum* a man can begin at the top of the tree—can be independent of general practice, or at least can pick and choose, undertaking none but of an easy kind; he has no dispensing; it would be *infra dig.*; he is seldom called up at nights; his Sundays are his own if he pleases; his fee is understood to be nothing less than a guinea; he holds as many hospital appointments as he pleases—can obtain them in the country for the asking, and even in London without much difficulty—has such an one any grievance? His grievances are of a different kind, but none the less real. There is very little encouragement to such an one to support the dignity, *i.e.*, to discharge the special duties, of his position; the pressure is quite the other way. It will “pay better” to make himself notorious in a puffing, pretentious way—as by giving advice gratis, not merely at the hospital, but on particular days and at particular times, which must be proclaimed aloud; or by writing a book, or by adopting some other way of advertising himself, than by doing his own business quietly—a little it may be, but that little well. It is almost impossible to do so. He finds himself in an undefined region of practice—neither in general practice nor in consultation practice, but between the two; accordingly, the acknowledgment that he receives is of a nondescript character; his fee is not a guinea, nor even “a guinea or nothing”, but a fraction of a guinea or nothing. For the guinea (if not vexatiously shorn of its shilling), two or three visits are expected; whilst the guinea a mile extra is reduced to two guineas for three miles even in the metropolis, and in the country to half a guinea a mile, to a third of a guinea a mile, to smaller fractions if he will accept them, till it becomes a question whether the mileage will cover comfortably the cost of cab-hire. The tendency of all this is to discourage first-class endeavour, to encourage a slipshod mode of doing his work—and this to a man who loves his profession is a grievance. Even his duty in connection with public hospitals partakes of the same character; a large portion of it is mere routine, and, as a natural consequence, the appliances at command are often of a very second-rate description. It naturally follows that the appointment of physician to a hospital does not confer the honourable distinction that it used to do, nor is it the same introduction either to first-class practice or to first-class society. By first-class practice I mean, of course, consultation practice. And here let me not be misunderstood; I count it no grievance, but the contrary, that consultations should pass into the hands of those who are engaged in general practice; but that consultations should seldom be held, and, when held, should be attended with so much difficulty, so much chance of injuring a professional brother, and so little chance, in comparison with what might be, of benefit to the patient, is a great grievance. Under these and other such disabilities the class of which I am now speaking is fast becoming extinct. I say this with no bitterness. I have already intimated the condition under which I should hail with satisfac-

tion this consummation. Let general practitioners become physicians; but the converse—*absit omen!*

Besides these “class” grievances, there are others which all alike feel more or less. There is counter-practice—a custom largely prevalent, whereby druggists who have no legal qualification prescribe, as well as dispense prescriptions.

Then there is the hydra-headed grievance of quackery—quackery sanctioned by the legislature and quackery which defies the law—quackery without, and, alas! quackery within, the profession itself. Add to this, that the public never lose an opportunity of giving a doctor a rub. Individuals may think and speak highly of individuals in the profession; every one thinks his own doctor a “none-such”, at least for the time being; but the good-will and praise, even of one’s own patients, is so commonly goodwill at the expense of all the rest of the profession, that no one whose heart is in the right place can feel it otherwise than as a professional grievance to be thus exalted. If further proof were needed of the disability under which the profession generally suffers, look at the doctor put upon his trial for malpractice. The cardinal principle of English justice is almost reversed; instead of considering him innocent till proved guilty, a doctor is held to be guilty until he can prove his innocence. This is the more oppressive, in that an unqualified quack will escape scot free under the very same circumstances from which the legally qualified practitioner suffers heavy loss.

This is a dark picture; and though it be ever so true, and true it is that most of these clouds have a silver lining (at least to every one who is devoted to his profession, for to such there are charms—scientific, philanthropic, social, and religious, using the term in its widest sense—which are rather intensified than lessened by the trials which accompany them), nevertheless it must be confessed the picture is sombre, and fully justifies my challenge at the outset, “Who is there among us that has not his own particular grievance?”

But let us not forget that there is another side of the question. *Audi alteram partem*, say the patients. If parish doctors are overworked, not paid, and little thought of; if club-doctors are imposed upon and a bye-word; if general practitioners are servants and leave no inheritance behind them; if physicians have little less than the shadow of their former dignity; if the whole profession is depreciated and does not occupy a position to which, in virtue of its important and responsible duties, it feels itself justly entitled; what of the patients—club-patients, pauper patients, private family patients, and physicians’ patients, hospital and other? Though the pauper often receives an amount of attention and consideration regardless of cost, fatigue, and even of life itself, which makes many a despised parish doctor a veritable hero, has the pauper patient no grievances? There is an old proverb, “Dead men tell no tales”, and this is true of dead paupers. The provision made for them is generally so utterly inefficient that suffering is inevitable, however great the energy, the self-denial, yea, the self-sacrifice, of the parish doctor.

Again, club-patients find to their cost that *my club-doctor* is a very different person from *my own doctor*. Perhaps it so happens that the one selected by the club is the very one against whom the member voted; or he may live so far off as to be practically beyond reach; or, if there be nothing more against him than the knowledge that the terms under which a medical man undertakes a club are not satisfactory, all the service rendered is suspected, and it (physic included) is assumed to be worth no more than the little or nothing that has been paid for it. There is, in short, wanting in the transaction that first element of success—the element of confidence. Add to this, if the wife or child be ill, he does not feel free to employ any one but the club-doctor, and this curtailment of his liberty tends to make him dissatisfied; so the club-patient finds, when it is too late, that the system on which he depends breaks down.

Passing on to private practice, we often hear of ruinous long doctors’ bills—of attendance for days, and weeks, and months, and the patient little better. We hear ourselves accused of prejudice against this and that clever person—of unwillingness to try this and that new mode of treatment. We are blamed for coming too late, we are blamed for arriving too soon; and at best, as already intimated, if there be one doctor in the world who is perfect, his reign is short, and there is only one. These are some of the ordinary grievances urged by patients—grievances which make many an one either do without a doctor or take refuge in quackery. And as to physicians’ patients—using the term in its conventional sense—when a consultation is desired, there is so much difficulty in the way, so much fear of giving offence, so much questioning about who shall be called in, so much mystery when the second doctor does arrive, so little apparent result from the transaction—in a word, so large a fee and so little for it, that we must admit that these are grievances, or something very like them.

And what of hospital and dispensary patients? Surely here, where so

many thousands are expended, and where the patient has to pay nothing, the patient can have no grievance. My experience of dispensary work and of hospitals is probably as large as, or larger than, that of anyone here present; and it is my very decided conviction that hospital and dispensary patients in the long run, and in one way or another, as much as any class in the community, have grievances neither small nor few. Put yourselves in their places. Suppose yourselves now for the first time in your lives obliged to go to a hospital or to a free dispensary for medical aid. This is probably the very first time you have been obliged to beg: but, passing by this and all such social considerations, important though they be, and judging of the circumstances simply on the ground of efficiency, think of the increase to a man's suffering from the delays in obtaining the assistance needed. First, there is a letter to be procured; then he has to wait for the day of admission; the proper day arrives, but it is not the day on which the doctor of his choice attends at the hospital, so he has to wait another week, or perhaps a fortnight; and then, though the day be wet, windy, or cold, and he likely to get as much harm on the way as good from the visit, there is no alternative but to go, or to wait another fortnight or three weeks. At last, however, he is admitted; but even then the doctor may have been called away—may be gone for a holiday, or may be ill himself. But supposing yourself to meet with none of these minor drawbacks, and that the goal is attained—you have arrived at the proper time, on the proper day, and the doctor of your choice is there too; still there is the ordeal of the waiting-room, surrounded with others like yourself—some not so ill; others, it may be, worse. Imagine yourself one of twenty, forty, or more, waiting for your turn; and then four minutes and a quarter is the average (and this is a large one) of the time that you will have devoted to your case. Then you wait again for the physio, subject once more to the inconvenience and dangers of a crowd; and then you have your journey home, and in another week—not sooner, whatever may have happened meanwhile—you run the gauntlet again, with this difference, that a minute and a quarter is now your allowance; and so on. And the more ill you are, the worse it is. If you are so ill as to wish to be an in-patient you must wait the longer, for in-door letters of recommendation are less easily obtained than "out", there being fewer of them; also the same rules as to admission must be observed, and there is the additional chance of being sent home again after all, because there is no room. Then after admission there are, in nine hospitals out of ten, regulations which, if you were the patient, you would think very hard. Governors, boards of management, even the doctors themselves, have often very little idea of these grievances, simply because they do not put themselves even in imagination in the place of the patient. By this simple process, however, which is but carrying out the golden rule, "Do unto others as you would be done by", it will be found pretty generally true, that, for most of doctors' grievances, corresponding ones might be urged by the doctors' patients.

[To be continued.]

A STATISTICAL ACCOUNT OF TWO THOUSAND CONSECUTIVE CASES IN MIDWIFERY.

By GEORGE JONES, M.R.C.S., L.M., Birmingham.

Fellow of the Obstetrical Society.

At the present time, when hospitals may be considered in some measure to be put upon their trial, on account of the attack made on them by an eminent member of our profession—now no longer amongst us—it behoves all who wish to see truth prevail, and the question whether hospitals are an evil or a blessing honestly and correctly solved, to bring forward all the facts and statistics which can legitimately bear upon this subject, and throw them into the common stock, so that a sufficient number of statistics of home-practice may exist to make a comparison with the large numbers treated in hospitals anything like fair.

It is not in a spirit of partisanship for either side of the controversy that I am induced to contribute my mite towards amassing a sufficient number of figures to bear the comparison, but solely with a view to assist in elucidating the truth; and I trust that many obstetricians may be induced to do the same, so that the records of home-practice may collectively be as large as those of the great lying-in hospitals.

Dr. Matthews Duncan, in his recent work *On the Mortality of Child-bed and Maternity Hospitals*, says: "In order that any confidence in the data of home-practice may be expected, the following conditions are necessary.

"1. They must not be derived from memory.

"2. The items should be noted down at the time of their occurrence.

"3. The statistics should yield credible results.

"4. They should be collected with no particular object in view."

I can conscientiously say that my account fulfils all the conditions considered necessary, as I have regularly kept a record of every case (save the first two) that I have attended from my student days until the present time.

I have taken two thousand consecutive cases for two reasons: first, as supplying an even number for comparison; and secondly, because the first series of cases attended are not so complete in all particulars as the later ones. I have also eliminated from this account all those cases in which I had been called in to assist another practitioner, or for consultation. The number of pregnancies is as follows.

| | | | |
|-----------------------|-----|-----------------------------|----|
| First pregnancy ... | 403 | Tenth pregnancy ... | 39 |
| Second pregnancy... | 369 | Eleventh pregnancy... | 34 |
| Third pregnancy ... | 294 | Twelfth pregnancy ... | 27 |
| Fourth pregnancy... | 253 | Thirteenth pregnancy ... | 11 |
| Fifth pregnancy ... | 170 | Fourteenth pregnancy ... | 7 |
| Sixth pregnancy ... | 136 | Fifteenth pregnancy ... | 5 |
| Seventh pregnancy ... | 106 | Seventeenth pregnancy ... | 1 |
| Eighth pregnancy ... | 89 | Twenty-second pregnancy ... | 1 |
| Ninth pregnancy ... | 55 | | |

Sex of Children.—The 2000 labours produced 2018 children—1014 males, 1003 females, and 1 of no sex. Of these 131, or 1 in 15.41, were still-born; viz., 79 males, 51 females, and 1 of no sex.

The *Presentations* were—

| | | |
|-------------------------|-------------|-------|
| Of the face ... | 5, or 1 in | 400 |
| Of the brow ... | 5, or 1 in | 400 |
| Of the arm ... | 8, or 1 in | 250 |
| Of the foot or feet ... | 25, or 1 in | 80 |
| Of the knee ... | 1, or 1 in | 2000 |
| Of the breech ... | 30, or 1 in | 66.66 |
| Of the shoulder ... | 2, or 1 in | 1000 |

The remaining 1943 presentations were of the head; but what were the relative proportions of the different positions of the head I am unable to say, as in many of the cases, especially the earlier recorded ones, I did not always endeavour to ascertain; being satisfied if it was the head. Forty-four were born with the face to the pubes.

Of the ten face- and brow-presentations, three were with male children and seven with female. One male and one female were still-born; the other eight were living.

Of the eight arm-presentations, five were with female children and three with male; two males and one female were still-born.

Of the twenty-five footling cases, fifteen were males and ten females. Thirteen males and four females were still-born; five of the living children were of twin cases. Seventeen out of twenty-five seems at first sight a great mortality; but nine of these cases were premature, and the children had been dead from two to three weeks. One case was complicated with ascites, and the abdomen had to be punctured before delivery could be effected; one was complicated with serious hæmorrhage from partial separation of the placenta implanted near the os uteri; in one the mother had a distorted pelvis. These being fair cases for elimination, the mortality is reduced much below 1 in 2½, the proportion given by Churchill.

Of the breech-presentations, fourteen were males and sixteen females—nineteen living and eleven still-born. Of these, four were premature. Nine of the cases were first labours. The mortality in British practice, according to Churchill, is about 1 in 2.6; the mortality in these thirty cases is little less; and, excluding the premature cases, is only 1 in 4.25 nearly. The average duration of labour was 11¼ hours.

The *Twin-cases* were 19 in number, or 1 in 105.26. Of these—

| | |
|------------------------------------|------------------------------------|
| 4 occurred in the first pregnancy. | 2 occurred in the sixth pregnancy. |
| 5 " second " | 1 " seventh " |
| 1 " third " | 1 " eighth " |
| 2 " fourth " | 1 " tenth " |
| 2 " fifth " | |

Of the thirty-eight children, thirty were born alive—fourteen males and sixteen females; of the eight still-born, seven were male and one female. In eight cases, the heads of both children presented; in one, the head and arm; in two, the head and breech; in six, the head and feet; in one, the feet in both. In one case the ovum came away entire, the membranes being unbroken, and containing the foetus and liquor amnii. This was a premature case.

Forceps Cases.—The cases delivered with the assistance of the forceps were fifty in number, or 1 in 40.

| | |
|-------------------------------------|------------------------------------|
| 32 occurred in the first pregnancy. | 1 occurred in the sixth pregnancy. |
| 6 " second " | 1 " seventh " |
| 3 " third " | 2 " eighth " |
| 1 " fourth " | 2 " ninth " |
| 2 " fifth " | |

Thirty-one of the children were males and nineteen females; six were still-born. The causes necessitating the use of the forceps were powerless labours, small pelvis, and presentations in the third position—the head not making the turn in the pelvis. *Version* was had recourse to in thirty-two cases, or 1 in 62.5. This proportion of version cases approaches nearer to the German statistics of the operation, 1 in 63 $\frac{2}{3}$, than the English, the latter being 1 in 259 $\frac{3}{4}$. It was performed—

For presentation of the shoulder in..... 2 cases.
For presentation of the arm in..... 8 cases.
For presentation of the face in..... 5 cases.
For presentation of the placenta in..... 3 cases.
For presentation of the head in14 cases.

In one case of presentation of the head in which version was performed, the mother had been delivered in her previous labour by craniotomy; in the others there was disproportion between the size of the pelvis and the foetal head; and I might have been induced to perform craniotomy in several of them, had I not felt convinced of turning being a ready and sufficient remedy. As it is, I have never had a case of craniotomy in my own practice. All the mothers recovered and did well. Excluding the two premature children, the mortality to the children in these cases was 1 in 2.90, or a little less than 1 in 3, the proportion given by Churchill; but as some of these cases represent others in which craniotomy might have been performed, I consider the results of these version cases as very satisfactory.

Hæmorrhage occurred in 68 cases, or 1 in 29.39. Of these, 25 were cases of accidental, 3 of unavoidable, and 40 of *post partum*, hæmorrhage. The accidental cases were 25, or 1 in 80. Of these—

None occurred in the first pregnancy.

5 " " second " or 1 in 73.8
3 " " third " or 1 in 98
3 " " fourth " or 1 in 84.33
2 " " fifth " or 1 in 85
2 " " sixth " or 1 in 68
2 " " seventh " or 1 in 53
1 " " eighth " or 1 in 89
2 " " ninth " or 1 in 27.5
3 " " tenth " or 1 in 13
1 " " eleventh " or 1 in 34
1 " " twelfth " or 1 in 27

In these cases three mothers were lost, two of which were cases of concealed accidental hæmorrhage. In one, the mother had a fall two months before, followed by hæmorrhage, which recurred in a month; she lived thirty-one hours after labour commenced, giving birth to a living child. In the other case the child was still-born; the mother lived for eighteen days in a state of peculiar nervous excitability, and died of pneumonia after two days.

Of the three cases of unavoidable hæmorrhage, or 1 in 666.66—one occurred in the fourth pregnancy, one in the eighth, and one in the twelfth. The mothers all survived; two of the children were lost.

Of the 40 cases of *post partum* hæmorrhage, or 1 in 50—

14 occurred in the first pregnancy..... or 1 in 28.57
4 " " second " or 1 in 95.26
5 " " third " or 1 in 58.8
5 " " fifth " or 1 in 34
2 " " sixth " or 1 in 68
3 " " eighth " or 1 in 29.66
2 " " ninth " or 1 in 27.5
1 " " eleventh " or 1 in 34
1 " " twelfth " or 1 in 27
1 " " thirteenth " or 1 in 11
1 " " seventeenth, " or 1 in 1

Although several of the mothers were in a very precarious state, I am grateful to say I did not lose one.

Retention of the Placenta occurred in twenty-three cases, or 1 in 86.95. No mothers were lost. Five were cases of hour-glass contraction; in sixteen of the cases the hand was introduced into the uterus to extract it; in four cases there was what is called morbid adhesion.

Prolapse of the Funis occurred in nine cases, or 1 in 222.2; once with presentation of the feet; in the other eight cases before the head. This, one of the most fatal of the complications of labour, was especially so in my cases; only one of the children being saved, although in three of the cases the cord was replaced.

Convulsions complicated labour in seven cases. Five of these were in primiparæ; in three the convulsions occurred after labour, and were slight; one patient was the subject of periodical epileptic attacks; one case was rapid and severe, the woman dying undelivered soon after I entered the room, and before anything could be done. With this exception they all recovered. Five of the children were born alive.

Retroversion of the Uterus occurred in two cases, at about the third

month. The uteri had to be replaced three or four times. They both ultimately went the full term.

Labour was induced prematurely in six cases. In three, the membranes were detached from the uterine wall by the sound; in two the douche was used after Kiwisch's plan, and in one Barnes's dilators were used. The results are shown in the following table.

| No. | Age. | No. of Preg. | Means used. | Duration of labour. | Sex of child. | Living or not. |
|-----|------|--------------|----------------|---------------------|---------------|----------------|
| 1 | 23 | 4 | Sound. | 8 $\frac{1}{4}$ | Male. | Living. |
| 2 | 28 | 5 | Sound. | 48 | Female. | Living. |
| 3 | 23 | 3 | Sound. | 12 | Female. | Living. |
| 4 | 39 | 4 | Douche. | 11 | Female. | Living. |
| 5 | 28 | 3 | Douche. | 3 | Male. | Living. |
| 6 | 26 | 3 | Barnes's bags. | 46 | Female. | Dead. |

In the sixth case the labour was very lingering, and the child died in consequence of its being protracted for nearly two days with occasional long periods of freedom from pains, and not from any defect in the means used to bring on labour, as the dilators acted well and efficiently—indeed, they always have done so whenever I have used them, as I have frequently done since in consultation-cases, and I consider them the most certain and effectual of our armaments for this purpose.

Premature Labour occurred 71 times, or 1 in 28.16 cases.

At six months in 8 cases.

At seven months in 29 cases.

At eight months in 34 cases.

Five of the cases were plural births: 45 children were living and 31 dead. In four cases the head presented in the third position, in one the arm, in five the breech, and five the feet.

Illness after delivery occurred in 34 cases.

| | |
|-------------------------------|----------------------------------|
| From puerperal fever 5 | From phlebitis in left leg ... 3 |
| " peritonitis... .. 7 | " retroversion of uterus ... 1 |
| " pyæmia 1 | " pneumonia 2 |
| " febricula 2 | " bronchitis... .. 1 |
| " variola 2 | " spasmodic asthma ... 1 |
| " diarrhoea 2 | " hæmoptysis 1 |
| " pelvic cellulitis 2 | " jaundice 1 |
| " phlegmasia dolens ... 3 | |

These include only the severe disorders: slight febrile attacks, such as occur on the advent of the lacteal secretion, or from a loaded state of the bowels, quickly relieved by their evacuation, or other transient states, are omitted.

Death occurred in 16 cases, or 1 in 125.

| | |
|-------------------------------|----------------------------------|
| From puerperal fever 2 | From accidental hæmorrhage ... 1 |
| " peritonitis 3 | " concealed accidental hæ- |
| " pyæmia 1 | morrhage 2 |
| " diarrhoea 1 | " spasmodic asthma ... 1 |
| " exhaustion—syncope ... 2 | " bronchitis 1 |
| " eclampsia 1 | " pneumonia 1 |

Puerperal Fever.—Case I, aged 39; ninth pregnancy; 53 hours in labour; retention of placenta, with hour-glass contraction; death on the fifteenth day.—Case II, aged 36; fourth pregnancy; 9 $\frac{1}{2}$ hours in labour; subject to acute rheumatism; died on the eleventh day.

Peritonitis.—Case I, aged 26; second pregnancy; quick labour; retention of placenta; death on the eleventh day.—Case II, aged 19; second pregnancy. This woman recovered well from her labour, and went out early, but was seized on the twenty-fourth day, and died on the 27th.—Case III, aged 21; first pregnancy; forceps-case; died on the tenth day, with coexistent erysipelas of the leg, and she had been in hospital twelve months before with erysipelas of the same leg and thigh.

Pyæmia.—Aged 24; second pregnancy; death on the eleventh day, with effusion into all the serous cavities. The patient had a puerperal attack after her first labour.

Diarrhoea.—Aged 30; third pregnancy. Diarrhoea commenced five days before labour, and continued until the second day, after which she died. She had diarrhoea two weeks before the birth of the second child.

Exhaustion.—Case I, aged 25; first pregnancy; forceps-case; dead child; died in half-an-hour (granular kidney).—Case II, aged 30; first pregnancy; face-presentation; twenty-six hours in labour; death in forty minutes from syncope.

Eclampsia.—Aged 35; first pregnancy. A case of severe apoplectic eclampsia; she died undelivered soon after I entered the room.

Accidental Hæmorrhage.—Aged 44; eleventh pregnancy. She had a fall a week before, and the same morning placed her feet in hot water,

soon after which she had a fearful gush of hæmorrhage. She was put into bed and plugged. She was delivered of a still-born child after four hours; but she never rallied, dying in two hours afterwards, having had no more hæmorrhage.

Concealed Accidental Hæmorrhage.—Case I, aged 38; ninth pregnancy; had a fall two months before, which brought on hæmorrhage, from which with care she recovered, and went on to the full term. The child was born after six hours' labour, and she died in twenty-seven hours from syncope.—Case II, aged 28; fourth pregnancy; was seized with faintness and vomiting; feeble pulse and great prostration; she was well bound up and supported with stimulants until pains came on; after the expulsion of the child a large mass of clots followed. She was very feeble and suffered from intense nervous excitability for eighteen days, when she died after two days' pneumonia.

Spasmodic Asthma.—Aged 37; tenth pregnancy; was thrown out of a trap at about the sixth month, which shook her much, and from which she had slight concussion. The attack of asthma came on three days before labour; she had albuminous urine; died on the eleventh day.

Bronchitis.—Aged 34; premature labour on account of the bronchitis; she died in two days.

Pneumonia.—Aged 43; thirteenth pregnancy. This woman got out of bed on the night of the fourth day after delivery, and, without shoes or stockings, or any covering other than her night-dress, traversed a landing to the rooms of her children to see if they were safe. She was seized with pneumonia, and died on the ninth day.

Although the proportion of deaths has been 1 in 125, it is singular that I attended 250 labours before meeting with a fatal case; and, as if to prove to me the fallacy of calculating statistically from a small number of data, I found the next three deaths to occur in a much more rapid sequence—1 in 66.3—although I subsequently had an interval, in which 451 cases were attended without meeting with a death. I should also add that, after attending the first fatal case of puerperal fever, in which I made a *post mortem* examination, I delegated my midwifery cases to a brother practitioner for the space of one month; and whenever I possibly could, which was nearly always, I got cases of erysipelas attended by proxy also.

The ages of the patients and the duration of labour have been omitted from this account, as in many of the cases reliable information could not be satisfactorily obtained, whilst some facts and data relating to the duration of pregnancy I have reserved for a future occasion.

CHLOROFORM ACCIDENTS.

By J. T. CLOVER, F.R.C.S.

THE attention of medical men has been recently called to this subject, by a revision of Professor Lister's article on anæsthetics in Holme's *System of Surgery*. If I understand Mr. Lister, he maintains—1. That in deaths from chloroform the breathing fails before the circulation; 2. That the chief danger arises from laryngeal obstruction; 3. That the chief duty of the administrator is to watch for laryngeal obstruction, and draw out the tongue with forceps when it occurs; 4. That it is useless to watch the pulse; 5. That chloroform may be given as safely by means of a towel as by any apparatus. My experience obliges me to differ from Mr. Lister on these points. I have administered chloroform more than seven thousand times, and ether, tetrachloride of carbon, ethylidenchlorid, the compound "bichloride of methylene", and nitrous oxide, in four thousand other cases. I have never drawn out the tongue, and never lost a patient from any anæsthetic. My aim has always been to give the anæsthetic equally mixed, and in the smallest proportion needed for the purpose, so that, if the effect became greater than I wanted, there might be as little of the agent as possible in the chest requiring to be got rid of.

For several years I gave chloroform upon lint held at a distance from the face, but covered over with a towel; but I found it impossible always to prevent the patient from inhaling more than I desired. This induced me to contrive an apparatus which I exhibited in 1862, and have used constantly since. It enables me to administer the vapour of three minims and a quarter of chloroform with every one hundred cubic inches of air. This proportion rarely excites coughing or swallowing; and whenever any laryngeal obstruction has been threatened I have prevented it by raising the chin, and never have been obliged to draw out the tongue.

It is my habit when giving anæsthetics to watch the pulse as well as the breathing, and I am, therefore, better able to speak of the effect of chloroform upon the heart than those who disregard the pulse. It appears that in Mr. Lister's practice the necessity for dragging forward the tongue is of frequent occurrence. Either his method of giving chlo-

roform is not the best that may be devised for preventing the choking, or else the severe process of seizing the tongue with artery-forceps when the choking occurs is not so imperative as he supposes. Probably some of his patients were so affected by the pungency of the vapour that the simpler expedient of raising the chin well away from the sternum, which I have never found to fail, might have been sufficient.

There is an obstruction to breathing from closure of the glottis of a reflex character. It is often produced when a ligature is applied to a hæmorrhoid or to the pedicle of an ovarian tumour; but the obstruction Mr. Lister dwells upon is, I suspect, nothing more than an *act of swallowing imperfectly performed*. Every one must have noticed that swallowing is very commonly excited by the vapour of chloroform when first inhaled, and the stronger the vapour, the more frequent and annoying to the patient it becomes. There is reason to think that, under chloroform, the co-ordination of the movements which constitute deglutition is interfered with, and that in consequence it lingers in the second stage, when, as we know, there is normally a stoppage to the passage of air.

It is a remarkable fact that we do not get the laryngeal stoppage from nitrous oxide, although it produces a very deep stertor. In some thousands of cases I have continued to give the gas until this stertor was produced, but I do not remember a single case where the larynx was completely stopped. It is probable that the immunity from this accident depends upon the circumstance that the gas is so bland that it never stimulates the throat enough to produce the act of swallowing.

In giving chloroform I have met with several cases of partial obstruction of the larynx, where the mere depressing or raising of the chin was enough to close or open the passage. In such cases, if I had tried to open the mouth by pushing down the chin, I should by that very means have caused total obstruction, such as Mr. Lister describes; and then, no doubt, dragging out the tongue would have been followed by a free inspiration, and probably louder and freer than the one produced by the simple process of elevating the chin.

I am convinced that the chief cause of danger is the effect of chloroform upon the heart. Several deaths have occurred where failure of the pulse was noticed before the breathing became difficult; these cases should have recovered if Mr. Lister's theory be correct. Supposing the larynx to be obstructed at a time when the heart is acting well, and when not more than four or five per cent. of chloroform vapour is in the chest, the narcotism will diminish for the following reason. The blood circulating through the general system deposits a part of the chloroform in the tissues, and, passing through the lungs, it soon reduces the proportion of chloroform there present, and is no longer supplied with a sufficient quantity to keep the nervous centres under its full influence.

Those who have had experience in giving chloroform in a manner to secure that the air breathed only contains four per cent., must have noticed that patients who strain and hold their breath for half a minute or more, as they fell into a state of insensibility, are less under the influence of the anæsthetic when they recommence breathing than when they began to hold their breath. Supposing, however, that the lungs contained ten or twelve per cent. of chloroform, a very different result would occur; the narcotism would increase, for the heart's action would first be diminished, and as a consequence of this the blood would pass through the lungs more slowly, and by passing more slowly would have time to take up still more of the chloroform, and have a dangerous or fatal effect upon the ganglia of the heart. This is the worst form of accident that can happen; for it is obvious that, without effective circulation through the lungs, drawing out the tongue and artificial respiration would be useless.

The pulse varies considerably under the influence of chloroform; it often fails and is scarcely perceptible when sickness is about to take place; also when extensive incisions are made, or important nerves are injured. Whenever chloroform is given stronger than four and a half per cent., the pulse loses force rapidly. Experiments with the hæmadynamometer show that the arterial pressure diminishes when animals are kept under the influence of chloroform. If chloroform vapour is administered very strongly through a trachea-tube, it stops all action of the heart in sixteen seconds. It cannot be too strongly impressed on those who administer chloroform that the same proportion which would be safe when the blood passes quickly through the lungs, might be dangerous if the blood moved slowly, because in the latter case it would take up more chloroform.

I will mention a single case out of many which tend to show both that the pulse must be watched, and that no higher proportion of the anæsthetic should be given than is absolutely needful. A gentleman, fifty years of age, was inhaling chloroform freely, when, finding that his pulse became unsteady and soft, I discontinued the chloroform whilst he was still breathing satisfactorily. I felt the pulse become less and less, and in a few seconds cease; as he continued to breathe freely

and was recumbent, I merely waited, hoping that the pulse would return; and I saw his respirations gradually become fainter and at longer intervals, till at the end of a minute or so they also ceased, and he seemed dead. I now kept up the movements of the chest artificially for about a minute, when he breathed again spontaneously, and his pulse returned. In a few minutes he entirely recovered. It was the pulse which gave me the first warning of danger. Although I withdrew the chloroform whilst he was still breathing, he had a narrow escape, and I cannot avoid the conclusion that had he inhaled chloroform air instead of pure air, during the minute which followed the stopping of his pulse, he must have died.

ON THE CONTAGION OF SCARLATINA AND SMALL-POX.

By T. T. PYLE, M.D.,

Physician to the Sunderland Infirmary, etc.

At the present moment, when the public mind is agitated by doubts as to the necessity for vaccination on the one side, and by the fear of catching small-pox on the other, it may not be amiss to bring forward a few simple facts illustrative of the manner in which contagious diseases are spread abroad, and indicative of the means by which they may be prevented by timely care and attention. I maintain that it is by the neglect of a few very simple rules that our population is decimated by these infectious diseases; and we shall never check their progress until medical attendants and the heads of families are careful in carrying out a system of isolation on the appearance of fever in their villages or in their houses, and also in carefully tracing the virus-bearer so as to catch and imprison him until he is thoroughly disinfected and has ceased to be a pest to society. For these reasons, I call attention to this important subject, and venture to relate the following cases which have come under my observation in my own family and practice.

I shall begin by a case of scarlet fever that took place in my own house in the latter part of 1870. My eldest child, Ethel, aged 8 years, went to play with her little cousins for two days consecutively, and, on the evening of the second day, she awoke from her sleep with violent vomiting, and complained of pain in her throat. Two days after this, the eruption of scarlatina appeared. She had a rather severe attack; but, I am thankful to say, passed through the disease without any very formidable symptoms. It appeared that the housemaid at her cousins' house, about a week or so before, had suffered from sore-throat and excessive vomiting and prostration: she had been confined to bed for a couple of days, but was afterwards able to go about the house and perform her duties, though extremely weak. I made every inquiry where the child could have caught the infection. I had myself not attended any case of scarlatina for several months before that period. The laundress had not washed any clothes except for our family and the family of a patient of my own, whose children were quite healthy; and the only conclusion that could be arrived at was, that this housemaid had had a slight attack of scarlatina, and gave it to my little girl, who, perhaps, was rather in a condition to receive it, having just been convalescent from an attack of bronchitis.

The second case I can trace very clearly. Miss M., a governess from a school in Sheffield, came to Sunderland for the Christmas holidays, and consulted me for a chest-affection. On her next visit to me, about ten days afterwards, she was very depressed, and gave the following reason. Before leaving the school at Sheffield, a favourite pupil took scarlet fever; she nursed the child throughout its illness till its death. A few days after her return home, she wore the same dress that she had while she attended on her pupil. One of her little brothers took scarlet fever, and died within a few days. Three or four of the other children in the house also took the disease, but she herself never had the least symptom of it.

The third case occurred at a colliery village some few miles from this town, and one over which I have the medical supervision. The resident medical gentleman informed me that there had not been a case of scarlatina in the place for more than a year before. The village contains somewhere between three and four thousand inhabitants. When I was first called to see the child, the rash of scarlet fever was well developed, and the parents could give me no idea how the disease could have been caught. The drainage was excellent, the children were well fed, and the air good, being on the sea-coast. This child ran through the course of the disease in a mild form, and recovered. By very careful inquiry, I discovered that a relative of the parents had sat up all night in Sunderland a few days before this period, nursing a neighbour's child that had been ill and delirious, but, as they stated, merely with a very bad sore throat. Before leaving this case, I ought to state that I took every

precaution to prevent the spreading of the disease in the village. In spite of my efforts, some of the friends visited the house, and the fever appeared in two other houses in the place, in one of which three cases of scarlatina occurred, and in the other house one case. By impressing on these people the great importance of preventing any communication whatever with their friends, I was gratified to find that my instructions were fully carried out; and no other cases broke out except in the house where the first case was discovered. A brother of the child first affected was not at home when the fever appeared, and I ordered that he should be kept away for some time. After seven weeks, and when the child affected had become convalescent, the other child was brought home. I could not clearly ascertain if it had worn any of the clothing of the affected child; but, a few days after its return, it had a mild but distinctive attack of scarlet fever. I am happy to state that since that time, now several weeks ago, no fresh case of scarlatina has occurred in the village.

The following case will illustrate the direct contagion of small-pox, which is now occupying so much attention. It occurred at the same colliery village, and was brought from Hartlepool (a town distant about twenty miles) by a man in the desquamative stage, or, as they expressed it, "red raw", after the disease. He was invited to the house for change of air, and stayed about a week. Two days after he left, one of the children who had never been vaccinated, and whom the man had fondled a great deal and frequently had to play with him, took the confluent form of small-pox. The other children in the house had also not been vaccinated, but the Resident Surgeon and Public Vaccinator for the district at once had them vaccinated. They did not take the disease; and, by a proper surveillance of the house, and preventing any communication with it, no other cases have yet appeared.

CLINICAL ILLUSTRATIONS OF CUTANEOUS DISEASE.

By ERASMUS WILSON, F.R.S.,

Professor of Dermatology in the Royal College of Surgeons.

Melasma Frontis, with General Melasma in Patches, originating in Cachexia.—March 27th, 1871. A robust woman, aged 40, is troubled with a greyish-black stain which covers all that portion of the forehead which is exposed to the light. Her neck is also swarthy, and the integument of the whole body is darkened with pigmentary blotches of irregular figure and extent. This melasmic affection has been two years in progress, and is now somewhat less than it was some months back. Her health has been much shaken by numerous causes of exhaustion. Some years ago, she had a severe attack of rheumatic gout; this was followed by several miscarriages; and, immediately before the darkening of the skin was first observed, she suffered very considerably from abdominal spasm, accompanied with flatulence.

Perverted pigmentation of the skin in the form of melasma may always be traced to causes affecting innervation, assimilation, and sanguification. Such causes existed in the present instance; and the pigment-substance would seem to owe its origin to the destruction of the red corpuscles of the blood, for anæmia, in a greater or less degree, is always present with melasma; and in the present instance the sclerotic was anæmically pale.

Erythema Solare, affecting the Face and Hands on Exposure to the Rays of the Sun.—April 4th, 1871. Pellagra, the *mal del sole*, a disease of the South of Europe, has made us acquainted with an erythema due to a neuropathic condition of the skin; the disease subsequently invading the whole of the nervous system and brain, and ending in madness. Such a type of disease as this is necessarily recalled to the mind when anything of a similar nature, however remote, is brought under our notice; and it is as a far distant resemblance of the earliest stage of this affection that I now record the following case.

A healthy-looking young woman, aged 38, complains of the scorching effect of the sun upon her face and hands; and, to illustrate her complaint, she shows me the back of her hand, upon which she has allowed the light of an early April sun to impinge while awaiting her turn of consultation, about an hour. Sure enough, the hand presents a well marked erythema of a dull red or purplish-red colour—a slight degree, she observes, of the appearance produced during the warmer months of the year. The inference is evident. Her skin must be unusually and morbidly sensitive to be injured to such an extent by the actinic rays of the sun. She dates back this hypersensitiveness of the skin to a period of seven years; and since that time she has also noticed that her skin is unusually dry and lacking of perspiration.

Prurigo Mitis, from imperfect Assimilation.—March 11th, 1871. A

gentleman occupied in office duty from ten until four daily, aged 57, is troubled with pruriginous papules, distributed chiefly over the back of the trunk. The papules are of the kind which are felt rather than seen, and appear to be due to congestion and infiltration of the vascular coat of the follicles. His attention is attracted to the seat of the papules by itching; the finger detects a hardness, which is described as being under the skin; the part is scratched with the nails; and then an angular or square shaped excoriation remains, which dries up into a thin reddish scab. These spots make their appearance from time to time, but never exceed ten or twelve in number. Formerly he suffered from gout, but has had no symptoms of that complaint for four years. The gouty diathesis has for the time being been merged into the dartsous diathesis, and at present manifests itself as a simple prurigo such as I have now described. He was benefited very much by a tonic aperient treatment, and lotion of bitter almonds with hydrocyanic acid; but, not being entirely relieved at the end of a month, and his digestive functions being properly performed, I prescribed three minims of Fowler's solution three times a day, in my ferro-arsenical mixture.

Elephantiasis Gracorum, the Oriental Leprosy.—March 15th, 1871. A subaltern officer of the army, aged 43, a tall well built man, is afflicted with elephantiasis in its maculated stage. His face has a deep coppery-red hue; the trunk of the body and limbs are spotted all over with large round blotches an inch and a half to two inches in diameter, the pigmented surface being greater in extent than the sound skin. The blotches on the trunk of the body have a deep red brown hue, darkest in the centre, and fading at the circumference. But on the hips, thighs, and legs, the centre of the dark brown blotches is of a dead white colour, from loss of pigment; and these white areas are more or less completely anæsthetic. The skin has not as yet arrived at the tubercular stage, and probably may remain as an example of the anæsthetic form of the affection. The ulnar side of the forearms and two corresponding fingers are benumbed from partial paralysis of the ulnar nerve. The integument of this region is also deeply pigmented, and interspersed with white areas and a few cicatrices from slight ulceration. The feet, he says, are wholly unaffected. He has no constitutional symptoms of disordered health, with the exception of a burning flush in his face after taking food. He resided in India twenty-four years, and, shortly after his arrival there, had syphilis, followed by secondary symptoms. At different times, his regiment has been quartered in Madras, Bengal, the Malabar coast, and Lucknow. He was at the latter place when the disease first began, two years ago; and at present has returned to England. He has been married fifteen years, and has a family, but is wholly unaware of the nature of his disorder.

HIGH TEMPERATURE IN VARICELLA

By JAMES RAMSAY, M.A., M.D., York.

BEING called to see Miss M., a young lady, aged 15, living in a boarding school, on May 27th, I found her suffering from a smart attack of chicken-pox. She was confined to bed, feverish, and complaining of slight headache and nausea. On the face, arms, neck, and chest there was a mixed eruption of reddish papules and vesicles in different stages. The fully formed vesicles were about the size of split peas, semi-ovoid, with but slight areolæ, destitute of central depression, and contained perfectly limpid serum; on pricking one or two, they collapsed entirely. There was no eruption on the lips, tongue, or fauces, and no sore-throat. The tongue was coated with thick creamy fur; the appetite was suspended; the bowels confined. The urine was rather scanty and high coloured. The skin was very hot, but moist. The spots were most abundant on the face and neck. They had come out simultaneously over the parts mentioned. Malaise had been felt the day but one preceding my visit, and next morning the first crop of papules had appeared. A fresh crop had come out on the morning of the day of my visit. She had been revaccinated six weeks previously.

Having some doubts about the diagnosis between varicella vera and varioloid, I saw her again about 9 P.M. the same day. There was then little change in the state of the eruption. The pulse was 120 per minute; the temperature very high, being 103.8 deg. Fahr. in the left axilla. The face was considerably flushed. There was no cough or dyspnoea; the state of the chest was normal; and nothing of a local nature could be found in any way to explain the great general disturbance of the system. Next day the patient was better, but the temperature was still high, 100.5 deg. On the following morning it was 99 deg., and the day after it was normal. She continued quite well from that time.

After a careful investigation into the sources of infection, it was discovered that some children in a separate but adjacent house were suffering from chicken-pox; and no doubt infection had been brought thence by one of the servants, who had had intercourse with a domestic in the infected house. From the fact that few of Miss M.'s school-fellows had been revaccinated, I was at first in some doubt as to what course I should adopt with them; for it was some time before I was quite convinced of the nature of the case. I had at one time seriously contemplated the advisability of breaking up the school; but, as there were means of securing complete seclusion, I determined to wait. Any one who has been familiar with the perplexing appearances of modified small-pox, and the possibility of an outbreak of it in a house full of young ladies being taken into account, will quite understand the difficulty of my situation. The point which I venture to think of greatest interest, and which afforded me most anxiety, was the high range of temperature observed on the evening of the third day of the disease. Authors are, I think, hardly explicit enough, as a rule, in alluding to this point. Heberden, writing in 1802, even denies the presence of "fever" in varicella. Gregory, too (1843), calls it always "slight." Dr. Gee, in Reynolds's *System of Medicine*, speaks of it as being "mild." Aitken (*Practice of Physic*, vol. i) observes that "the fever may be severe for a few hours, but perhaps it never passes into a stage so severe as to have the tongue of a brown or coated appearance." Dr. Austin Flint, whose work on *Medicine* is most valuable as an exposition of observed clinical facts, describes it as "slight or wanting." Dr. West (*Diseases of Children*) writes that the fever is scarcely ever severe—sometimes altogether wanting. He has, however, sometimes seen children (who were teething actively at the time) suffer for twenty-four or thirty-six hours from febrile symptoms, quite as severe as those preceding the eruption of measles. Trousseau states that there are outbursts of fever, sometimes violent, for four or five nights, ceasing by day. The great mass of cases, of course, are attended with little general disturbance; but the one which I have described, though exceptional, shows us that even in a well grown subject, otherwise in perfect health up to the date of the attack, the temperature may be for a time sufficiently high to cause much hesitation in forming a diagnosis from varioloid, to which varicella frequently in other points bears a marked resemblance. The knowledge of the possibility of such a condition may be of service, and might prevent such an unfortunate mishap as the needless breaking up of a school; and I hope this consideration will be held to excuse the present notice of the subject.

I may add that the sister of Miss M. exhibited the appearances of varicella exactly fourteen days after the strict seclusion of the latter had been put in force. She went through a similar course without, however, any marked febrile symptoms.

CLINICAL MEMORANDA.

ATROPHY OF THE TONGUE.

HYPERTROPHY of the tongue is occasionally met with, and an interesting case of this kind, affecting only one-half of the organ, has been related by Dr. Graves (*Dub. Hos. Rep.*, iv, 43); but we have it on the authority of Mr. Holmes Coote (in Holmes's *System of Surgery*) that there is no well-authenticated instance of atrophy upon record. A case lately came under my notice which appeared to be one of unilateral atrophy of the tongue, but I hesitate to publish it, because the history is imperfect and no *post mortem* examination was allowed. It has led me, however, to search for other examples of a like kind, and my search only confirms Mr. Holmes Coote's statement with regard to the extreme rarity of this disease. I should be glad, therefore, to ask whether any of the readers of the JOURNAL have ever seen atrophy of the tongue, or can direct me to the history of such a case in medical literature.

Curzon Street, Mayfair, July 3rd, 1871. W. FAIRLIE CLARKE.

RARE LUXATION OF THE ANKLE-JOINT.

I HAVE read with interest in the JOURNAL of the 13th May the report of a case of "rare luxation of the ankle-joint" by Dr. Eames. About a year ago, I met with a case of similar injury.

Miss L., a stout middle-aged lady, while descending a hill suddenly slipped her foot, or, as she better expressed it, "went on the outside of her foot". She fell, and was quite unable to rise. On seeing her after she was carried home in about half-an-hour afterwards, I found the foot displaced inwards; the plantar aspect pointed to the middle line of the body, the external edge looking downwards; there was very great prominence of the external malleolus. Reduction was very easily effected.

Most careful examination was also made of both malleoli, with the result of finding neither fractured. The limb was put up in splints to maintain perfect rest of the joint. In a few weeks the joint had regained its normal state, all its movements being quite unimpaired.

Burntisland.

JAS. CARMICHAEL, M.D.

THERAPEUTIC MEMORANDA.

HYDRATE OF CHLORAL IN DELIRIUM TREMENS.

THE gate-porter of the London Fever Hospital was taken with vomiting and diarrhoea between 12 and 1 A.M. of May 31st; he had also headache, pain in the loins, and tremor. At 1 P.M. his temperature was 99 deg.; at 5 P.M. 102 deg. An emetic of ipecacuanha was given, and at 10 P.M. the temperature was 100.8 deg. He had perspired freely after the emetic, as well as vomited.

He did not sleep much on the night of the 31st May or of June 1st, though he took a dose of opium each evening. On June 2nd he felt and looked much better; the bowels were still loose, and he had slight headache; the tongue was covered with a pale thin fur. Temperature from the morning of June 1st, very nearly normal.

On the evening of the 2nd he began to have hallucinations and marked tremors, and he had no sleep during the night, notwithstanding repeated doses of laudanum.

Throughout the 3rd he was violently excited by all sorts of fancies. Towards evening he shouted "Police", "Murder", and could scarcely be kept in bed. There was much tremor of the limbs and tongue; the skin was cool and clammy; pulse 120, soft; tongue moist; bowels open; pupils small. He seemed exhausted, and his expression was haggard. He had remained much in the same condition, and was equally delirious, but less violent, because weaker, when I saw him about 4.30 P.M. on the 4th June for the first time after the accession of the delirium. He had had frequent and large doses of Battley's solution of opium, but had not slept at all, and seemed as wakeful and as restless as ever. I ordered him to have an ounce of brandy in a cup of beef-tea immediately; this to be followed in a quarter of an hour by forty grains of chloral. Ten minutes after taking the chloral he suddenly fell asleep, and continued to sleep calmly, opening his eyes two or three times and taking milk or beef-tea, till 9.30 P.M., when he awoke and had still slight delirium and tremor. Twenty grains of chloral were again given, and for the next thirty-six hours he slept continuously, waking only to take food, and going off to sleep again at once. At the end of this time he was quite well.

W. H. BROADBENT, M.D., Physician to the Fever and
June 29th, 1871. St. Mary's Hospitals.

LOCAL APPLICATIONS AND CHLORAL IN SMALL-POX.

A VERY useful local application, which I have used extensively in the treatment of small-pox, consists of a mixture of liquor calcis saccharatus (P. B.) with linseed oil, in the proportion of two and a half ounces of the former to two ounces of the latter. This combination seems to me to be an improvement on the old Carron oil. It is of the consistence of "salad cream," and is very soothing when applied to the skin in small-pox, and it relieves the tendency to scratch the pustules. No doubt the sugar increases the mollifying influence of the oil and lime.

There is, perhaps, no medicine for which small-pox patients are more grateful than for an occasional dose of hydrate of chloral. During the first few days of the disease, want of sleep is very generally present, and causes much distress. A moderate dose of chloral at bedtime will ensure several hours of deep and refreshing sleep. While on the subject of chloral, I may refer to an application of the drug which I have not seen adverted to elsewhere, but which I have found of considerable use in my own person. Probably most of those who are accustomed to burn the midnight oil in intellectual work, know that if their studies are kept up beyond a certain time, a peculiar irritability of brain comes on which entirely prevents sleep. The student feels that he could go on working for hours longer; but, if consideration for next day's duties induce him to retire to bed, he finds it impossible to go to sleep, and he tosses about for two or three hours before at length sleep overtakes him. If, instead of waiting all this time while the cerebral irritability gradually subsides, twenty or thirty grains of the hydrate are taken, he sinks within a few minutes into a profound and invigorating sleep; and no unpleasant effects are perceived the next day as the result of using the drug.

FREDERICK POLLARD, M.B.Lond., Resident Medical Officer to
the St. Pancras and Northern Dispensary.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

NOTES ON THE TREATMENT OF GANGLION IN THE LONDON HOSPITALS.

[Continued from page 10 of last volume.]

MIDDLESEX HOSPITAL.

Mr. CAMPBELL DE MORGAN prefers to leave slight cases of ganglion alone. If troublesome on the back of the wrist, he fairly cuts through them subcutaneously, and keeps on pressure. The large ones on the palm of the hand, if he interferes at all, Mr. De Morgan lays open fully, saving the annular ligament; and dresses with some balsamic tincture. Enlargements of the bursa patellæ he treats with rest and iodine. If they be inflamed and suppurating, he lays them open. When they are indolent, he uses puncture and rest; sometimes setons, though Mr. De Morgan states that he has seen mischief from these. He has seen great good from blistering. Ganglia in the popliteal space he never touches, if he can help it. If it be necessary to interfere, the greatest care should be taken to preserve rest. Inflammation is often propagated to the joint from them.

Mr. NUNN treats ganglion in the following manner. Ganglion—that is to say, circumscribed inflammation of synovial tissue in juxtaposition with the sheaths of the tendons, forming a tense roundish tumour, more or less moveable—if not capable of being disposed either by steady pressure or by sudden force, rupturing the sac and extravasating the contained fluid into the surrounding cellular tissue, cannot be treated off hand, like an abscess or a boil, by puncture, without considerable risk of diffused inflammation involving the sheaths of the tendons and intermuscular cellular tissue. As ganglion is frequently caused by excessive movement of the tendons in their sheaths—as in persons training for professional pianoforte-playing—it is difficult to imagine that ganglia are so completely independent of the synovial structure lining the proper sheaths of the tendons as is generally accepted. One might suppose that a pouch could be commenced by a slight effusion of fluid in the sheath, distending the delicate true synovial membrane through a gap in the investing firmer tissue, and that this pouch could become a cyst, as in well-known parallel examples, by obliteration of neck of sac. The fact is (as far as Mr. Nunn's experience goes) that the ganglion is usually, if not invariably, found on the back of the hand. Where the sheaths of the tendons are undefined and apertures common, Mr. Nunn understands that circumscribed effusions *within* the sheaths of flexors or extensors should not be included in the term ganglion, although in many cases, doubtless, essentially of the same nature. These swellings are, on the other hand, sometimes also due to constitutional causes. Subcutaneous puncture, or rather incision, is, in cases not to be ruptured by blow or pressure, probably the best next step, but may require repetition, and should not be done without using a splint as a precaution. The subcutaneous puncture is probably quite as safe as severe counterirritation—a plan which Mr. Nunn has seen tried. But, before using even subcutaneous puncture, he would advise diligent trial of alternate douches of very hot and cold water: this will remove almost with certainty any tenderness along the course of the tendons, and diminish the ganglion if it will not get rid of it. Mr. Nunn has never met with results at all satisfactory from the employment of blister, or of localised pressure by pad and strap.

The mode of treatment which Mr. GEORGE LAWSON adopts for the small ganglia on the extensor tendons of the wrist is, first, to try if he can rupture them by firm pressure with his two thumbs whilst the hand is laid upon the table; and then, by steady rotatory rubbing, to cause the contents of the cyst to be extravasated into the adjacent cellular tissue. He then paints the part with a strong solution of iodine, and applies a firm pad and a bandage. When, however, the ganglion resists the pressure of the thumbs, and cannot in this way be ruptured, Mr. Lawson introduces a tenotomy knife through the skin, at a short distance from the ganglion, and lays it freely open subcutaneously, and then, by pressure with the fingers, evacuates its contents into the surrounding tissues. The parts are then painted with iodine, and a pad and bandage applied as above stated. Mr. Lawson strongly deprecates the plan of using setons for the cure of ganglia, as on two occasions he has seen the hand nearly lost from diffuse cellulitis which followed this mode of treatment.

ST. GEORGE'S HOSPITAL.

Mr. HENRY LEE's plan of treating ganglia is to puncture them subcutaneously, and to press out their contents into the subcutaneous cellular tissue every day or two until it ceases to reaccumulate. Mr. Lee lately treated in this way, with success, a ganglion as large as a French walnut, on the instep, of many years' duration.

Mr. ROUSE bursts the cyst, when recent, with his thumbs, and well rubs the surfaces together; and in many instances this succeeds. When ganglia are of long standing, he punctures them, squeezes out their contents, then rubs the surfaces, and subsequently blisters or uses liniment of iodine. If this fail, he again punctures, blisters, and dresses the sore with blue ointment. This last generally succeeds, especially if the the sac be thick. In those rare cases in which melon-seed bodies exist, which are usually found on the anterior surface of the wrist, Mr. Rouse believes that no treatment save laying open the sac and dressing it in is of any avail. He has had no experience in dissecting out the sac, or laying it open and dressing in with lint, in the ordinary forms of ganglion.

LONDON HOSPITAL.

Mr. WALTER RIVINGTON invariably punctures the swelling with a fine-pointed bistoury, squeezes out the fluid thoroughly, and then applies a compress tightly for a few days. Failure to cure is in his experience rare.

ST. MARY'S HOSPITAL.

Mr. GASCOYEN restricts the use of the term *ganglion* to a swelling which is connected with the sheath of the extensor tendons on the back of the wrist and on the dorsum of the foot. He does not regard this as an independent growth, but as a protrusion or hernia of the synovial membrane through the fibrous sheath of the tendon; and considers that its enlargement is produced by the gradual escape of the synovia into it during the movements of the tendon. Mr. Gascoyen therefore advocates a subcutaneous method of treatment, and adopts the old plan of rupturing these swellings by pressure with the thumbs or by a smart blow, afterwards applying a conical pad with a bandage. This treatment he has generally found to effect a cure in recent cases. In those of old standing, when the above means fail to disperse the tumour, he recommends free incision with a tenotomy-knife, introduced in a valvular manner through the skin; and the application of firm pressure in the same manner after evacuating the contents. When these tumours have existed for a long time, they have, however, a great tendency to re-form after any plan of treatment. Blisters, iodine, and other stimulant or absorbent applications, have seldom proved of service; they merely diminish for a time the size of the swelling. The very severe inflammation which often follows the use of setons in these cases renders their employment undesirable. Mr. Gascoyen deprecates excision of these swellings, except in those few instances where the tumour, having become solid, is disposed to ulcerate from friction or some other cause. In these cases, though the connexion between the ganglion and the sheath of the tendon has become severed, so long as the contents remain fluid, showing that there is a communication with the interior of the sheath, he is strongly opposed to any attempt to remove them.

CHARING CROSS HOSPITAL.

The treatment of ganglion which Mr. HANCOCK has found most successful, and which he now always adopts, is subcutaneous section—making, at far as possible, a crucial incision; and afterwards gradual compression, with rest of the part.

Mr. BELLAMY has found that, in the case of the ordinary non-inflamed ganglia generally met with about the dorsum of the wrist or foot, a good smart squeeze with the thumbs, one on the top of the other, is sufficient to disperse the contents of the sac into the surrounding tissues. This, however, appears to be effective only in ganglia having very thin walls, and situated either above or beyond that point where the annular ligament is thickest, or exists merely as fascia. In ganglia that have existed for some time, where the walls are thick and the cyst frequently multilocular, a puncture should be made, but in a peculiar way. A sharp-pointed tenotomy-knife should be introduced flatwise through the skin, and caused to traverse the cyst or cysts, making a free opening in them. Pressure with the thumbs will then readily diffuse the contents, and a pad and bandage will frequently effect a cure. In other cases, where the thick annular ligament of the wrist is lifted up by a subjacent cyst, Mr. Bellamy prefers free incision, pushing the knife straight into the sac through the annular ligament and integument, dividing these structures thoroughly; the contents are then evacuated externally, and a strong pad or compress is kept on for some time. It is remarkable how rarely even the slightest inflammation supervenes, and how thoroughly the ganglion is destroyed without

further applications. He has cured large obstinate ganglia by passing setons through them, but this was after the ordinary methods of treatment had failed.

WESTMINSTER HOSPITAL.

Mr. HOLTHOUSE's most frequent method of proceeding in simple ganglia about the wrist is, first to flex the joint to the utmost, and make firm pressure on the tumour with the thumbs. Failing to get rid of it by this means, he passes a single thread through it; again makes pressure as before, and so empties it through the apertures made by the thread. The two ends of the thread are then tied together, and a compress applied. In the course of one, two, three, or more days, according to the amount of inflammation set up, the thread is removed; the inflammation subsides, and the ganglion is cured. Mr. Holthouse never adopts this plan of treatment unless he can see the patient within twenty-four hours, lest inflammation of an unhealthy character or too violent should be set up. Failing this condition, he punctures the tumour with a tenotomy-knife; squeezes out the contents; applies a firm compress over it; and straps it tightly round a splint placed on the palmar aspect of the wrist. There is a variety of ganglion with the pathology of which Mr. Holthouse is not well acquainted. It appears suddenly, without obvious cause, and cannot be distinguished either by its appearance or feel from an ordinary ganglion. It differs from this, however, not only in the mode of its appearance, but in its not forming a perfectly closed sac. Under pressure, it may be made to disappear completely, and without rupture of its walls: for this reason, Mr. Holthouse always first tries pressure and manipulation of the tumour before resorting to seton or puncture.

After a considerable experience of the various methods of treating ganglion, Mr. FRANCIS MASON believes that, in those cases in which the cyst has a thin wall, the forcible rupture with the thumb or a flat book is the simplest and best plan of effecting a cure; but in cases of long standing, or those in which the sac is very thick, by far the least painful and most successful proceeding is to puncture the cyst in a valvular manner with a grooved needle (a hare-lip pin does equally well); and, having traversed the contents, to make make five, six, or more punctures in various parts of the cyst, especially on the opposite side, taking care not to wound the skin in this situation. On the needle being withdrawn, pressure with the thumb evacuates the contents of the sac into the surrounding tissues; absorption ultimately ensues; and, if the precaution be taken to place a pad of lint, secured with a bandage, over the part, the cyst seldom, if ever, re-fills. With regard to the common and popular method of suddenly rupturing ganglions with a book, Mr. Mason has remarked that, when the ganglion is tough, no little skill is required to strike the part so as effectually to accomplish the object in view; and another point of some importance is that, if the cyst be not broken at the first attempt, the patient is unwilling to have the blow repeated, much discomfort being occasioned by this somewhat apparently coarse procedure. Again, a book of suitable size and shape is not always at hand. Moreover, the proceeding is in many instances, even if successful, attended with considerable pain, generally causing extreme pallor, and not unfrequently inducing a fit of fainting. Few patients object to the prick of the needle, provided they have the assurance that there is no "cutting operation". Iodine paint at the onset may be tried, but permanent good seldom follows from its use. The removal of the cyst by excision is seldom absolutely necessary; and when the operation is performed, it is, as Mr. Mason has seen, sometimes followed by intense inflammation of the sheaths of the tendons, accompanied with profuse suppuration, and leaving the use of the fingers much impaired, not to mention the constitutional irritation set up, endangering the life of the patient. Such cases are of course rare; but the practice of puncturing the cyst in the way already described is, so to speak, painless, and is almost entirely free from risk in any shape.

Mr. RICHARD DAVY pursues the following methods amongst the out-patients; viz., excision, partial or complete; subcutaneous slicing; subcutaneous puncture, and injection of tincture of iodine; mechanical crushing; and subcutaneous puncture. The seton, being a tedious and painful process, has not been employed.

GREAT NORTHERN HOSPITAL.

Mr. GAY has tried a variety of ways, with different success in different cases. His experience has led him to the conviction that these bursæ must be treated with caution, and that danger may accrue at least to the limb if such a rule be not observed in every case. Rupturing the cyst by violence, with subsequent pressure, is of little or no avail. The cyst has, in his experience, repaired the injury and become refilled. External puncture, and even free incision, followed by compression, have been more successful. A series of blisters, followed by

some irritant application, such as tincture of iodine, has occasionally succeeded, especially if the cyst be subsequently punctured externally, the contents squeezed out, and compression be ultimately applied. In these cases, the blistering must be continued so as to ensure the propagation of the excited inflammatory action to the inner lining of the cyst. Mr. Gay has not tried iodine and other injections. He has removed these cysts on two occasions, and with results that determined him not to attempt this mode of treating them again. In the first instance, the operation was followed by a violent attack of diffuse subcutaneous cellulitis and acute inflammation of the wrist-joint, which proved serious, although ultimately the limb and joint were saved; and in the second case the healing of the wound was very prolonged, and was attended with deep-seated suppuration and some permanent contraction of the extensor tendon. The plan which Mr. Gay usually follows (and uniformly with success) is that by seton. He passes a single thread of silk through the cyst, and allows it to remain until undoubted pus issues from the punctures. He employs a needle so large as to permit of the contents of the cyst being expressed through the openings which it makes; and, in case the thread does not excite sufficient inflammatory action, he not only moves it daily, but soaks the thread with tincture of iodine, and draws the portion thus soaked within the cyst. Even this plan is sometimes followed by severe inflammation and suppurative action, when the thread has had to be taken out. Occasionally, it has been so severe that he has had to open the cyst as an abscess. For the most part, however, the process is simple; no superfluous action is set up. About the seventh day, some pus exudes with the thread; the thread is then withdrawn; gentle pressure is applied; and the cyst contracts and disappears, all but its walls. Even when treated thus, the case must be under daily observation.

Mr. W. ADAMS thinks that, in the simplest form of ganglion, such as that frequently seen over the carpus, when recent, rupture of the sac by a sudden blow, or by hard pressure with the thumb, should first be tried, and will frequently succeed, even if it have to be repeated once or twice. This failing, he always resorts to a free subcutaneous section of the sac in different directions, by introducing a tenotomy-knife; and, after transfixing the sac, cutting freely in one direction, and then turning the knife, cutting as freely in the opposite direction. If the thin ganglionic sac appear to yield before the knife, the latter may be partially withdrawn, and the point made to pierce the sac in two or three situations. Firm pressure must afterwards be made by means of a piece of metal or small coin, wrapt round with lint, and kept in position by a bandage for a week. By this means he has generally succeeded in obliterating ganglia by one operation. Occasionally, however, failure occurs; and either the same operation may be repeated, or a seton may be introduced. In employing the seton, Mr. Adams always introduces six threads, and removes three on the following morning. This at once allows the fluid to escape, and relieves the inflammatory tension and pain produced by the seton. The remaining three threads may be allowed to remain for a week or more. From a neglect of this rule of removing half the seton, he once saw acute suppurative inflammation extend to the wrist-joint in a man under the care of the late Mr. Mackmurdo at St. Thomas's Hospital; and the patient died. The preparation, showing complete destruction of the articular cartilages of the carpal bones, is in the museum of St. Thomas's Hospital. Mr. Adams believes the seton to be a perfectly safe and reliable remedy, if half the silk be removed on the day following its introduction; but it may occasionally fail, and in two instances he has cured an obstinate ganglion by a second introduction of the seton. To what extent ganglion may be dissected out with safety, he cannot say; but in one instance, mistaking the character of the tumour, Mr. Adams dissected out a large ganglion of a flattened and lobulated shape, which had formed over the extensor tendons as they cross the ankle-joint. He mistook it for a fatty tumour, such as he has seen in the forearm. On section, the ganglion was seen to be thick-walled and loculated; and, from its flattened and expanded form, he does not think a seton could have been employed. Metal sutures were used, and Dr. Richardson's colloid styptic with cotton-wool applied. Union by the first intention took place. Old thick-walled bursal tumours over the patella, we know, have frequently been removed with safety.

Mr. BUXTON SHILLITOE always treats simple ganglion by subcutaneous puncture with a grooved needle, thoroughly emptying the cyst, and irritating its interior by a few scratches with the point of the needle. He is particular in keeping pressure upon the emptied cyst until he can apply a firm pad, which is retained in place by plaster and bandage for a week or so. It very seldom fails to cure, if thoroughly done. If it do, he repeats it immediately the cyst commences to refill. After the bandages are removed, he orders the application of iodine or frequent douches of cold water. Mr. Shillitoe has seen

awkward results from the use of setons; and he believes, in the treatment of simple ganglions, that they are unnecessary. Compound ganglion requires much more careful treatment, partly on account of its extent and position, partly because its contents are mixed up with more or less solid fibrinous deposits. They occur chiefly in the palm of the hand and side of the sole of the foot. He has cured those on the palm of the hand by dissecting out a portion of the cyst, without division of the annular ligament—squeezing out the remainder of the semi-solid contents, and allowing the wound slowly to granulate up. Mr. Shillitoe says he should not hesitate to inject iodine in such cases.

[To be continued.]

NOTES ON BOOKS.

THE *Reports of the Medical and Surgical Registrars of the Middlesex Hospital* for the year 1870 present, as usual, a considerable mass of statistical and other material arranged with much care and labour. Among other matter, Dr. JOHN MURRAY, who up to the end of the year filled the office of Medical Registrar, gives an elaborate tabular analysis of the morbid appearances observed in the various organs in one hundred and twenty *post mortem* examinations of patients who died in the medical wards; and a tabular view of the histories of 123 cases of acute and subacute rheumatism, special regard being paid to the presence or absence of cardiac disease, and to the family history. Mr. HENRY MORRIS, the Surgical Registrar, gives an analytical table of the results of *post mortem* examinations (91 in number) of surgical patients, besides very valuable tables of the cases of cancer, infectious diseases, hernia, and compound fracture. Such reports as these not only indicate work done, but, from the evident care with which they are compiled, they are valuable contributions towards the collection of a mass of facts from which, at some time, important conclusions both in medicine and in surgery may be drawn.

The Use of the Laryngoscope in Diseases of the Throat (3rd edition), and *Essays on Growths in the Larynx*, by Dr. MORELL MACKENZIE (London, Churchill, 1871) are two monographs of first-rate merit—better than we altogether like to acknowledge, considering that they are the result of work at an institution to which, on public and professional grounds, we think that the great objections which have been made should be steadfastly maintained. Of course excellent work may be done at an objectionable institution, just as very poor work may be done at those of the highest worth and of classical reputation. Dr. Mackenzie's essays would do honour to any place; and he has used the opportunities afforded to diligence and skill by the introduction of a new diagnostic instrument, to make solid and enduring contributions to science and practice. Both works are throughout models of honest and complete work, and are honourable to British medicine, as they are useful to practitioners of every country. The completeness of the clinical records, the excellent and abundant graphic illustrations, and the fulness of bibliographical references, are excellent features in both volumes—notably in the essay on Morbid Growths.

In noticing a further edition of SQUIRE'S *Companion to the Pharmacopœia*, we have to speak especially of the useful analytical list of mineral spas which he has added, and the extreme pains taken to make this really admirable book more and more worthy of its extended and well-earned popularity.

REPORTS AND ANALYSES IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

GRANULAR EFFERVESCING PREPARATIONS OF PEPSINE.

MESSRS. YOUNG and POSTANS, of 35, Baker Street, W., have submitted to us specimens of their new Granular Effervescing Preparations of Pepsine. In these preparations, the ammonio-citrate of bismuth, ammonio-citrate of iron, and pig's pepsine, are used. The flavour of a little essence of lemon is then added, and the granules are then made at a temperature not exceeding 90 deg. Fahr. By means of this low temperature, the otherwise delicate properties of the pepsine are entirely preserved. We believe that many members of the medical profession have already greatly approved their use, and appreciated the form as at once elegant and agreeable.

THE
GENERAL MEDICAL COUNCIL
ON
EDUCATION AND REGISTRATION.
SESSION, 1871.

Tuesday, July 4th.

THE Council assembled at 2 P.M., at the office, 32, Soho Square.

New Members.—The official notifications of the appointment of Mr. Quain as representative of the Royal College of Surgeons of England in the room of Mr. Cæsar Hawkins, and of Dr. Gull as member nominated by the Crown in the room of Dr. Rumsey, having been read, these gentlemen were introduced and took their seats.

President's Address.—The President, Dr. PAGET, addressed the Council as follows.

On the two former occasions in which I had the honour of opening a Session of the Council, I did it in the fewest words. I spared your time, knowing its value, and could well spare it, because the business of the Session was plainly and unmistakably before us, and any introductory remarks of mine would have been at least superfluous. On the present occasion, the circumstances are different, and in one respect peculiar. What has happened since our last meeting might seem to demand comment, perhaps lengthened comment. But I will not detain you long. We meet for business, not for talk, except such talk as may be in itself business. But one word for two friends of ours who have retired from the Council since our last meeting. We should be ungrateful if we omitted to acknowledge what we owe to Mr. Cæsar Hawkins—to his diligence in business, his conscientious accuracy on which we could always rely, and the clear judgment and honourable spirit which he brought to the consideration of every question; and to Dr. Rumsey it is due that we should remember his great and willing sacrifice of time and labour while aiding us in the large and complicated subject of State Medicine, of which he is so perfect a master. The services rendered by these gentlemen to the Medical Council were, in fact, rendered to the general public. The public may overlook them, or fail to acknowledge them; we cannot, and ought not. Our last meeting was wholly occupied in considering the Medical Amendment Bill of the Lord President of the Council. I regret that it was necessary to withdraw it. I believe that it would have accomplished a vast amount of good. I believe that it would have removed the chief obstacles to the further improvement of the education of the medical profession, the real obstacles to the advancement of its social status, and the more general attainment of professional excellence. It would thus have conferred great—very great—benefits on the public; I therefore regret its loss. But I have satisfaction in remembering that this Council, after long and careful consideration, expressed an approval of it, and a wish that it might speedily become law. It has been sometimes said, or insinuated, that this Council has more regard for the interests of the medical corporations and universities than it has for the interests of the public. If there be any candid man who thinks thus, I would ask his attention to the vote of the Council on the Bill of Lord De Grey. That Bill proposed in its chief and leading provision to deprive all the universities and medical corporations of their ancient privilege of granting licenses to practise medicine—a privilege which in the case of the corporations is the most important they possess. The Council, early in their discussion of the Bill, expressed a doubt of the necessity or expediency of this sacrifice of ancient privileges—a sacrifice which might not improbably be injurious to all the corporations, and might even endanger the existence of some of them. Yet, after careful consideration of the whole Bill, this Council approved of it by a majority of fifteen to three. Perfect unanimity of course could not be expected on a measure involving so great a number and variety of details. But to any person who finds fault with the constitution of the Council because he believes it to represent unduly the interests of the corporations, I would commend the vote of fifteen to three as a fact worthy of consideration. It is not necessary for me to enter upon the causes which led to the withdrawal of Lord De Grey's Bill. Neither is it necessary for me to discuss the merits of the two Medical Bills which were introduced into the House of Commons by private members in the present session. They have been withdrawn. Yet they have not been without use, if their discussion has diffused more knowledge on a subject of which the general public is profoundly ignorant, and many members even of the medical profession are still imperfectly informed. Among

the business of our present session, will be an inquiry into the conduct of a qualified medical practitioner. We shall have to inquire, under the provisions of the 29th section of the Medical Act, whether he has been guilty of "infamous conduct in a professional respect." The charge against him is that he authorised another person to affix his name to false certificates of death—false in this respect, that they stated him to have been in professional attendance on the deceased, which, it is said, was contrary to the fact. Charges of this kind have been made against two practitioners. The complaints were made originally to the Registrar-General of Deaths and the Secretary of State for the Home Department, and by them the complainants were referred to this Council. In accordance with standing orders, a preliminary inquiry has been made by the English Branch Council. In one of the cases, it was found that the evidence was scanty, and the circumstances such as, in the opinion of our solicitor and that of the Branch Council, would not fairly warrant a charge of infamous professional conduct. In the other case, it was thought proper that the charge and the evidence in support of it should be submitted to your judgment. I have mentioned this case, not merely because it is the first in which charges of this kind have been brought under your notice, but because I desire your opinion as to whether one part of the procedure, namely, our deliberation on the merits of the case, should be public or private. Of course the hearing of the case will be public, and the decision will be public; but it has appeared to me worth considering whether there should be a short intervening time in which our deliberations should be private. The deliberations of juries are private; so are those of magistrates at sessions, and those of judges when they sit in a body. In all those cases the deliberations are private, though the decisions are given publicly. Whatever difference of opinion there may be in the Council on this suggestion of mine, I am satisfied we shall be agreed on taking the course which appears to us the most likely to lead to a just conclusion—just towards the person whose conduct is impugned, and just towards the profession and the public, who would have good reason to blame us if we shrank from exercising aright the powers conferred on us by the Medical Act.

Committees.—The following committees were appointed:—*Business Committee:* Dr. Andrew Wood, Chairman; Dr. Embleton; Dr. A. Smith; and Dr. Leet.—*Finance Committee:* Dr. Sharpey, Chairman; Dr. Risdon Bennett; Dr. Quain; Dr. A. Smith; and Dr. Fleming.—*Committee on the Registration of Medical Students and on the Returns from Examining Bodies:* Dr. Embleton, Chairman; Dr. Fleming; and Dr. A. Smith.

Returns from Public Departments.—Statements of the Degrees, Diplomas, and Licences, of the candidates who presented themselves in February last for commissions in the Medical Department of the Army and in that of the Indian Army, were presented. From these it appeared that, for medical commissions in the army, 57 candidates presented themselves, of whom 36 were successful, while of the remaining 21, 17 were found qualified, but were not accepted, only ten appointments being made. For commissions in the medical service of the Indian army there were 23 candidates, of whom 10 were admitted, and 9 out of the remaining 13 were, though qualified, unsuccessful on account of there not being a sufficient number of vacancies.

Sir DOMINIC CORRIGAN moved, Dr. ANDREW WOOD seconded, and it was resolved:

"That the returns from the medical departments of the army and of the Indian army be entered on the minutes."

Medical Acts Amendment Bill of 1870.—Dr. ACLAND, in pursuance of a notice which he had given, asked the President whether he would inform the Council for what reasons the Medical Bill, brought forward after the last meeting of this Council in the last session of Parliament by the Lord President of the Privy Council, was, after much consultation with a committee of the Medical Council, not proceeded with in the House of Commons after it had passed the House of Lords. He said: In putting this question it is unnecessary that I should dilate upon it further than just to remind the Council of the circumstance, that when we broke up at our last meeting, we parted with the expectation of meeting again with fresh powers and fresh duties, and a committee of the Council was appointed to confer with the Lord-President. As the Council is aware, the Committee did so to the best of their ability; and the result was the passing of a Bill through the House of Lords, which Bill was afterwards dropped. It seems to me, therefore, to be expedient for our own sakes, and for the sake of the public, that a formal question should be put to the President in order that he may officially tell us if he has any knowledge how it was that the legislation which was expected to give us new powers and new duties fell through. Before I put the question formally, I would only add that we are now, as I understand it, *in statu quo*—that is to say, after a great deal of deliberation, which in one form

or another has gone over two or three sessions, we have to begin again and carry on our work with the same powers as we had before, and that in entire uncertainty whether we shall have any new powers or duties assigned to us. I see that there is a notice of a question referring to this last-named subject, and therefore I will only put the question of which I have given notice.

The PRESIDENT—I have no special information on this subject—at least no official information. Most of you know that an answer to this question was included in some remarks by the Vice-President of the Council, Mr. Forster, in the debate on the 14th June. I sent for a copy of *Hansard* in order that I might read his very words, but, curiously enough, *Hansard* for that night cannot be obtained. I will read you Mr. Forster's words from a newspaper report, the accuracy of which I have no reason to doubt. "Mr. Forster said that legislation had failed last year because, although the Bill which had been introduced in the House of Lords had been most carefully considered, it had been thought desirable when the Bill came down to that House (the House of Commons) to add to the question they were then attempting to settle the other question of the constitution of the Medical Council, and it was then too late in the session to deal with the subject." Of course I have the same information as most other persons have as to some of the causes of the withdrawal of the Bill, but I do not know that I should enlighten you by mentioning them. I wish to give, however, as complete an answer as I can to the inquiry. It was known that the Bill was opposed, that some medical corporations petitioned against it, and that it was energetically opposed by a committee of the British Medical Association. It was also well known that the session was drawing to its close. I believe that not more than a fortnight remained, and the little time that did remain was shortened unexpectedly by one or two debates incidental to the breaking out of the war between France and Germany; and it was quite clear that any serious opposition, or at all events any obstruction, to the Bill would be fatal to it. Some members of the House, in concert with, or representing, the Committee of the British Medical Association, expressed their intention of opposing the Bill; and they insisted on its being enacted that a certain proportion of the members of the Council should be elected by the direct votes of all registered medical practitioners. They said they would obstruct the Bill if that were not granted immediately, or a promise given by the Government that should be binding for the following year. The Government objected to that, because, as it was a question in which there was a difference of opinion, a discussion was absolutely necessary, and there was no time for discussion. Under these circumstances, Mr. Forster offered on the part of the Government that, if the Bill passed unobstructed, and if any private members were to introduce another Bill in the following session for the purpose of securing the direct representation of the profession in the Council, the Government would assent to the Bill being referred to a fair select committee without prejudging the question themselves. This offer of the Government was refused by some members of the House, acting with the Committee of the British Medical Association. As there was no time for discussing the matter, Mr. Forster was, as I understand, under the necessity of withdrawing the Bill. That is all that I know upon the matter, and I have stated it as accurately as I can.

Dr. STOKES—I beg to ask the President if he is aware whether the Government proposes to bring forward the same or any other medical Bill either in this or any subsequent session; and, if so, whether he will inform the Council.

The PRESIDENT—The answer which I have to give is much the same to which I gave to the first question. It is a question which, under ordinary circumstances, I should have thought it proper to refer directly to the Government in order to ascertain what their intentions were, but I did not think it necessary or advisable to do so under the circumstances; for in the same debate of the 14th June Mr. Forster made this statement: "From the number of questions pressing on the Government for legislation, he could not pledge them to bring in a Bill next year, but it was their wish and anxiety to do so. If they were unable to deal with the subject next year, and if any private member would take up the subject, no obstacle would be thrown in the way of the fullest consideration of it by the House; and, if it were desirable, the Bill might be referred to a committee upstairs." That is the only information I have; and the statement being so recent as the 14th June, I thought it scarcely advisable to make any further inquiry.

Preliminary Examination.—The list of examining bodies, whose examinations fulfil the conditions of the Medical Council as regards preliminary education, which had been prepared by the Executive Committee, was laid before the Council. It was the same as the list of last year, with the following addition: "The examiners for commissions in the military and naval services of the United Kingdom; certificate to include all the subjects required by the General Medical Council." On

the motion of Mr. HARGRAVE, seconded by Dr. PARKES, it was resolved that the list, with the proposed addition, be approved of.

Professional Education.—A report from the Committee of the Council on Professional Education was presented; and, on the motion of Dr. PARKES, seconded by Dr. STORRAR, was ordered to be received and entered on the minutes. The report, after treating of various matters of educational detail, concluded with the following recommendations.

"We beg to recommend that the Council shall address a letter to each licensing body, transmitting a copy of the resolution of the 26th February, 1870, and urging that arrangements for the formation of conjoint boards shall be undertaken without delay, so that the Council may be in a position to communicate them before the close of the year to the Government.

"And we advise, in addition, that the Council shall authorise the Executive Committee to seek an interview with the Lord-President of the Council, and to urge upon him the desirability of such medical legislation in the session of 1872 as may carry out the object the Council proposed in passing the resolution of February 1870, and which Lord de Grey had in view when he introduced his Medical Bill of 1870."

Removal of Name from Register.—A letter from the Secretary of the Royal College of Surgeons of England was read, stating that Mr. Edwin Lowe of George Street, Hanover Square, had been removed from being a member of the College in consequence of having been convicted of felony and sentenced to penal servitude. The diploma of member of the Royal College of Surgeons being the only qualification under which Mr. Lowe was registered, his name was ordered to be erased from the Register.

Alleged Conviction for Misdemeanour.—A certificate of the conviction of Frederick Henry Morris of a misdemeanour was read; and it was resolved:

"That the Solicitor of the Council be requested to obtain due information and report as to the identity of Frederick Henry Morris, convicted at Devizes, March 29th, 1871, of a misdemeanour, with the Frederick Henry Morris of Swindon, Wilts, whose name stands on the *Medical Register* for 1871."

Petition for Restoration to the Register.—A petition addressed to the General Medical Council by Dr. John Pattison, praying that his name may be reinstated on the *Medical Register*, was read; with a letter from C. H. Frewen, Esq. (See BRITISH MEDICAL JOURNAL, July 10th, 1869, p. 43). It was resolved:

"That, having heard the petition of Dr. Pattison to be replaced on the Register, and having fully considered the said petition, the Council see no reason to reverse the decision to which they formerly came, after full and careful consideration of the whole case."

Communications.—A letter from Dr. Edwards Crisp, with a copy of resolutions passed at a meeting of medical practitioners held on 7th May, 1870, was read; and the Registrar was directed to intimate to Dr. Crisp that his communications were received and read to the Council.—A letter from the Board of Public Examiners, Cape of Good Hope, praying the Medical Council to recognise their third-class certificate in literature and science, was read, and was referred to a committee consisting of Dr. Gull and Dr. Storrar.—A letter from the Honorary Secretaries of the Sydney Infirmary and Dispensary, requesting advice on the subject of founding a medical school at Sydney, was read; and it was resolved—"That a letter be addressed to the Honorary Secretaries of the Sydney Infirmary and Dispensary, in reply to their request for advice on the subject of founding a medical school in Sydney, informing them that it is not within the province of the Medical Council to give advice on the subject, but that the Council will forward to them copies of their reports on medical education."

The Returns from the Army and India Medical Boards.—Dr. ALEXANDER WOOD called attention to the erroneous impressions liable to be produced from the manner in which the statements as to unsuccessful candidates were made in the returns furnished by the Army and India Medical Boards. He moved:

"That the returns from the Army and India Medical Boards be referred to a Committee to consider and report thereon. The Committee to consist of Sir D. Corrigan, Chairman; Dr. Alexander Wood; Dr. Allen Thomson; Dr. Apjohn; Mr. Quain; Dr. Bennett." The motion was seconded by Dr. APJOHN, and agreed to.

—
Wednesday, July 5th.

Charge against a Registered Practitioner.—After the reading of the minutes of the previous day's meeting, the Council proceeded to investigate a charge of "infamous conduct in a professional respect" made against Mr. W. H. Kempster, a registered practitioner residing at Battersea. Mr. Kempster, who had received notice to attend the

meeting of Council, was present; and was accompanied by Dr. Baxter Langley, Dr. James J. Joseph, Mr. W. G. Sutcliffe, and Mr. W. Goodson.

Mr. OUVRY, the Solicitor to the Council, read a copy of the notice which had been sent to Mr. Kempster, in which he was stated to be charged with "permitting one William Goodson, an unqualified person, to practise under colour of his name, he sharing the profits of such practice, and to issue certificates of death, signed, or purporting to be signed, by him" (Mr. Kempster), "by which certificates it was made to appear that the deceased persons therein named were attended by him in their last illness, whereas, in truth and in fact, they were attended by the said William Goodson." Affidavits relating to three cases in support of the charge were also read; together with an agreement between Mr. Kempster and Mr. W. Goodson.

In reply, Mr. KEMPSTER admitted the facts stated, but said that by the terms of the agreement Mr. Goodson was engaged as his ordinary assistant. He then called Mr. Goodson as a witness, who stated that he had been engaged as assistant to Mr. Kempster for nine years. One term of five years had expired, and the other was not yet complete. He had never practised on his own account; he paid over all monies to Mr. Kempster, reserving only petty cash and his weekly salary. He consulted his principal in all cases. In a few instances, the patients had died without being seen by Mr. Kempster. Mr. Kempster signed the certificates of the cause of death, and he (Mr. Goodson) filled them up. He did not sign them himself; and in one of the instances referred to, he delayed giving the certificate until he had Mr. Kempster's signature.

Mr. KEMPSTER urged that it was evident that he did not share the profits of the practice with Mr. Goodson, who received only his pay as an assistant. With regard to the employment of unqualified assistants, he would refer to the regulations of some of the examining boards, especially the Royal College of Surgeons of Edinburgh, which recognised, as part of the education of a student, the performance of duties as visiting assistant for six months to a registered medical practitioner. Out of a large number of certificates of death which he had given during the last four years, it had been found possible to bring forward only three instances in support of the charge; and, as to one of them, he denied that he had never seen the patient before death.

Dr. JOSEPH being called as a witness, said that he knew that Mr. Goodson was only Mr. Kempster's assistant. He himself, before he was qualified, had been an assistant. It was a common practice in the profession to employ unqualified assistants. In cases of death, where the patient had not been seen by his principal, the latter sometimes signed the certificate.

Mr. W. G. SUTCLIFFE gave similar evidence with regard to the professional relation between Mr. Kempster and Mr. Goodson. He believed that it was usual for the principal to be consulted before filling up the certificate in cases where the patient had been seen by the assistant only; but in some instances, blank forms were signed by the principal, and left to be filled up by the assistant.

Dr. BAXTER LANGLEY said that unqualified assistants were formerly much in demand; but within the last two years there had been an increasing tendency to prefer qualified assistants. In branch practices, the assistant sometimes resided at a distance; and cases must sometimes occur in which death occurred without the patient having been seen by the principal. He considered that the maxim *Qui facit per alium facit per se* was applicable in the case of medical assistants. It was, from the necessity of the case, a widely spread custom for the principal to allow his assistant to fill up certificates, subject to communication with him. He considered that an assistant, in using the name of a principal with his authority, was in a position analogous to that of the managing clerk of a firm of solicitors. In answer to a question why an assistant could not sign the certificate stating that he did so for his principal, he (Dr. Langley) said that the registrar would not receive a certificate so signed. He believed that in exceptional cases unqualified assistants residing at a distance filled up the certificates without consultation with their principals, whose names were attached to them.

Mr. KEMPSTER said that he had been summoned on the same charge as was now made to Wandsworth Police Court, but the magistrate, Mr. Ingham, had decided that there was no legal offence. A complaint had also been made to the Home Secretary and the Registrar General, who had declined to entertain it. If the Council should consider that he had done wrong, he would express his sorrow, and promise not to repeat the offence.

Mr. OUVRY explained that the particulars of the charge had been supplied by Dr. Leslie, a practitioner at Battersea. Dr. Leslie had corresponded on the subject with the Home Secretary and the Registrar General, who declined to interfere, but recommended him to bring the matter before the Medical Council.

The Council then deliberated in private for some time; after which Mr. Kempster was again called in, and informed by the President that the Council unanimously acquitted him of the charge made against him.

The Registration of Death.—SIR DOMINIC CORRIGAN proposed—

"That the facts which have come to the knowledge of the General Medical Council in the investigation of the case of Mr. W. H. Kempster have impressed this Council with the conviction that an amendment of the laws in force in regard to death-registry is most urgently required; and that a copy of this resolution be forwarded to the Secretary of State for the Home Department."

Dr. CHRISTISON seconded the motion. It appeared absolutely necessary that a change should be made, in order to enable medical practitioners to obey the law. There ought to be some form of certificate which unlicensed assistants could sign.

Dr. ACLAND supported the motion. The statements that had been made before the Council as to the manner in which certificates of the cause of death were filled up would no doubt cause astonishment. A more tortuous state of the law, and one more unfair than that which now existed, could not be conceived. Further, the evil was connected with many others bearing on the profession and the public; and all this tended to indicate the necessity for the formation of a Public Health Department in the Government. Mr. Stansfeld had given notice of his intention to bring in a Bill for the formation of such a department; and it was the duty of the Council to support such a measure, which would affect the health and welfare of all.

Dr. ALEXANDER WOOD agreed as to the necessity for amending the law relating to registration of death. In Scotland, it sometimes occurred that the certificates were signed by unqualified persons, who had not seen the patients before death.

Dr. STOKES said that the certificate of death contained matters with which a medical man had nothing to do—such as the age and the duration of illness. Again, it was not always certain that the person was actually dead. Sir D. Corrigan had once been asked to sign a certificate, and had refused; on going to the house a few days afterwards, he found the man still alive. The cause of death, also, was a most difficult question. The medical man ought to be called on to certify only to the best of his belief.

The motion was put to the vote, and carried unanimously.

Some formal business was then transacted, and the Council adjourned.

ON Thursday, the Council was occupied during the entire sitting in the discussion of subjects treated of in the Report of the Committee on Professional Education. Resolutions were passed in favour of separating the instruction in Pharmacy from that in Therapeutics, and of giving the former at an early, and the latter at a later period of the professional curriculum; of introducing systematic instruction in Pathological Anatomy into the curriculum; and of making class-examinations a necessary part of professional education. A motion for increasing the duration of instruction in midwifery was, after considerable debate, negatived.

SINGULAR MUNIFICENCE.

IN alluding to new charities, the *New York Medical Journal* mentions a splendid institution, the Stranger's Hospital, erected and equipped by the munificence of a single individual, Mr. Keyser, of that city. This hospital is located at the corner of Avenue D and Tenth Street, a portion of the city far away from the public hospitals, and yet crowded with a population compelled by their poverty largely to rely upon such institutions in case of sickness. The building will accommodate about two hundred patients, and, in its appointments, is certainly one of the completest hospitals in this city. Everything has been subordinated to the convenience and comfort of the patients, and it is doubtful if there can be found in the country any more perfect provision for ventilation, heating, and water-supply and waste, than is to be seen here. All this work has been done under the personal almost constant supervision of the donor, who, besides the expenditure necessitated in the construction and outfit, amounting to upwards of one hundred and seventy-five thousand dollars, also provides the means for the current expenses of the institution. Such noble charity as this carries its own reward, and yet none the less on that account ought it to receive the commendation and gratitude of all classes and professions. The attending medical staff consists of Drs. F. N. Otis, T. G. Thomas, H. B. Sands, and William H. Draper, assisted by Drs. R. W. Taylor, James L. Brown, T. T. Sabine, and E. C. Seguin.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 8TH, 1871.

COLLECTION OF SUBSCRIPTIONS.

AT a special meeting of a Committee of Secretaries of Branches held at Birmingham on June 6th, it was unanimously agreed to recommend that all Branch Secretaries should be officially requested to issue circulars for the collection of subscriptions in the months of January, April, July, and October. This, it was found, accords generally with the practice of those Secretaries who have been found to be most successful in collecting the subscriptions from the members of their Branches. This recommendation was approved and passed by the Committee of Council (JOURNAL, June 17th, p. 650). The forms which will ultimately be adopted are still under consideration, and are being framed by the Subcommittee of Local Secretaries then nominated. Meantime the ingenuity of each Local Secretary will of course be in a position to issue a form satisfactory to himself. In calling attention to the above resolutions, therefore, we desire to suggest that Local Secretaries should act upon them at once, at their discretion. We may mention that in some Branches, where the current subscriptions in arrear are thus looked up, the ultimate loss from arrears amounts to less than two per cent. (and this in a large total number of members); while in others, where it is omitted or less carefully adopted, they run up to fifteen or twenty per cent., and even a higher percentage, thus involving a great loss to the Association at large, as well as to the Branches concerned.

New members are now admitted for the current half-year at a subscription of half a guinea. The number of July 1st commenced a new volume. The present is, therefore, a favourable time for enrolling new members, to add to the permanent strength of the Association.

THE CONJOINT EXAMINING SCHEME.

WE are happy to learn that the Joint Committee of the London Colleges have now agreed upon a plan of conjoint examination, based upon the scheme presented by the College of Physicians, of which we have already explained the main features. The English Universities have also, we believe, accepted the proposals of this scheme with favour. We regard this step as one of great value and importance. It will, when the details are settled, provide an uniform minimum examination for England of a complete and satisfactory character. Thus one great step towards Medical Reform, steadily and consistently urged by this Association for years, will have been voluntarily consummated by the English Universities and Corporations. It does them honour, and will confer a lasting benefit on the profession and the public. We shall venture to express the hope that a similarly harmonious measure of reform will commend itself to the medical institutions of the sister kingdom. Some ardent spirits have declared that reform, to be satisfactory to the profession, must include the destruction and degradation of the medical faculties of the Universities and examining boards of Corporations, as proposed by the Bill which was brought forward without support this year in the House of Commons. We are persuaded that the real wish of the profession is to see those bodies elevated, purified, and enlarged, fulfilling their functions in a liberal and catholic spirit, and continuing

to advance the cause of medical education by free, elastic, and individual co-operation in the work of education for which each of them has its own special fitness. This accords with the genius of English institutions, and with the honour and capacity of liberal professions. It is in this spirit that the British Medical Association has sought to promote medical reform, and for these reasons we hail with pleasure the mutual arrangement which we have the satisfaction of being able to-day to announce.

THE GENERAL MEDICAL COUNCIL.

THE session of the Medical Council for 1871 is not likely to be very eventful or very protracted. The President detailed the causes which led to the withdrawal of the Government Bill of last session. That history is now well known to the members of our Association. The opinions of the profession had been expressed, within and without the Association, in favour of direct representation as a *sine quâ non* of medical reform, by the voice of numbers beyond precedent, and with a force, unanimity, and earnestness which might well have convinced the Council and the Government that it would not be put aside. When the time came for parliamentary decision, it was found that the Government measure included no provision on the subject; and the Medical Council, which had received a perfectly clear, explicit, and definite expression of those views from a formal deputation of the British Medical Association, took no step, in its communications with the Government concerning modifications of the Bill, to raise that question. It ignored what the profession and the Association declared to be vital. Many will think that this fact in itself indicated how far the Medical Council is from being fully representative of professional opinion, and how necessary, therefore, was the reform demanded. The Government and the Council having alike ignored the written declaration of ten thousand practitioners, it became the duty of the executive of our Association to take action for the profession, whose views were being treated with something very like silent contempt. They stood manfully to their duty. At great personal inconvenience, cost, and labour, the leading members of the Direct Representation Committee of the Association came to town and went to work independently when they found the views which they were appointed to represent thus put aside. They were offered at the last moment a compromise; they were told that the Government would not oppose a separate consideration of the question of the constitution of the Council, if they allowed this Bill to pass unobstructed. The responsibility was grave, and was felt to be such. But they had an old experience which told them that, in such a case, piecemeal legislation is fraught with dangers. They remembered that similar promises, held out long ago on a similar occasion, had not sufficed to produce a practical result. They were advised that, the main public questions once settled, there would be extreme difficulty in reopening subsequently a part of the case which was more purely professional; and that, by letting the Bill pass as it was, they would lose a great part of their power to obtain what the profession required: they would have to meet the opposition of interested bodies, without any help from those now interested in passing their general measure, and willing to give and take. In fine, to have consented to the course proposed would have been, as they were advised, and in their opinion, to sacrifice the principle which the profession had extensively endorsed, and of which they alone stood forward as the solitary champions. They did their duty as they understood it; they did it well; their course has been endorsed by the Association; and, except in the Council itself, not one medical society or body or collection of individuals has ever had one word of blame for their proceedings. We understand, and we largely sympathise with, the regrets which Dr. Paget expressed, and of which he stated the grounds with force and precision. If we decline to adopt his conclusions, it is not because we deny the premises from which he argues, but because we hold his argument to be incomplete. It reckons with the public, the Corporations, and the Government; but it does not adequately gauge the strength,

endurance, and vitality of the professional feeling in and out of the Association, but working through its organisation, which demands as a *sine quâ non* that which Dr. Paget and some other distinguished men were content to ignore when they had the opportunity of representing it to the Government, and which they still hold to be either ill founded or of secondary importance.

The encouragement which Mr. Forster gave to private members to bring forward their schemes next year will, we suppose, put the Council on their mettle this year. The first necessity for their better success is, that on this point they should place themselves more nearly in harmony with the general opinion of the profession.

THE ELECTIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE elections of the Council of the Royal College of Surgeons of England took place on Thursday, and we announce the result in another column. Mr. Le Gros Clark, Mr. Spencer Wells, and Mr. George Critchett, were elected by almost equal numbers. The number of plumpers polled for Mr. Cock attests the personal attachment of his old pupils and friends, and the desire of many Guy's men to do honour to their valued teacher. The Conservative party were of course true to their attachments, and paid him a parting tribute of wasted votes. Mr. Busk, by the sheer force of personal character, acknowledged eminence, and the respect due to his ability, earnestness, and independence, triumphed, unaided by party following or the close attachment of a large family of pupils and adherents, and received the merited honour of re-election to a position which he fills with eminent usefulness, and from which he will rightfully step in due course into the Presidential Chair, although possibly with an interval of a year, for we hope Sir William Fergusson's term of office will be prolonged thus far. Mr. Barnard Holt occupied a position sufficiently high to insure his due election in turn. On this occasion, as for a now unbroken succession of years, the precise list of candidates which we have been led to select as that having the greatest claim on the majority of votes has been returned; and the test of the ballot-box has confirmed our independent judgment. It is now some years since any provincial candidate for the Council has presented himself. There is more than one who might fairly now make this sacrifice to his professional duties; and we hope next year to find the provinces in the field.

THE VITAL STATISTICS OF THE BRITISH ISLES.

WE have compiled, from various analyses of the census of 1871, just published, information which will be acceptable to our readers.

The enumerators collected 5,030,895 schedules from families or lodgers living in 4,259,032 houses. The enumerated population of England and Wales on April 2nd was 22,704,108 souls—an increase of 2,637,884 over that at the preceding census. This is in excess of the estimated growth. The increase from 1851 to 1861 was 2,138,615, being at the rate of 12 per cent. for the ten years; whereas that for 1861-71 is 13 per cent. The actual increment was larger than in any preceding decenniad, although the ratio of increase was higher in the period 1811-21, amounting to 18 per cent. The ratio had declined until the present decennium. In 1801, when the first census was taken, the population at home amounted to no more than 8,892,536, a number almost equalled by the mere increment of population since 1831. The causes of the more rapid growth of population in the last decennium awaits explanation from further analysis.

The relative movement of population in the urban and rural districts is disclosed by these returns. That of the urban districts has in the last ten years grown more than twice as fast as that of the country districts. The former include 12,900,297 of the population, and the latter 9,803,811. The decennial increase in the former is 1,969,456, and in the latter 668,428. The former population has grown at the annual rate of 1.67 per cent., and the latter at the annual rate of 0.71 per cent. But the growth of the urban districts has not been so great

as in the previous decenniad, while that of the rural has been more so. In 1851-61, the urban population increased 1.79 per cent. per annum, against 1.67 in 1861-71; whereas the rural population increased at the rate of 0.41 per cent. in the former period, against 0.71 in the latter. The progress of the ratios is thus reversed. This is said to imply that many rural districts are assuming the character of towns—villages becoming towns, small towns growing large; the town is spreading into the country. The number of inhabited houses has increased by more than half a million. The average number of persons to a house is 5.3. The number of uninhabited houses (in which no person dwelt or slept on the Sunday night preceding the enumeration) is 260,178, as against 184,694 in the year 1861. In towns, many of these houses were occupied during the day. With regard to the proportion of sexes of the population, the females number 11,663,705, and the males 11,040,403—an excess of 623,302 women and girls. Estimating soldiers and sailors abroad at 149,254, the excess of women is reduced to 474,048.

Summing up the totals for the British Isles, the following figures result. Including 207,198 abroad in the army, navy, and merchant service, the population of the British Isles is enumerated as 31,817,108. Of these, England has 21,487,688; Wales, 1,216,420; Scotland, 3,358,613; Ireland, 5,402,759; the Isle of Man, 53,867; and the Channel Isles, 90,563. Out of every 100 of the population, England owns 67½, Wales not quite 4, Scotland upwards of 10½, and Ireland 17. The daily growth of the population of the whole kingdom is at the rate of 725 persons. The decennial rate of increase was 6.06 per cent. in 1851-61, and the annual rate 0.59 per cent. In 1861-71, the decennial rate was 8.96 per cent., and the annual 0.86 per cent. The increasing rapidity of the growth is thus evident. Distinguishing the sexes, the male population of the United Kingdom appears as 15,549,271, including soldiers and sailors abroad; and the female as 16,267,837. It is believed that the 718,566 absent males are to be found elsewhere; and the Registrar-General refers to the ascertained fact that, about the year 1861, there was an excess of more than a million males in the colonies and the United States, the latter alone showing a male surplus of 735,429 in 1860. Emigration from the United Kingdom has been going on steadily, but at a retarded rate. The emigrants in 1851-61 were 2,054,578. In 1861-71, they were 1,674,794, the decrease being 379,984. The decrease in emigration helps to account for the increased growth of the population—bearing in mind that not only were so many more individuals retained, but a portion of them have become the parents of children born within the decenniad.

One of the most interesting considerations arising out of the study of the census relates to the forecast of future growth of the population. An able writer in the *Standard*, in analysing these returns, points out that at the present rate England will double her population in fifty-six years, and the United Kingdom in eighty-four years. It is expected that the population will increase pretty uniformly for some years to come. Euler showed on mathematical principles how rapidly men can multiply, proving that it was quite possible for the millions of the human race to have sprung from one pair within a moderate period. Malthus, by an elaborate statistical deduction, established the principle that population grows naturally at rates in geometrical progression. In this report we find it argued—and the argument is doubtless sound—that a prolific population is by no means a source of peril as affecting the means of subsistence, but rather the contrary. But for its prolific power the English race would now have no existence. The dangers and disasters of its infancy in the days of the Celts and Angles would have extinguished it. In 1801 the population of the United Kingdom amounted to about 16,302,410. The preceding year had been one of great scarcity, giving the people some idea of famine. The mortality was high, and the population seemed to be in danger of exceeding the limits of subsistence. But now, in 1871, with a population of nearly 32,000,000, and rapidly increasing, the pressure on subsistence is far less than it was at the beginning of the century, and products are in-

creasing far more rapidly than people. The increase in the working power of the country, brought about by the machines, tools, and engines which men of science, mechanics, and engineers have placed at our disposal, tends directly to the maintenance of a large population. The necessities of life are substantially what they were. But the opportunities are immensely increased. Men are still but men in regard to that which they consume. They are becoming giants in the power of production.

THE Infirmary for Children, Clifton Hill, Brighton, is to be formally opened on the 14th instant.

TYPHUS is diminishing in Vienna. In the week ending July 1st, fifty-nine cases were admitted into the hospitals.

FOR the future, the operations at Charing Cross Hospital will take place on Saturdays at 2 o'clock.

THE order of the Iron Crown of the second class has been conferred on Dr. Frerichs of Berlin, whose classical work on the *Liver* has made his name well and favourably known to English readers.

DURING the week from June 17th to 23rd, there were fifteen deaths from small-pox in Paris. The total mortality was 1106; in the corresponding week of 1870, it was 1149, the number of deaths from small-pox being 238.

M. RICORD has been presented to the grade of Grand Officer, and M. Demarquay to that of Commander, of the Legion of Honour, in consideration of their services during the siege of Paris. Several promotions to the grades of Officer and Chevallier of the same order have been made on the same grounds.

ONE of the medical officers of the Dudley Union, having received a circular with reference to the non-production of the medical officers' books, forwarded his to the last meeting of the Board of Guardians, with a long entry in the column for observations, from which the following is an extract. "The last time I had the honour of attending at the Board, I took my book, carefully filled up. Not a soul would take the trouble to look at it. I proposed to an intelligent guardian, well developed in the frontal region, that I should put a good-looking dummy in your possession, and he thought I couldn't do better." A little further on, he stated that "Mr. Brooks has been suffering from one shilling and sixpence a week and old age combined." The facetiousness of the medical officer roused the ire of one of the Board, who stigmatised it as "nonsense".

UNIVERSITY COLLEGE: THE SHARPEY SCHOLARSHIP.

THE scheme proposed for the institution of the Sharpey Scholarship has been adopted by the Council of the College. Its principal features are that the scholarship may be held for three or a greater number of years, and that the holder of it shall act as an assistant to the Professor of Practical Physiology, having opportunities afforded to him of pursuing original investigations, and having the right to use the laboratory and its apparatus for that purpose.

NEPHROTOMY.

DR. MEADOWS performed the operation of nephrotomy on Saturday under rather peculiar circumstances. The operation was performed for the relief of a patient who presented the symptoms usually recognised as those of ovarian dropsy, but, on opening the abdomen, the tumour was found to be a large cyst of the kidney. The true structure of the organ had almost entirely disappeared, while the other kidney was apparently healthy. Dr. Meadows, in the belief that the removal of the diseased organ presented the best method of treatment, accordingly applied a clamp, as in the operation for the removal of ovarian tumour. Although the woman exhibited symptoms of suppression of urine for twenty-four hours, she is now, we believe, doing well.

CHARING CROSS HOSPITAL.

WE very much regret to learn that Dr. Hyde Salter has been compelled, in consequence of the state of his health, to resign his appointment as Physician to the Charing Cross Hospital. The vacancy thus caused will be filled by the promotion of Dr. Silver. An appointment as assistant-physician will consequently ensue.

OUR AMERICAN COUSINS.

ON Wednesday, after doing lithotomy on an adult, Sir Henry Thompson introduced Dr. Sayre of New York, well known for his practical improvements in the treatment of joint-disease, to the students and spectators in the operating-theatre of University College Hospital. On Sir H. Thompson's invitation, he gave an instructive description of his method of treatment, by which he is able to let even the most severe cases of hip or knee disease take regular exercise in the open air or the gymnasium, while the principles of *surgical rest* are also complied with. After some remarks on the various difficulties that have to be surmounted in the treatment of acute and chronic arthritis, illustrated by anecdotes full of pungent and characteristic humour, Dr. Sayre applied his hip-splint to a patient of Mr. Berkeley Hill's. This was a lad of ten years, whose hip had gradually consolidated during many months of rest in bed. The sinuses were first thoroughly explored by the flexile probe (made rigid at will) which Dr. Sayre has contrived in order to detect necrosed bone, however devious the way to it. Then, the splint being adjusted to draw the head of the femur from the acetabulum, and at the same time to support the hip-joint, the patient was let on the ground and made to walk, which, when his timidity was overcome, he was able to do without pain. On Friday (to-day), at one o'clock, Dr. Sayre's method of extending ankylosed joints will be tried upon the retracted knee of a patient of Mr. Berkeley Hill's in University College Hospital, for whom excision will probably be necessary.

ST. BARTHOLOMEW'S HOSPITAL.

ON Tuesday last, the Prince of Wales, accompanied by the Princess of Wales, the Princess Louise, and the Marquis of Lorne, paid a visit to this hospital, of which his Royal Highness is President. The Governors mustered in considerable numbers to welcome the Royal party, and many ladies were present on the occasion, as was also the whole of the working staff of the institution. The Royal visitors arrived about four o'clock, and were received at the entrance by a deputation of the Governors, headed by Mr. Foster White, the Treasurer, and thence escorted to the court room, a stately apartment, where the company had assembled, and where, after some preliminary business had been transacted, the Secretary, Mr. Cross, read a resolution bearing the signature of the Prince of Wales, as President, and passed at a General Court of Governors on the 11th of May last, expressive of the sincere regret with which they had received the resignation by Mr. James Paget, F.R.S., of his office of senior surgeon to the hospital. The Court, further desiring to evince its appreciation of Mr. Paget's services, had unanimously appointed him honorary consulting surgeon. The resolution, of which that is the substance, and which was loudly cheered at the conclusion, was written upon vellum and magnificently framed. His Royal Highness, the President, said it afforded him sincere gratification to present that memorial to Mr. Paget, mingled at the same time though it was with a sad feeling, arising from the consideration that that gentleman was about to sever his connection with the hospital to which his great experience and valued services had been continuously devoted for nearly quarter of a century. He was glad, however, to think that, though Mr. Paget was about to leave the hospital as senior surgeon, his name would continue to be associated with it as consulting-surgeon, and also, he believed, as occasional Clinical Lecturer. The testimonial was hardly equal to his services. However that might be, he sincerely trusted Mr. Paget's health, which lately had not been good, would be speedily restored to him, and that he would long live to enjoy the society and esteem of his friends and

admirers. He had only further to say that, in addition to the testimonial by the Governors, a supplementary one would be presented to Mr. Paget by his pupils and the surgeons connected with the hospital. Mr. Paget, in reply, said it was with mingled feelings of pleasure and of pain that he received the testimonial—of pain because it was the signal of the close of his career as an active officer of the hospital; of pleasure because it recorded the opinion of those whose right it was to judge him that he had done his duty, still more because the judgment was recorded in terms and with proofs of confidence that were very grateful to him, and was affirmed by a signature which would insure its preservation long after all personal recollection of him and of his work would be lost. Mr. Paget said that he had to thank, first, the Governors, and especially the Treasurer of the hospital, for the long and happy tenure of office he had enjoyed, for their abundant provision of everything that could make his office useful and agreeable, for this last crowning act of their goodwill and confidence, and for their electing him consulting-surgeon. Mr. Paget offered thanks to his late colleagues, naming the chief among them, and stating that there was no professional or social virtue, no form of mental power, no variety of knowledge or of skill, which he might not have studied among them. Mr. Paget next thanked his pupils, pointing out that the majority of those now on the staff of the hospital had at some former time been among the number of his class. He concluded by tendering his thanks to the Prince and Princess of Wales, assuring his Royal Highness that his condescension would never be forgotten, and that his signature to the document gave it a value which would increase every year, for that those who would follow him in generations far off would point to it in proof that he had enjoyed the good opinion of a Prince than whom history would not tell of one more generous, more gentle, or more just. At the conclusion of the address, which was repeatedly cheered, the Royal visitors, who were received with every mark of respect, passed through the various wards of the hospital, and then took their departure.

CHOLERA IN RUSSIA.

THE latest advices state that cholera has declined at St. Petersburg, though it would appear to have increased at Moscow, and to be extending its ravages in a southward direction.

SANITARY STATE OF ILKLEY, YORKSHIRE.

ONE of the Privy Council Inspectors has recently been inquiring into the sanitary state of Ilkley, and, on account of the bad condition of the sewers and drains, has recommended that the attention of the Home Secretary of State should be called to the default of duty of which the Ilkley Local Board of Health has been guilty as to sewerage and as to the inspection and abatement of nuisances from sewers and drains. If this warning do not suffice to awaken the Ilkley Board to a sense of its public duty, we trust that not only will the attention of the Home Secretary be drawn to the matter, but that Mr. Bruce will see that all necessary steps are taken, either by the Board or by some one whom he shall appoint under the power given to him by the Sanitary Act.

BRITISH MEDICAL BENEVOLENT FUND.

AT the last monthly meeting of the Committee, grants to the amount of £90 were made to nine applicants for assistance; and one disabled member of the profession was elected to an annuity of £10, to qualify him for a vacant residence at Providence Place, Chippenham. The Treasurer reported an additional donation of £50 from Dr. Gull; and a warm vote of thanks was passed for this seasonable act of liberality.

CHOLERA AND SMALL-POX IN PERSIA.

CHOLERA is reported to have again made its appearance at Tehran and other places, and the deaths in Tehran have reached to ninety *per diem*. Small-pox is also stated to have been prevailing at Bushire, and to have caused the deaths of a large number of people during the months of March and April last; but it appears that the epidemic, if not now quite abated, is soon expected to be at an end.

CHOLERA IN MADAGASCAR.

CHOLERA has again made its appearance in Madagascar, and also in the French colony of Norse. In the latter place, it appears to have been very fatal; and many natives, and also some Europeans, appear to have fallen victims to it. We understand that precautions have been taken, and that the coast-trade has been stopped.

THE BROWN TRUST.

By the liberality of Mr. Cunliffe, who presented £2,000 for the purpose, the University of London has now been formally placed in possession of an excellent site and buildings at Battersea, and the Brown Institute for the Treatment and Study of the Diseases of Domestic Animals is now an accomplished fact. Thirty thousand pounds are available for the purpose. Dr. Burdon Sanderson, F.R.S., has been appointed by the Senate the first Brown Professor. This Institute will thus be placed in a position to render services alike important to humanity and to science.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS.

ONE of the most interesting features in connection with the annual election of Fellows into the Council of the Royal College of Surgeons is the very instructive collection displayed in the theatre of the additions about to be made to the museum, and which have been presented or purchased during the past year. One of the principal novelties in the osteological department is the skull of a very large sturgeon, in which all the cartilaginous portions, constituting the greater part, and which cannot be preserved by any known method in a condition suitable for ready examination, have been carefully modelled in soft wood, and the ossified portions fitted to them in their natural relations. The form of the brain-cavity, and the position, course, and size of the various nerve-apertures have been carefully reproduced by the ingenuity of Mr. James Flower, the articulator. The hippopotamus which was born in the Zoological Gardens in February last, and lived but two days, and which excited some interest as being the first of these animals produced in this country, has afforded an exceedingly good skeleton, valuable as showing the condition of development of the bones at that early period of life. The skeleton of the horse which had stood for many years in the Eastern Museum, frequently and erroneously designated as "Eclipse," has been replaced by a finer and more characteristic specimen, being that of the celebrated racer "Orlando," whose death occurred at the Royal Paddocks in December, 1868, at the age of 28. His remains were obtained for the museum with the permission of Her Majesty the Queen through the kind intervention of Mr. Sudlow Roots, of Kingston, a Fellow of the College. The additions to the pathological series have rather exceeded those of last year. Dr. Thurnam, of the Wilts County Asylum, has recently presented a collection of nearly fifty specimens, many of which are of considerable interest. The continuation of the revision of the Hunterian series of specimens of Physiology and Comparative Anatomy has occupied much of the time of the zealous conservator, Professor Flower. The whole of the division appropriated to the Nervous System and Organs of the Senses has now been put in perfect order. To 206 of the old preparations, 118 new ones have been added. The arrangement of the Dermatological Collection has been completed by the liberal donor; and a descriptive catalogue has been printed and published at the expense of Professor Wilson and presented to the College. Mr. Lowne is proceeding with the arrangement of the Teratological Collection, of which 164 of the preparations have been remounted. Mr. Taylor is engaged on a Supplementary Catalogue of the Calculi, which will shortly be added to the other valuable catalogues of the collection. The collection of Surgical Instruments and Appliances is making progress. Additions have been made to it by Messrs. Barrow, Barker, Birkett, Bond, White Cooper, Edwards, Holden, Kempthorne, Swan, Taylor, Wilson, and Mrs. Hatton. Amongst the contributors to the other series are the Zoological Society, the Royal Institution, Professor Gervais of Paris, Professor Van Beneden of Louvain, Professor Peters

of Berlin, Drs. Thurnam, Hickman, Reed, Fergusson, Pranker, Crawther, Bennett, Hamilton, Sir William Fergusson, Messrs. Hilton, Quain, Cock, Partridge, Gay, Hancock, Spencer Wells, J. E. Adams, Hutchinson, Curling, Coleman, Flower, Slater, etc. The collection will remain on view in the theatre of the College until Thursday next, and will well repay a visit, containing, as it does, so many interesting and instructive cases.

THE VACCINATION ACT, 1867.

In answer to objections raised by Sir Massey Lopes, Mr. W. E. Forster said he could not admit that the working of this Act would make a large increase in the expenditure of the Poor-law guardians. As to the recommendations of the Select Committee—namely, “that a considerable proportion of the expenses of working the Act should be contributed from moneys to be voted by Parliament”—it had not been included in the Vaccination Bill, which was merely a Bill for the practical amendment of the Act to secure better provisions against the increase of small-pox. The recommendations of the Committee would require the serious attention of the Government, but the question of these expenses could not be considered by itself; it must be considered along with other subjects as between local rates and Imperial taxation.

BIRMINGHAM HOSPITAL FOR WOMEN.

THE staff of this new hospital was elected on Tuesday last, and is composed of Mr. C. J. Bracey, Mr. Savage, Mr. Ross Jordan, and Mr. Lawson Tait.

UNIVERSITY COLLEGE HOSPITAL.

DR. F. T. ROBERTS has been appointed Assistant-Teacher of Clinical Medicine. Mr. Berkeley Hill and Mr. Christopher Heath have been promoted from the office of Assistant-Surgeon to that of Surgeon. As teachers of practical surgery, they are introducing improvements into the course, destined to develop the completeness of the instruction and to meet the new requirements of the College of Surgeons.

THE KENT BENEVOLENT MEDICAL SOCIETY.

THIS excellent Society, which has been established more than two-thirds of a century, will hold its general meeting at the “Ship Tavern,” Greenwich, on Wednesday next, under the presidency of Dr. Carr, of Blackheath. It offers to all medical men actually resident in Kent at the time of joining, for the moderate sum of £1 is. annually, the advantages of an insurance of considerable value, as well as those of a Friendly Society, to meet the special claims of sickness or disability, besides providing for widows and orphans. We strongly urge all the members of our profession in the county to join this Society.

GROWTH OF THE ASSOCIATION.

WE are very happy to see that, under the impulse of the activity of the energetic Honorary Secretary of the Lancashire and Cheshire Branch, Mr. Reginald Harrison of Liverpool, that Branch shows this year a total of 348 members—an increase of 52 since last year.

MEAT PRESERVING.

MANY methods have been introduced to meet the ever-growing want of England—cheap animal food. Some of these methods have been successful, and others the reverse. We could ill spare the little that is already placed at our disposal by Australian and other meat companies; and the highly remunerative character of investments in the preserved-meat trade affords a sure guarantee for greater efforts in the future than any that have hitherto been made. Liebig's process has been carried on very profitably at home as well as abroad; but the preparation of extract of meat has been declared wasteful from the small amount of stimulating material preserved, and the carting away of all albuminoid matters to the manure-heap. A new plan has been introduced by an engineer, whose experience in sugar refineries and other extensive works in hot latitudes has ensured a practical and economical solution of one of the most important problems of the day. Mr. T. F. Henley does

away with steeping meat in water, and with boiling and otherwise treating it in the most costly way. He simply squeezes a definite amount of juice out of the fibre, and by mechanical desiccation preserves the latter intact. The pressed meat thus obtained contains ten per cent. of alcoholic extract and salt, and over fifty per cent. of fibrin and other albuminoid constituents. It is exceedingly rich, and so is the meat-juice which Mr. Henley evaporates in vacuum-pans. The juice contains about fifteen per cent. of alcoholic extract, and over fifty per cent. of albumen. The ancient method of abstracting water only from the animal matter is relied on as the preservative, and the low temperature at which the evaporation is carried on prevents any loss of flavour or other deterioration. It is perhaps strange that so cheap and simple a process should not have been suggested before. Mr. Henley has worked at it for some time, and perfected it so as to ensure its immediate adoption. The first works, on an extensive scale, are to be opened in the River Plate, on the Estancia Nueva Alemania, where cattle have been reared and fattened for the European markets. It is proposed to slaughter three hundred bullocks daily; and since it is stated that the hides and feet pay the first cost of the bullock and of its slaughtering, the financial prospects of the undertaking wear a promising aspect.

THE GERMAN ARMY SURGEONS AND THE WAR.

A STATISTICAL report published by the Medical Department of the Prussian Ministry of War states that, during the recent war with France, 101 surgeons of the Prussian army died, or were disabled for a long time by wounds. Of these, six fell on the field of battle, and three died of the results of their wounds. Besides these, sixty-three received gunshot wounds—two of them each twice. Twenty-five surgeons died of disease; four of them from dysentery, eight from typhoid fever, and one from a combination of the two diseases. The number of army medical officers in the Prussian army who died of typhoid and dysentery is very small in proportion to those who fell victims to epidemic diseases in the Crimean war.

THE PHARMACY BILL.

IN answer to Mr. T. Cave this week, Mr. W. E. Forster said that the Government intended to proceed with this Bill during the present session, its object being mainly to ensure that the first clause of the Pharmacy Act, passed in 1868, which said there should be regulations for the keeping, dispensing, and selling of poisons, should be complied with. He was aware that several petitions had been presented against the Bill from chemists and druggists throughout the country; but he hoped to be allowed to take the second reading on Thursday, with a view afterwards to go into Committee *pro forma* and reprint the Bill with amendments, which he believed would meet the wishes of many persons connected with the trade.

THE ANNUAL MUSEUM, 1871.

WE beg to call the attention of our readers to the proposed scheme of our Annual Museum at the Plymouth meeting. In addition to pathological specimens, casts, drawings, new medicines and articles of diet, and new books, deposited for examination by the members and description in the JOURNAL, it is proposed to make a special collection of diagrams and instruments setting forth the history, from the earliest records down to the present time, of appliances used in a special branch of surgery, namely, *in the treatment of fractures*. Many such are novel to the great majority which are known to the few; and their interest may be either of rarity, or of antiquity, or of special application, as well as of absolute newness. We may suggest that possibly some of those who exhibit may subsequently desire to add their objects and photographs for permanent display in the collection of surgical instruments which, at the instance of Sir William Fergusson, it is proposed to make at the Royal College of Surgeons, London. We should be pleased to find our Annual Museum helping to swell the means for the permanent instruction of the profession in this way.

SCOTLAND.

WE hear that Dr. Marshall, the able and popular practitioner at Braemar, is about to leave that locality to fill a permanent appointment in the Royal Household.

MUNIFICENT DONATIONS.

MR. JOHN FREELAND, of Nice, has, it is stated, given £3,000 to the Glasgow University, £5,000 to the Royal Infirmary, and £5,000 to the Andersonian Institution.

CRAIG *versus* JEX BLAKE.

THE first division of the Court of Session has sustained Lord Mure's ruling, and disallowed the bill of exceptions. Expenses were accordingly granted to the pursuer.

EDINBURGH: THE SECOND SIEGE OF THE UNIVERSITY.

THE ladies have again laid siege to the University of Edinburgh, and apparently with promise of better success than attended the defensive efforts of the Amazons of the second siege of Paris. The circumstances which have given rise to this renewal of hostilities, are the following. Two years since, the University sanctioned the study of medicine by women, and admitted them to matriculation as medical students. During the subsequent period, Miss Jex Blake and four other ladies have completed the first half of their University course. It appears that by application to the several professors whose courses it is necessary for them next to attend, they cannot obtain from them the requisite instruction during the ensuing winter session, as these professors are not prepared to deliver second courses of lectures for the benefit of the ladies, and they are debarred by the existing regulations from obtaining qualifying instruction in the University in any other way. They are, at the same time, it is stated, prevented from obtaining the necessary classes in the extramural school, as they have already attended four classes outside the University, and the general regulations do not allow University students to exceed this number. Under these circumstances, Miss Jex Blake now addresses the Senatus on behalf of the lady medical students, and requests that they will take into immediate consideration what steps may be necessary to enable them to complete the education that they have already carried so far in the University of Edinburgh. In doing so, she submits two suggestions: 1. That whenever a professor may be unable or unwilling to deliver a separate course of lectures on his subject, the Senatus should nominate, for the approval of the University Court, a special lecturer on the said subject, for the express purpose of giving the requisite qualifying instruction, the ladies undertaking to defray the expenses of such appointment: 2. That the University regulations with respect to extramural classes should be so far relaxed in their special case that, whenever a professor may be unable or unwilling to deliver a separate course of lectures, they should be authorised to attend a corresponding class on the same subject in the extramural school, the said class being held to qualify equally for graduation. The matter was brought up for discussion at a meeting of the Senatus on Friday of last week, but it was decided to postpone the full consideration of the subject until legal advice had been obtained as to the powers of the Senatus in dealing with the suggestions contained in Miss Jex Blake's letter. We presume that the Senatus of the University, if they are found to have not sufficient legal authority in the matter, might, if they were favourable to the carrying out of either suggestion, obtain with little difficulty the necessary powers; so that the result of the petition rests largely in the decision of the members of the Senatus. The schemes suggested by Miss Jex Blake are both apparently feasible, and cannot be accused either of entailing inordinate labour on the professors or of necessitating mixed classes, to which many members of the Senatus are opposed.

IRELAND.

THE Medical Travelling Prize in the School of Physic of Trinity College, Dublin, value £50, has been awarded to Mr. Jacob O'Connor.—No Surgical Travelling Prize has been awarded this year.

LUNACY LAW IN IRELAND.

SIR DOMINIC CORRIGAN has introduced in the House of Commons a Bill to amend the law relating to dangerous lunatics and dangerous idiots, and to make more effectual provision for the superannuation of the officers of District Lunatic Asylums in Ireland. The clauses are as follows.

1. It shall be lawful for any two justices causing any person to be examined by a medical officer under the provisions of the said recited Act of the thirtieth and thirty-first Victoria to call to their assistance the medical officer of the dispensary district as provided for under the said recited Act, or any other legally qualified medical practitioner, and to make an order under their hands and seals upon the governors of the lunatic asylum established either wholly or in part for the county, county of a city, or county of a town in which such person shall have been apprehended, for the payment to such medical officer or other legally qualified medical practitioner called to their assistance of such reasonable remuneration for the examination of any such person, and for the payment of all other reasonable expenses in or about the examination of any such person, as may have been incurred by such medical officer, not exceeding in the whole the sum of *two pounds two shillings*, and such justices may make such order for payment, whether such person so examined shall or shall not be certified by such medical officer to be a dangerous lunatic or a dangerous idiot, as the case may be.

2. It shall be lawful for the governors of any district lunatic asylum in Ireland, with the approval of the inspectors of lunatics, or one of them, to direct that any officer who has served for above twenty years at the least, and who is incapable from age, infirmity of mind or body, or otherwise, of discharging the duties of his office, shall be superannuated, and shall receive such yearly superannuation pension as upon consideration of all the circumstances of each case shall appear just, not exceeding such proportion of his salary and allowances as hereinafter mentioned; that is to say, for above twenty years service, a pension not exceeding two-thirds of his salary.

3. The several moneys to be paid or to become payable under this Act shall respectively be advanced, paid, presented for, and raised in like manner as any other moneys advanced or raised for supporting and maintaining such asylums.

THE SOLUTION OF A DELICATE QUESTION.

AN animated correspondence is published in the Dublin papers between a dignitary of the Roman Church and Drs. Beatty, Churchill, and McClintock, on the effort which is being made to introduce sectarian principles into the election of dispensary medical officers. The Rev. Canon urges that craniotomy is, under any circumstances, detestable in the eyes of Roman Catholics. The answer, of course, is, that the sole object of medical men is to fulfil their sacred duty of saving life. It rests with the patient or the patient's friends to prohibit proceedings having that object, on the ground of opposing religious or other convictions, if they entertain them. A Roman Catholic patient entertaining a settled objection to craniotomy under any circumstances would, perhaps, on the whole, be in a better position under the care of a Protestant surgeon, bound by all the rules of his profession to respect the expression of those convictions, than a Protestant patient would be, needing and willing to benefit by the proceedings, under the care of a Catholic surgeon, whose scruples of conscience should prevent him from proposing it. This is, however, to put an extreme case. We earnestly deprecate the introduction of the element of dogmatic strife into medical elections, or in the appointment of officers whose duties need never, under any circumstances, place them in opposition to religious opinions of any kind.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING.

THE Thirty-ninth Annual Meeting of the British Medical Association will be held in Plymouth, on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th of August next.

President—E. CHARLTON, M.D., D.C.L., Physician to the Newcastle-upon-Tyne Infirmary.

President-elect—JOHN WHIPPLE, Esq., F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital.

An *Address in Medicine* will be delivered by GEORGE JOHNSON, M.D., F.R.C.P., Professor of Medicine in King's College, London.

An *Address in Surgery* will be delivered by JOSEPH LISTER, Esq., F.R.S., Professor of Clinical Surgery in the University of Edinburgh.

Notices of Motion.—The following notices have been given.

The PRESIDENT OF THE COUNCIL: Rule 4. To insert "President-elect", and to omit "Secretary".—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting."—Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary".—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District", and to erase the words "the Secretary of the Association".—Rule 9. To omit the words between "The President of the Council" and "shall be elected".—Rule 10. To omit the words between "The Treasurer" and "shall be elected".—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office". To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting".—Rule 13. To erase the words "Secretary shall call", and to substitute "President of Council shall direct to be called".—Rule 14. Between "shall" and "be recommended", to insert "express his desire in writing, and shall be".—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea". To erase the words after "each member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding".—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association".—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and".

Dr. STEELE (Liverpool): Election of Committee of Council. Every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: "I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed) ———." Together with a nomination-paper signed by six members of the Association, in the following terms: "We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association." The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the BRITISH MEDICAL JOURNAL not later than months prior to the Annual Meeting of the Association.

Mr. NICHOLSON (Hull): To alter Law 16, line 2. For "three", insert "two".

Dr. WADE (Birmingham): In Law 8, Paragraph No. 3, of the duties of Council, to alter "ten" into "twenty-five"; and to omit the words "and one Secretary from each Branch".

Gentlemen desirous of reading papers, cases, or any other communications, are requested to give notice of the same to the General Secretary at their earliest convenience.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary*.

13, Newhall Street, Birmingham, June 13th, 1871.

THE ANNUAL MUSEUM.

THE "Annual Museum" of this Association will be open during the four days of the meeting, for the exhibition of:

1. The latest inventions in medical and surgical instruments and appliances of every kind. Also, for the special exhibition of ancient and modern fracture apparatus, or diagrams of such, thus setting forth the history of the treatment of fractures from the earliest records down to the present day.
2. New drugs and their preparations.
3. New articles of diet for invalids.
4. Pathological Specimens; also photographs, casts, etc., illustrating disease.
5. New works on medicine, surgery, etc.
6. Models or drawings of any object of professional interest not included in the above list.

Notice to Exhibitors.—Application should be made as soon as possible; at the same time giving a list of the objects to be exhibited, and mentioning the space required. All objects sent must have a description attached. Parcels for the Museum should be addressed—"British Medical Association, the Assembly Rooms, Plymouth; care of H. Greenway, Esq." They must be delivered on or before July 31st, and be removed within three days after the termination of the meeting. Expenses of carriage and all risk must be borne by the exhibitors. A card, bearing the name and address of the exhibitor, must be enclosed in each package, ready to be fixed on the outside. All communications respecting the Museum to be addressed to "Henry Greenway, Esq., Surgeon, Plymouth", the Secretary for that department.

THE PROPOSED ALTERATIONS IN THE LAWS.

IN the statement of the proposed alterations in the laws, at page 22 of last week's number, Mr. Nicholson's proposal for altering the word "three" to "two", was by error applied to Law 14. It belongs to Law 16; which, with its alterations, should be read as follows.

16. The name of no member shall remain on the books of the Association, whose arrears extend over [three] [two]* years; but the omission of the name from the list of members shall not be deemed, either in honour or equity, to relieve any member from his [liability for the subscriptions due for the period during which he has availed himself of the privileges of membership] [liabilities to the Association].

The fourteenth law, with its proposed alteration, will then stand thus.

14. *Admission of Members.*—Any qualified medical practitioner, not disqualified by any bye-law, who shall [express his desire in writing and shall] be recommended as eligible by any three members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch; provided he shall have the votes of three-fourths of those present.

CUMBERLAND AND WESTMORLAND BRANCH.

THE third annual meeting of the above Branch will be held at the Bush Hotel, Carlisle, on Wednesday, July 12th, at 1 o'clock. *President*, Dr. F'ANSON, Whitehaven; *President-elect*, Dr. ELLIOT, Carlisle.

Dinner will be provided at 4.30, at the usual charge.

Gentlemen having papers or cases to communicate, will greatly oblige by sending early intimation to

HENRY BARNES, M.D., *Honorary Secretary*.

Carlisle, June 20th, 1871.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held on Thursday, July 13th, 1871, at the Institution at the top of Park Street, Bristol, at 4.45 P.M.

Members having any communications for the meeting are requested to give notice of them to the Secretaries.

The dinner will be held at the Royal Hotel, College Green, Bristol, at 6.30 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. Wines at moderate charges.

E. C. BOARD, Clifton. } *Honorary Secretaries*.
R. S. FOWLER, Bath. }

NORTHERN BRANCH: ANNUAL MEETING.

THE Seventh Annual Meeting of this Branch was held in the Assembly Room, Tynemouth, on Thursday, June 15th: J. B. BRAMWELL, M.D., President, in the Chair. There were also present thirty-one members, and three visitors.

* Mr. Nicholson.

The PRESIDENT, having thanked the meeting for the honour they had conferred upon him, and referred to the healthiness of Tynemouth, said that during the twenty-seven years he had been in practice in Tynemouth he had witnessed two severe epidemics of cholera and one of typhoid fever, several of small-pox, and many of scarlet fever and measles. One disease (typhus) frequently endemic in some towns, was only an occasional visitor in the borough of Tynemouth; and then its origin could always be traced to direct importation, and rarely had he known it to spread beyond a few cases. Had Tynemouth possessed a fever hospital, with power to enforce the removal of any important case, the town might have been kept entirely free from the disease. He described the origin and causes in the borough of the epidemics alluded to. Speaking of the small-pox epidemic, he said it was not his intention to say anything on the subject of vaccination generally, as he believed the members were fully persuaded of the power possessed by vaccination of controlling the disease. He would merely state that the conclusions drawn by him in private practice were in exact consonance with those derived from hospital statistics. He had never seen a fatal case of small-pox in any one that he had himself vaccinated, nor had he ever seen the disease spread in any family where revaccination was at once practised. His conclusion was that efficient vaccination enforced by law, with revaccination, would effectually eradicate the disease from the kingdom. The only reasonable objection to such law was the now admitted fact that syphilitic poison had in a few cases been conveyed into the system with vaccine lymph; but these cases were so few that he was not of opinion that an evil so infinitely small, and which itself could be guarded against, should influence us in enforcing this most important protection on all. With regard to other epidemic diseases, there were not as yet any protectives like vaccination; but each case should be reported to a duly appointed central authority, empowered to enforce isolation or removal as might be deemed best to prevent the formation of a focus or centre of infection, and to prevent the convalescent from speedily mixing with the healthy. He referred more especially to scarlet fever; and he thought it should be made penal for any teacher to receive a child who had suffered from that disease back to school until authorised by a medical certificate. If the registration of infectious disease could be made compulsory, it would be a great step in advance. He believed it to be of great importance that members of societies like the Branch should form definite opinions on the most likely means to control the ravages inflicted by epidemic diseases, and that they should privately, amongst their friends and patients, and publicly, when opportunity offered, disseminate their views, and thus lead the Legislature to pass the necessary laws to render them effectual. The President then read a statement by Dr. Philipson, showing that the number of members of the British Medical Association was 4,258; that, in 1865, the numbers of members of the Northern Branch was 53, and was now 235; that during last year there had died of members of the Northern Branch 12, resigned 10, and that the new members numbered 23.

Mr. BROADBENT (Hetton) moved a vote of thanks to the President for his able address.—Dr. TESSIER seconded the proposition, and spoke strongly in favour of vaccination and revaccination.

Vote of Thanks.—Dr. FOTHERGILL (Darlington) proposed—"That the warmest thanks of the meeting be awarded to the retiring President (George Welford, Esq.), the Council of Management, and the other officers for their services during the past year." This was seconded by Mr. HEFFERNAN (Spenny Moor), and carried by acclamation.

Officers for 1870-71.—On the motion of Dr. EASTWOOD, seconded by Dr. JONES, it was unanimously resolved—"That the next Annual Meeting be held at Stockton-on-Tees; that Charles Trotter, [Esq., F.R.C.S., be President-Elect; Dr. Philipson, Honorary Secretary and Treasurer; Dr. Charlton, Dr. Tessier, Dr. Frain, and Dr. W. H. Dixon, the Council of Management."

Representatives in the General Council.—On the motion of Mr. W. R. SHIELL, seconded by Mr. W. H. SMITH, the following members were elected to represent the Branch in the General Council of the Association: G. Y. Heath, M.D.; Charles Gibson, M.D.; J. B. Bramwell, M.D.; Martin Burnup, M.D.; R. J. Peart, M.D.; Robert Wilson, M.D.; John Jobson, Esq.; George Welford, Esq.; S. W. Broadbent, Esq.; H. G. Hardy, Esq.; Charles Trotter, Esq.; J. W. Eastwood, M.D.; and G. H. Philipson, M.D., *en officio*.

Representative in the Parliamentary Committee.—It was moved by Mr. R. H. B. WICKHAM, seconded by Mr. BYROM BRAMWELL, and unanimously agreed to—"That Dr. Philipson be the representative of the Branch in the Parliamentary Committee."

Treasurer's Report.—Dr. Philipson read the Treasurer's statement, which showed that the balance in hand, at the commencement of the year 1870, was 12s. 1d., and the amount received in annual subscriptions was £28 4s.—total, £28 16s. 1d. The expenses during the year

amounted to £28 6s. 10d., leaving in December 31st, 1870, a balance of 9s. 3d.

Cases.—1. Dr. LEGAT introduced a boy upon whom he had performed Double Amputation above the ankles; also, a successful case of operation for Imperforate Anus.

2. Mr. C. T. JEAFFRESON exhibited and explained several beautifully drawn diagrams of the Fundus of the Eye.

3. Dr. PHILIPSON exhibited a specimen of Recurrent Fibroid Tumour, which he had received from Mr. R. T. Lightfoot.

Papers.—The following papers were read:—1. On the recent and still prevailing Epidemic of Small-Pox at South Shields; with special reference to the origin, spread, and treatment of the disease. By Andrew Legat, M.D.—2. On the Hectic State in Phthisis Pulmonalis. By R. W. Foss, M.B.—3. Notes of a case of Incipient Dementia, with observations on the diagnosis and treatment. By R. H. B. Wickham, F.R.C.S.Ed.—4. Case of Hydrophobia. By J. W. Eastwood, M.D.—5. Case of Hydrophobia. By J. R. Fothergill, M.D.

On the motion of the President, a hearty vote of thanks was accorded to the readers of the papers, with the expression of the hope that they would allow them to be published in the BRITISH MEDICAL JOURNAL.

Dinner.—The members and their friends afterwards dined together at the Bath Hotel, the President (Dr. Bramwell) in the chair, supported by the Mayor of Tynemouth (George Bell, Esq.), the Vicar of Tynemouth (Rev. Thomas Brutton, M.A.), the President of the British Medical Association (Dr. Charlton), Dr. Negus, of H.M.S. *Castor*, and Dr. Parker Smith, H.M. 35th Regiment, etc.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES: ANNUAL MEETING.

THE members of the East Anglian and Cambridge and Huntingdon Branches of this Association held their annual meeting at the Norfolk and Norwich Hospital on Friday, June 30th, under the Presidency of Dr. EADE of Norwich. There were also present fifty-five members and visitors, and the pupils of the Norwich Hospital. After the members and visitors had partaken of an elegant luncheon, given by the medical and surgical staff of the hospital, they commenced the business of the meeting in the Harrison Ward.

Dr. CHEVALLIER, the late President, made a few introductory remarks, and then introduced Dr. Eade, the President for this year, who delivered an inaugural address.

Dr. PITT, Honorary Secretary, read the report of Council, which congratulated the members in again assembling in Norwich, and expressed satisfaction with the manner in which the JOURNAL is conducted, and at the gradual increase of members.

The following resolutions were then passed.

1. Proposed by Dr. DURRANT and seconded by Mr. FAIRCLOTH—"That the thanks of this meeting be given to retiring President, Members of Council, and Honorary Secretaries, for their services during the past year."

2. Proposed by Dr. HUMPHRY and seconded by Mr. MURIEL of Ely—"That the Members of the Council and Honorary Secretaries be re-elected."

3. Proposed by Dr. COPEMAN and seconded by Mr. CADGE—"That the next annual meeting of the East Anglian Branch be held in conjunction with the Cambridge and Huntingdon Branch at Ely, and that R. Muriel, Esq., of that city be elected President."

New Members.—Mr. H. Robinson, Norwich; Mr. P. Ransom, North Elmham; Dr. C. D. H. Drury, Pulham St. Mary; and Mr. Thomas Garney, Bungay, were elected.

Papers.—The following papers were then read. 1. Reminiscences of Surgery in the Norwich Hospital Five-and-Thirty Years Ago, by G. M. Humphry, M.D., F.R.S. This elicited considerable discussion by Dr. Bateman, Dr. Copeman, Mr. Cadge, Mr. Reade, Mr. Brownfield, Mr. Muriel, and Mr. G. Taylor.—2. Pre-Phthical Dyspepsia, by C. M. Durrant, M.D. A discussion followed, in which Mr. Allen and Dr. Bateman took part.—3. Ovariectomy, by W. Cadge, Esq. The paper caused considerable discussion by Professor Humphry and others.—4. Accidents in Lithotomy, by T. W. Crosse, Esq. Dr. Eade and Mr. Pringley took part in the discussion.—5. Intraocular Malignant Growths, by H. Robinson, Esq. Papers from Drs. Bateman, Bradbury, and Lowe, were omitted for want of time.

A *Vote of Thanks* to the President was proposed by Mr. FAIRCLOTH, and the meeting separated.

Dinner.—The members and friends, including the Mayor of Norwich and the Rev. G. Cook, Vicar of Worstead, and numbering forty-one, dined together at the Norfolk Hotel; Dr. Eade occupying the chair, and Dr. Pitt the vice-chair.

SOUTH MIDLAND BRANCH: ANNUAL MEETING.

THE fifteenth annual meeting of this Branch was held at the Northampton General Infirmary on Tuesday, June 27th. There were present, W. W. CLARK, M.D., President, in the chair, and eighteen members and visitors.

New Member.—Dr. James More, of Rothwell, Northamptonshire, was duly elected.

Officers and Council.—The following were elected. *President-elect*, Allan D. Mackay, M.B. *Honorary Secretary and Treasurer*, John M. Bryan, M.D. *Joint Honorary Secretary*, W. Moxon, Esq. *Committee of Management*: F. Buszard, M.D.; C. J. Evans, Esq.; A. Evershed, Esq.; G. P. Goldsmith, Esq.; J. H. Hemming, Esq.; C. E. Prior, M.D.; R. W. Watkins, Esq.; E. Woakes, M.D. *Representatives in the General Council*: R. Ceely, Esq.; D. J. T. Francis, M.D.; A. D. Mackay, M.B.; H. Terry, jun., Esq.; R. W. Watkins, Esq. *Representative in the Parliamentary Committee*: J. M. Bryan, M.D.

Proposed Conjoint Meeting.—Mr. HEMMING proposed, and Dr. W. CLARK seconded—"That a joint meeting of the Cambridge and Huntingdon Branch and the South Midland Branch be held at Huntingdon or Peterborough in 1873." The consideration of the subject was deferred to the autumnal meeting of the South Midland Branch.

Corresponding Secretaries.—Mr. ASHDOWN proposed, and Mr. KNOTT seconded, the appointment of a corresponding secretary for each of the three counties of Bedford, Buckingham, and Northampton.

Autumnal Meeting.—Mr. MASH proposed, Mr. WATKINS seconded, and it was resolved—"That the autumnal meeting be held at Wellingborough."

Report.—Dr. BRYAN, the honorary secretary, read a report, in which he mentioned the continued success of the Branch, both in numbers and funds, and referred to the Parent Association, numbering only 2,500 six years since, and now over 4,250, with additions in prospect. Within the last twelve months, seven members had left the district or had resigned. Two had died; viz., Mr. Thurnall of Bedford, and Mr. Lambden of Rippingale. Since the last annual meeting of the Branch, Dr. Bryan, in his capacity of its representative, had attended several meetings of the Committee of Council of the Parent Association held in Birmingham and in London. The principal business discussed had been the financial affairs; and it was proposed to alter several of the laws of the Association, which, it was hoped, would thereby be placed on a firmer basis, and also to have the General Secretary resident in London, with full control over the office management, which he had not had hitherto. It had been also decided that applications for subscriptions should be made by the secretaries of Branches four times in the year; viz., January, April, July, and October, after which accounts were to be given up to the General Secretary. It was, however, hoped that members would send their subscriptions to the secretaries or treasurers of Branches in the first month in the year, and thereby prevent the necessity of frequent applications. On December 31st last, the subscriptions of five members of the Branch remained unpaid; and those of twenty-four at the present time (June 27th).

President's Address.—Dr. CLARK read an address.

Papers.—The following were read. 1. Case of Scarlatina in an adult, followed by temporary Blindness: Recovery. By A. D. Mackay, M.B. 2. Case of Belladonna Poisoning. By J. G. Carruthers, Esq. 3. Case of Intussusception: Recovery. By Arthur Evershed, Esq. A portion of intestine, including the cæcum with its appendix and ileum—altogether a yard—sloughed and came away. The patient, a youth, aged 15 or 16 years, ultimately recovered, and is now alive and well. 4. Notes on some Antipyretic Remedies; viz., Cold Affusion, Belladonna, Aconite, etc. By W. Newman, M.D. In Dr. Newman's absence, this paper was read by the President. A paper by Dr. Woakes on a successful case of Ovariectomy was not read on account of want of time and the absence of the author.

Alterations of Rules of Branch.—Mr. ASHDOWN gave notice of a proposal that a luncheon only and no dinner should be had at future meetings.

Vote of Thanks was passed to Dr. Clark, the President; to the authors of papers; and to Dr. Bryan, the Honorary Secretary and Treasurer.

Dinner.—The members and visitors dined together at the George Hotel.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 13TH, 1871.

T. B. CURLING, ESQ., F.R.S., PRESIDENT, IN THE CHAIR.

ON THE REMOVAL OF TUMOURS FROM BONES.

BY JAMES PAGET, D.C.L., F.R.S.

THE design of the paper was to show the propriety of removing the majority of non-malignant tumours growing in bones, by simple extirpation or enucleation, rather than by resection of the bones or by amputation. It was shown that these tumours are as separate from the proper tissue of the bones as are fatty and most other innocent tumours from the connective tissue or other structures in which they grow; and that the same rules of operation are applicable to the one as to the other set of tumours. Cases were given of successful enucleation of fibrous, myeloid, cartilaginous, and osseous tumours, and some rules were stated for the diagnosis of malignant from innocent tumours in bones, and of those which grow within from those which grow without the bones.—After a few remarks by Mr. FAIRLIE CLARKE on the great value of Mr. Paget's paper, Mr. BIRKETT remarked that the same practice as that recommended by the author had been for years adopted at the London hospitals; certainly at Guy's Hospital, especially in tumours of the jaw. He referred, among other cases, to one of myeloid disease of the radius, which was enucleated many years ago by Mr. Bransby Cooper, but which returned and necessitated amputation. The patient was still living, but the case showed that enucleation may not be sufficient to eradicate the disease.—Mr. THOMAS SMITH related a case of a tumour of the size of a fist at the head of the humerus in a female, aged 22. It had existed for two years: it pulsated and enlarged, and the general health was suffering. There was no gland-enlargement. Mr. Paget recommended enucleation, which was done, but not thoroughly. The wound closed, and the patient recovered very fair use of her arm, but at the end of the year the growth returned. At the second operation, she died of pleuropneumonia.—Mr. BIRKETT, in answer to Mr. Smith, said that in such a case he would have performed the same operation.—Mr. WEEDEN COOKE had found it necessary in some cases to amputate, as enucleation was impossible.—Dr. O'CONNOR related a case bearing on the discussion.—Mr. SAVORY considered that the value of the paper rested on the information given as to the kind of tumours to be enucleated. He thought that strumous or scrofulous disease of bone might also be treated on this great principle, as in the tarsus. Some surgeons believed that the disease was afterwards made worse by the irritation caused by the operation; but still, if the disease were thoroughly removed, he thought it would be found to be successful.—Mr. JOHN CROFT alluded to a case illustrating Mr. Paget's paper.—Mr. PAGET, in reply, said that he was quite conscious that the treatment was often done, but he wanted to see it more generally adopted. The difference lay between enucleation and resection of bone, and not, as Mr. Birkett said, between enucleation and amputation.

A FOURTH SERIES OF ONE HUNDRED CASES OF OVARIOTOMY, WITH REMARKS ON THE DIAGNOSIS OF UTERINE FROM OVARIAN TUMOURS. BY T. SPENCER WELLS, F.R.C.S. ENG.

Following the order of former papers, the author had arranged this fourth series of one hundred cases in tables of three series.

Series 1. Cases in which ovariectomy was completed—100 cases: 78 recoveries, 22 deaths.

Series 2. Cases in which ovariectomy was commenced, but not completed—6 cases: 2 relieved or cured, 4 died.

Series 3. Cases where an exploratory incision was made—7 cases: 5 recovered from incision, 2 died.

He showed that the mortality after ovariectomy was steadily diminishing. Of his first 100 cases, 34 died; of his second 100 cases, 28 died; of his third 100 cases, 23 died; and of his fourth 100, 22 died. In this fourth series, 44 had been in hospital, and 56 in private practice. In private practice the mortality was only 14 per cent., while in hospital it was 31 per cent. The author believed that the mortality in private practice might be taken as a guide to what might become the general average mortality after ovariectomy, and he was convinced that it might be reduced to about 10 per cent. without excluding those extreme cases where the operation was performed as a forlorn hope. The author then proved that large tumours of the non-gravid uterus had been frequently mistaken for ovarian tumours; and he pointed out how they might be distinguished from each other. He showed that there was nothing in the history of a doubtful case which afforded any very decisive assistance, and then examined in detail the signs afforded by inspection and measure-

ment of the abdomen, by palpation, and by percussion and auscultation, which are of value in diagnosis. He then described the conditions to be observed in examination by the vagina and rectum—alone or combined—and in conjunction with examination by the abdominal wall; deferring to a future opportunity any account of the results obtained by exploratory puncture or incision.—Dr. WEST, in paying a tribute to Mr. Wells for his great services as an ovariologist, remarked that the papers which were most open to discussion were not always the papers of most value. He believed that we should fall into very few errors if we followed out the precautions given in the paper by Mr. Wells. The operation was a great boon to society. Every chance should be given to enable the patient to recover, on which the success of the most skillful operator so much depended.—Mr. SPENCER WELLS, in replying, exhibited a fibroid tumour of the uterus weighing eleven pounds eleven ounces, which he had removed on the previous day by the *écraseur* after incision. There had been a considerable quantity of fluid in the abdomen, which he had drawn off; but, as it again speedily collected, he determined to remove the tumour. There was some bleeding from the pedicle, which was necessarily transfixed by needles. The patient was doing well.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 7TH, 1871.

J. BRAXTON HICKS, M.D., F.R.S., President, in the Chair.

MR. C. R. CARTER exhibited a large Uterine Fibroid Tumour, removed after death. In its interior were contained about three pints of pus.

MR. SCOTT exhibited two Ovarian Tumours removed from a patient aged 35. The one was a multilocular cyst of the right ovary, the other a fibroid tumour of the left ovary. The operation had been performed on the 3rd of May, and the patient was progressing favourably.

DR. GREENHALGH exhibited his new Metrometer Sound for measuring any part of the cavity and neck of the uterus from side to side, and from back to front, as well as in its long axis.

DR. MEADOWS read a paper on Pelvic Hæmatocele, with special reference to its diagnosis and treatment. He expressed his conviction that this affection, though not common, is not so rare as is generally supposed; nor in many cases is the diagnosis a matter of much difficulty, though very puzzling in some and especially in the less severe forms, or when seen long after the attack. Allusion was made to a paper by Dr. Barnes on Intraperitoneal Hæmorrhage, published in the last number of the *St. Thomas's Hospital Reports*. The author criticised some of the cases in regard to their diagnoses, and expressed some doubt as to their accuracy in this respect, judged solely by the details given. An examination of these cases in their results when compared with others of the same kind, collected from the works of MM. Bernutz and Goupil, showed that of 40 cases of the former, three only died; whereas, in 62 cases of the latter, only eighteen recovered. In regard to diagnosis, difficulties were greatly lessened in cases where the attendant knew the exact condition of the parts before the occurrence of the attack; because, as swelling necessarily resulted from the hæmorrhage, its absence before the attack and its immediate discovery afterwards, together with the attendant symptoms, pointed at once to the nature of the case, inasmuch as no other swelling occurred thus suddenly. The differential diagnosis of uterine displacements; of tumours, either of the uterus or of the ovaries, becoming suddenly impacted in one or other *cul-de-sac*; of pelvic cellulitis; or of pelvi-peritonitis, was dwelt upon at some length, and their distinctive features were pointed out. The author recommended the division of the cases into two groups; the first to include all those which originated in the performance of the functions of menstruation or parturition; and the second, those of distinctly organic origin, not connected directly with the uterine functions. He advocated more frequent resort to puncture, grounding his recommendation on the fact that of Bernutz's eighteen cases which recovered, nine were operated upon, seven ruptured spontaneously, and only two were left alone; while of twelve fatal cases, two only were tapped, one ruptured spontaneously, and nine were left alone. The author related two cases in which he had tapped successfully, and the paper ended with some directions as to the conditions, mode, and time, of operating.—Dr. BARNES said that Dr. Meadows doubted his cases because they were so many; but was his experience so exceptional? Olshausen said that, in 1867, Scanzoni had only seen two cases, but that he ought to have seen 200. Olshausen himself had seen 34 cases of hæmatocele in 1145 gynecological cases. Seyfert had seen 66 cases

out of 1272. In fact, it was only necessary to look for these cases with intelligence in order to find them. He had expressly stated in his paper that some of the cases were no doubt open to criticism as to diagnosis. In some, this had been drawn from the history and general symptoms, and was not established by local exploration. He would, however, premise that every one had been seen either in consultation or in hospital practice, and that there was a presumption that the symptoms were severe enough to cause anxiety. The facility of diagnosis depended upon the extent of one's experience. Hæmatocele was most liable to be confounded with pelvic peritonitis. He had been familiar with pelvic peritonitis for thirty years. The history and physical signs of pelvic peritonitis from other causes than effusion of blood into the peritoneum differed materially. Dr. Meadows was astonished that eight of his cases attended abortion. The possibility of this occurrence should not be questioned because others had not noticed a similar connection. Again, Dr. Meadows doubted, because so many of Dr. Barnes's cases recovered. It would have been easy to produce a more convincing mortality if he (Dr. Barnes) had punctured the cysts and given purgatives. In reference to the division of the cases, Dr. Meadows failed to see that his design was simply to illustrate the matter from a clinical point of view, not to classify. Lastly came the question of treatment. He considered it most important not to disturb parts recently the seat of severe injury. Rest was necessary to allow the conservative process of encapsulation. Puncture was only necessary when urgent symptoms, as of toxæmia, arose. Dr. Meadows, by dealing with the statistics of Bernutz's cases, had come to a conclusion strictly the opposite of that which Bernutz himself had formed. He (Dr. Barnes) very much preferred the deliberate judgment of Bernutz upon his own cases, arrived at by a process of clinical reasoning and comparison, to Dr. Meadows's statistical deduction.—Dr. SNOW BECK said that his experience led to the conclusion that retro-uterine hæmatocele was comparatively rare. He did not think that rupture of the gravid uterus, or extra-uterine gestation cysts, or ovarian cysts with large effusion of blood into the peritoneum, ought to be included under this term, which was properly restricted to effusions of blood encysted in the pelvic peritoneum, or extravasated into the loose cellular tissue in the pelvis. With these restrictions Dr. Barnes's cases were reduced from 53 to three cases of hæmatocele from rupture of diseased ovaries, and eight cases attending abortion, some of which were of a very doubtful nature. When blood became encysted in the pelvic peritoneum or neighbouring cellular tissue, it was desirable to remove it if possible, and to prevent the cyst from refilling. The danger of allowing it to remain was shown by the cyst sometimes bursting into the peritoneum, or the woman being worn out by constant suffering. However, when it formed an inert mass, causing little inconvenience except from its presence, it would not be desirable to interfere with it.—Dr. MADGE, in reply to Dr. Beck, said that in his case death did not take place from the rupture of the cyst into the peritoneal cavity. There were repeated hæmorrhages from the cyst, the blood passing *per rectum*, and some of the contents of the hæmatocele seemed to undergo changes of an unhealthy character, which induced a pyæmic condition, and the patient died from exhaustion. Dr. Madge said he was the first to bring the subject before the society; his paper was read about ten years ago, and contained a *resumé* of the leading opinions to that date.—Dr. PHILLIPS believed that small effusions of blood into the retro-uterine pouch were of common occurrence. Instances of large effusion extending above the pelvic brim he considered comparatively rare. Excluding those severe cases, where the effused blood resulted from some grave lesion, as the rupture of an extra-uterine foetal cyst, or a gravid uterus, he thought the mortality was not nearly so great as Dr. Meadows implied. There existed but few specimens of retro-uterine hæmatocele in any of the museums. He considered that the peritoneal symptoms described in some monographs on the subject, were exaggerated. They were not necessarily very severe, as pure blood did not set up much peritonitis. He stated that in many cases the retro-uterine pouch descended much lower than represented in diagrams, and that the depth in the pelvis to which the effusion extended, should not be used as an argument against its intraperitoneal seat. He asked for some indications to distinguish between a small inflamed ovarian cyst surrounded by inflammatory adhesions and a blood effusion. The physical signs in many cases afforded but little assistance, and the preceding history might mislead, as urgent symptoms occasionally supervened suddenly from impaction of an ovarian tumour in the pelvis. Generally, however, an ovarian cyst displaced the uterus more to the opposite side of the pelvis, a hæmatocele pushed it forwards. Probably no one would doubt the advisability of emptying the cyst by puncture, if pyæmic symptoms threatened from absorption of putrid contents (which he believed rarely happened if the patient were left alone); but the cases in which tapping was applicable seemed to him to be few. It was certainly not safe to tap before the effusion became encysted;

while at a later period the serous part had in most cases already undergone absorption, and it was almost useless to puncture the remaining mass. He had seen cases, where the blood extended as high as, or above the umbilicus, do perfectly well without surgical interference. Dr. GERVIS said that it appeared to him that some of Dr. Beck's remarks were founded on a misapprehension of Dr. Barnes's views. Dr. Barnes never asserted that certain symptoms referred to by Dr. Beck were the symptoms of peri-uterine hæmatocele, but that, in the cases quoted from his paper, there was pelvic peritonitis, plus more or less intraperitoneal effusion of blood, standing to one another in the relation of cause and effect. Again, Dr. Beck asked, if purulent accumulation be present, what rest would do for the patient; whereas, Dr. Barnes distinctly stated that the indication for puncture was the presence of irritative fever, pointing to the occurrence of local suppuration. On the general question of the comparative frequency of slight effusions of blood into the peritoneum, he (Dr. Gervis) entirely coincided in the opinions expressed by Dr. Barnes and Dr. Phillips.—Dr. GRAILY HEWITT stated that, during the last five years, he had observed in University College Hospital, altogether, he believed, twelve or fifteen cases. They had all recovered, and in no case had puncture been resorted to.—Dr. TILT remarked that, if the German pathologists had found hæmatocele common, the French writers considered it to be very rare. Since he first drew the attention of the British pathologists to hæmatocele in 1853, he (Dr. Tilt) had only met with twelve cases. Pelvi-peritonitis was often mistaken for hæmatocele. The majority of cases required no surgical treatment, but when the collection of blood was considerable and the tension of the sac very great, he had repeatedly punctured it through the vagina, and allowed the blood to drain away of its own accord, thereby greatly relieving the patient's suffering and shortening the duration of the disease.—Dr. GREENHALGH agreed with Dr. Meadows that pelvic hæmatocele was by no means so frequent nor so harmless an affection as Dr. Barnes would lead the profession to believe. On a rough estimate he (Dr. Greenhalgh) did not think that he had seen more than twenty-five indubitable instances of that affection, notwithstanding he had had extensive opportunities of meeting with such cases. He observed that many of the cases of pelvic hæmatocele which had fallen under his notice, were of a far graver character than those recorded by Dr. Barnes; three cases having died speedily after the attack, and several others requiring much more treatment than the rest-and-do-nothing system advocated by Dr. Barnes. In three cases, puncture and evacuation of the effused blood had been necessitated by the severity of the constitutional symptoms, followed by satisfactory results; and he (Dr. Greenhalgh) had little doubt that, had puncture been had recourse to in some of the other cases, the patients would have made a far more rapid and satisfactory recovery. He inferred that Dr. Meadows attached due importance to rest.—Mr. SPENCER WELLS said that his personal experience of pelvic hæmatocele was chiefly as a sequel of ovariectomy. He believed the less severe forms, where only small quantities of blood were effused and afterwards absorbed, were very common. When the tied or cauterised pedicle was in the pelvis, a good deal of trouble was sometimes observed at each menstrual period for some months, with all the signs of hæmatocele. In the slighter cases, he considered that rest and opiates constituted the best treatment. But there were other cases where a high temperature, rapid pulse, loss of flesh, dry tongue and skin, with a painful distended abdomen, and scanty concentrated urine, showed that the patients were being poisoned by absorption; and here not only puncture but drainage was necessary to save life. Puncture alone might only give temporary relief, or do harm by hastening decomposition of blood or pus; but when a cannula or drainage-tube maintained a free escape for fluid and gas, cases apparently hopeless did well.—The PRESIDENT stated that his experience coincided with those observers who considered slight cases of hæmatocele as of common occurrence.—Dr. MEADOWS said that he had referred to Dr. Barnes's paper, on the ground that these cases, if unchallenged, might hereafter be used for statistical purposes in a way which their real importance did not warrant. Dr. Meadows agreed with the speakers who had preceded him, as to the comparative rarity of hæmatocele. He entirely concurred in the value of rest in the treatment of these cases; but he thought that the facts which he had brought forward in his paper made it necessary that we should review our practice in this respect—at least in regard to those cases where the quantity of effused blood was more or less considerable. The frequency of spontaneous rupture, either by the vagina or rectum, and the escape of the effused blood, seemed to be Nature's method of pointing out the treatment which we ought to adopt. He found, moreover, that the period of convalescence was greatly shortened by the tapping or rupture.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

WEDNESDAY, MAY 17TH, 1871.

J. MATTHEWS DUNCAN, M.D., in the Chair.

DR. GILLESPIE showed two Loose Cartilages which he had excised by subcutaneous incision from the knee of a man. Four years previously, Mr. Spence had removed a similar body from his other knee. Antiseptic dressings were used and the case made a good recovery.

Dr. GILLESPIE and Mr. COUGHTREY read a paper on a Case of Extensive Fracture of the Skull and Vertebrae, with extravasation into the cord and ciliospinal region. A lad aged 15 in frolic jumped on to a steam-lift, and in its ascent his head was brought into forcible contact with a beam. He was insensible for a few minutes. There was no scalp-wound, but a fracture of the left parietal bone from the vertex towards the left ear. There was profuse and continued bleeding from the ear. The pupils were equally contracted but sensitive. There was complete paralysis of the lower limbs and all below nipples, with hyperæsthesia of the arms. Paralysis of the bladder was complete. He was quite conscious, but drowsy to the last. Pulse 64, compressible. He died about thirty-six hours after the accident. A detailed account of the *post mortem* appearances was given. The fracture of the skull was extensive and complicated, extending to the meatus auditorius. A thin layer of extravasated blood lay between the dura mater and brain. There was little subarachnoid effusion. The grey substance of the gyri in the neighbourhood of the fracture was contused and ecchymosed. The fourth ventricle showed one or two ecchymosed patches. In the spine the intervertebral disc between the fifth and sixth vertebrae was separated from the fifth, and considerable mobility existed. There existed two extensive extravasations of blood into the sheath of the cord. The bodies of the sixth and seventh cervical and first dorsal vertebrae were extensively fractured. There were extravasations of blood into the grey matter of the cord in the cervico-dorsal region, and also in the dorso-lumbar region. Considerable discussion took place as to the question of the injury of the cilio-spinal region of the cord explaining the contraction of the pupils.—Mr. COUGHTREY thought that probably it did so.—Dr. ARGYLL ROBERTSON was of opinion that the mobility of the pupils disproved this, and probably that the contraction would be better explained by some irritation of the third pair of nerves as a result of the injury to the cerebrum.—Dr. MATTHEWS DUNCAN, Dr. HANDYSIDE, and Dr. JOSEPH BELL also made remarks on various topics brought out in this interesting case.

Dr. MCKENDRICK read a paper entitled Experimental Notes on the Action of Aloin. The experiments were thirty-two in number, and were performed on pigeons, rabbits, cats, dogs, and healthy men. In each case the animal was first weighed, then the weight of ingesta for three days was taken, and also the weight of egesta for the same period, so as to obtain a normal average for comparison; then the drug was administered and its effects noted in the same careful manner. In the pigeons, doses of half a grain and a grain seemed to produce little result. In the rabbits, from three to four grains purged; small doses had no results. On cats the effect of even small doses was very severe, one dying of diarrhoea. In dogs, doses over a grain produced diarrhoea. In men, doses above half a grain induced diarrhoea.—Dr. G. W. BALFOUR and Dr. HAMMOND made remarks on the paper. The latter mentioned that he took the first dose of aloin when it was discovered by the Messrs. Smith twenty years ago, and that on him half a grain acted as a cathartic purgative.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, MAY 5TH, 1871.

ALBERT J. WALSH, Esq., President, in the Chair.

MR. WILLIAM STOKES communicated two cases illustrative of the difficulties occasionally surrounding the diagnosis of Strangulated Femoral Hernia. A woman, aged 35, was admitted to the Richmond Surgical Hospital on April 22nd, stating that three days previously she had received a kick in the groin. A lump shortly appeared in this situation, and all the symptoms of strangulated hernia set in. There were constipation, tenderness over the abdomen, nausea, and vomiting. On examination, a large globular swelling was noticed in the neighbourhood of the femoral ring. Owing to the urgency of the symptoms, an operation was determined upon. The usual incisions were made over the tumour, when a greatly swollen gland, in a state of high inflammation, was discovered. It was removed, with a rapid amelioration of all the alarming symptoms. The second case was really one of femoral hernia. The patient, a woman of advanced age, was admitted three days before. For sixteen years she had suffered from hernia, the

mour often returning spontaneously. The day before her admission, however, pain set in in the swelling, which increased in size, and became hard and painful. She could not reduce it. Nausea and green vomiting began, and there was extreme prostration. The abdomen was tense and painful, and the knees were drawn up. When examined, the tumour was of the size of a child's head. It was determined not to operate, but to adopt purgative treatment. Warm baths and purgative enemata were tried for some time without effect. Early next morning, however, a natural motion occurred. The treatment, being so far successful, was persevered in, with the result that two more motions came away, and the vomiting ceased. On May 4th, the tumour was soft and flaccid, though still irreducible, and the patient had lost her anxious look. Next day, the improvement continued. The case was still under observation.—The PRESIDENT briefly detailed the particulars of a case similar to the second one spoken of by Mr. Stokes.—Mr. HARGRAVE recalled an instance in which the late Dr. Geoghegan had operated to relieve most decided symptoms of strangulated femoral hernia, the tumour being situated just outside the ring. On cutting down on the supposed sac, nothing was met with but a gland containing a little fluid. Complete relief and a good recovery followed the operation.—Dr. WHARTON referred to the fact that symptoms of strangulation might be absent when that lesion had actually occurred. He, therefore, believed that those symptoms depended on something not necessarily connected with the lesion in question.—Dr. JAMESON gave the history of a peculiar form of complicated strangulated femoral hernia occurring in an elderly woman. The usual symptoms of strangulation were present. In operating, he cut down on a tumour as large as a walnut when covered with the integuments. An incision was then made a quarter of an inch into the tumour, which proved to be solid, and glandular. No hernial sac was met with. The case ultimately terminated fatally. At the necropsy, it was found that a knuckle of intestine, of the size of a hazel-nut and in a gangrenous state, had become entangled in an enlarged gland. The bowel had escaped injury in the incision, and death was the result of the strangulation alone.—Dr. FREDERICK KIRKPATRICK mentioned a case in which operation failed to discover any hernia; but the patient, a woman, rallied for a time. Obstinate constipation nevertheless continued, and, after six weeks, death occurred. A stricture of the rectum existed ten inches from the anus, and the opening was only as large as a goose-quill.—Dr. BENSON suggested, that in Mr. Stokes's first case a position of parts resembling that described by Dr. Jameson may have been present.—Mr. STOKES considered that the facts narrated went to show that local inflammations in the neighbourhood of the femoral region might give rise to symptoms of strangulated hernia, though that lesion might not itself have occurred.

Dr. ARCHIBALD H. JACOB described a very obstinate case of the Rodent Ulcer, commonly known as Jacob's ulcer. The patient, a lady, had been eleven years under observation by his father and himself. At times, the ulcer extended its ravages, and these exacerbations were invariably preceded by increase of foetor and of discharge. It was also observed that, while the disease was extending in one direction, the affected surface was healing in another. Tentative treatment alone seemed to avail. Hæmorrhages were checked by astringents, and these agents seemed to exercise temporarily salutary influence on the ulcer itself. Those chiefly used were tincture of the perchloride of iron, tannic acid, and—on one occasion—nitric acid. Anæmia resulted from the repeated hæmorrhage, and the patient at last sank from asthenia.—Mr. S. HEWITT looked upon the disease, as described by Dr. Jacob, as a form of lupus. Its origin as a tubercle, its situation, the phenomena observed in connection with its simultaneous healing and spreading, and the inefficiency of any line of treatment, were the points on which he based this view.—Mr. HARGRAVE asked whether Dr. Jacob had employed the actual cautery, or had attempted the operation of "sealing" the ulcer.—Dr. WHARTON laid stress on the occurrence of violent hæmorrhages as bearing on the differential diagnosis between this affection and ordinary lupoid.—Mr. STOKES stated, that in similar cases he had attempted excision, but with unsatisfactory results. Among caustics, he had used Landolfi's paste without success, but he had obtained favourable results from the acid nitrate of mercury.—Mr. KELLY would attribute the partial healing to the depletion depending on the occurrence of hæmorrhage.

The PRESIDENT delivered his valedictory address. Having briefly reviewed the work done during the past session, and having given a *résumé* of the various papers read, and of the discussions which they had originated, he congratulated the members on the vitality and usefulness of their Society, and concluded by thanking them for the kindly way in which they had ever treated him during his Presidentship.—A vote of thanks to the President was then carried by acclamation, and the Session was declared closed.

CORRESPONDENCE.

AMENDMENT OF THE MEDICAL ACT.

SIR,—In the last number of the JOURNAL, I publicly avowed myself the sole author of the letter to the editor of the *Lancet* signed by the General Secretary, and published on April 1st. Dr. Paget, on the part of himself and his colleagues, took exception to the last paragraph in that letter, which was as follows: "The statement" (one amongst others made in the previous leader of the *Lancet*) "that the Reform Committee 'derived their only claim to collective consideration from the presence of the five eminent men who seceded from them,' is also incorrect, inasmuch as they were never on it. They were all members of the General Medical Council, and retired from the executive of the Association because they were opposed to the direct representation of the profession and to the consequent diminution of the influence of the Universities and the Corporations in the General Medical Council, which it is your object to effect."

Dr. Paget complained that this paragraph misrepresented the reasons and motives of the resignation of himself and his colleagues, which were not "that they were opposed to the direct representation of the profession," but that those who acted in the name of the Association were unwilling to accept from a friendly Government any measure of medical reform which did not contain the special provision for direct representation.

The letter to the *Times* announcing their resignation is as follows.

"Sir,—With reference to a recent report in your columns, we beg to state that, in the late meeting of the British Medical Association, held at Newcastle-upon-Tyne, we found ourselves compelled to resign our seats on the Council of that body. As members of the General Council of Medical Education and Registration, we had advocated the main provisions of the Amended Medical Bill introduced into the House of Lords by the Lord President of the Privy Council—provisions which, in our judgment, were of the utmost importance to the public weal. The Bill, it is believed, was withdrawn in the House of Commons by Mr. Forster in consequence of the course pursued by the Direct Representation Committee of the Association. That course was subsequently approved by a vote of the Association at Newcastle. We, therefore, could not, in justice to ourselves or the members of the Association, continue any longer to belong to its executive. The question of the permanent construction of a Medical Council of Education is one of grave importance. It is intimately connected with other questions and interests entirely extra-professional, and it cannot, therefore, be properly dealt with by any hasty or one-sided legislation.

"We are sir, your obedient servants,

"GEORGE PAGET, Cambridge.

WILLIAM STOKES, Dublin.

HENRY W. ACLAND, Oxford.

H. WYLDBORE RUMSEY, Cheltenham.

DENIS EMBLETON, Newcastle-upon-Tyne.

"August 29."

In reply to Dr. Paget, I wrote him a letter, which he published in the *Lancet* of May 27th. The statement in the first paragraph of that letter, "because the Association by its vote at the Newcastle meeting approved of the conduct of the Direct Representation Committee of the Association in not accepting the Medical Acts Amendment Bill of last session," was drawn from the letter to the *Times*. I also accepted Dr. Paget's statement of the reasons of the resignation of himself and his colleagues, though I objected to the imputation of any disregard of professional and public good on the part of the Committee. It is with the deepest regret I have found that this letter was not deemed satisfactory; and that, in consequence, Dr. Paget and his colleagues, concluding that the whole Reform Committee were implicated in the correspondence, have resigned their connexion with the Association.

It is, I believe, no unusual course for the chairman of a committee to take independent action when circumstances render it necessary. The letter to the *Lancet*, *teterrima causa belli*, was written in reply to a leader, and was intended for insertion in the following number. There was, therefore, no time to consult the members of the Reform Committee. The letter appeared with the signature of the General Secretary; but the resignation of Dr. Paget and his colleagues determined me to proclaim myself without any delay the sole author.

In order to give full expression to the views of Dr. Paget and his colleagues, I must beg the insertion of the letter in which they resigned at Newcastle their seats on the executive, and in which they seem to me to deprecate the interference of the Association in medico-legal questions. I never saw this letter until the meeting of Council held at

Birmingham on June 6th instant, when Dr. Paget and his colleagues had already resigned their connexion, as members, with the Association.

I can only hope that an involuntary error on my part, for which I have desired to make every reparation, may not be permanently visited on the Association. The error in no way added to the force of the letter complained of.

I am, etc., EDWARD WATERS.

Chester, June 28th, 1871.

The following is a copy of the letter written at Newcastle by Dr. Paget and his colleagues.

"I, Eldon Square, Newcastle-on-Tyne, August 11th, 1870.

SIR,—We, the undersigned, beg leave to resign our places on the Council of the British Medical Association. We take this step with sincere regret, but feel compelled to take it. We are, and have been, anxious to promote in every way in our power such education and such legislation as may in our judgment maintain and increase the just esteem in which every branch of the profession of medicine is held in this kingdom. We believe that the thwarting the sincere attempts of a friendly Government in this direction to be injurious to this object. Having been engaged, in the discharge of a duty imposed on us under the Act of Parliament of 1858, in repeated consideration of the Medical Bill now withdrawn in consequence of the refusal of the Committee of the Association to accept what appears to us a fair offer of the Government (a Committee of the House of Commons on the question of direct representation), we feel that we cannot now consistently share any responsibility in the Council of the Association. We do not at present withdraw from the Association, because, much as we deplore the introduction at these meetings of medico-political questions, we hope to be able from time to time to join in what we consider the great objects of the Association—the friendly discussion in different parts of the kingdom, at general meetings and in sections, of all questions bearing directly on the improvement of medical science.

"We are, sir, your faithful servants, GEORGE EDWD. PAGET, H. W. ACLAND, WM. STOKES, D. EMBLETON, H. W. RUMSEY.

"The President, British Medical Association."

DEATHS FROM CHLOROFORM.

SIR,—Among your "leaders" of June 24th, you have an article on the above subject, wherein you criticise with great justice Professor Lister's conclusions as to the mode of death in anæsthesia induced by chloroform, and his *only* method of treatment.

Without attempting to explain the various causes of death, in different individuals and under every variety of circumstance, whilst under the action of chloroform, I shall content myself with daring to "contravene" the Professor's statements.

It will generally be allowed that the immediate and common cause of death during the induction of anæsthesia by chloroform or any other volatile anæsthetic ingested by the organs of respiration is, primarily, paralysis of the heart, and secondarily, paralysis of the respiration; but the paralysis of the respiration follows so closely upon that of the heart that, in practice, it is found to be impossible to say which is first, nor is it, in my opinion, of vital importance which is first; suffice it that it is well to know that death, in the vast majority of cases, begins at the heart. It will also generally be admitted that, in the majority of instances where death has actually supervened, a certain and considerable percentage of chloroform is and must be within the area of the circulation, paralysing the great nerve-centres; and that this anæsthetic and paralysing agent entered the circulation by the lungs, and, so far as we know at present, it also makes its exit *en masse* by the same channel.

If these premises be true, then it follows that the majority of those who die from chloroform, die from pulmonary asphyxia from stoppage of the action of the heart, induced by a poison in the blood, which exerts an anæsthetic and paralysing influence upon the entire nervous system, and through it upon the whole substance of the body.

In the face of this, Professor Lister has the hardihood to tell us that "firm traction upon the tongue with artery-forceps at once clears away the barrier." With all deference to a professor of surgery, this is the most mechanical and vain way of getting rid of a poison circulating in the blood and paralysing the great nerve-centres, that any one could well conceive; but the most remarkable part of Professor Lister's theory and practice is, that the firm traction on the tongue does not act mechanically, as most of us believe; it does not operate by preventing the paralysed tongue from falling back and closing the glottis to the entrance and egress of air; but he holds that it acts simply as a stimulant to the nervous system, "like a dash of cold water on the face or chest." The brilliancy of the comparison is perfection, and it reminds one of his student or hospital career, when, in the sublimity of our ignorance and the sportiveness of youth, some are charmed with the very idea of a case of opium-poisoning, where flagellation

with a wet towel and such like barbarous and more than useless practices were, and perhaps still are, thought to be the treatment *secundu artem*.

Really, after twenty-four years' experience of chloroform, we ought to know our work better than to treat poisoning under its influence; we would *an ordinary faint*. Fresh air, the recumbent position, smelling salts, strong liquid ammonia, etc., rubbed over the face and nostrils, raising the head and shoulders, and pouring wine down the throat, and last, though not least, stimulating the nervous system by laying violent hold of the tongue with artery-forceps, and using *firm traction* on the same, are all very well, but they are not the primary means, much less the only means, which ought to be relied upon in a case of chloroform-poisoning. Professor Lister entirely forgets that the nervous system of the patient is not paralysed from want of a stimulant, but on account of the presence of a poison, which is acting upon the pulmonary nerves in especial, and on the great nerve-centres in particular. This being the case, it is perfectly useless to stimulate nerves which refuse to be stimulated. We might as well try to stimulate a dead body, or talk a drunk man sober, or attempt to rouse him into sobriety, or to "clear away the barrier" to his healthy respiration, by firm traction applied to his gustatory nerves by arterial or any other form of forceps. The late Sir James Simpson was the first to point out the necessity of drawing forward the tongue in chloroform poisoning. He was in the custom of using his finger, sometimes the uterine sound; and I have once seen him use a vulsellum, because it was at hand. He looked upon the practice as simply mechanical, and not vital. In my own opinion, there is no instrument for the purpose that is equal to, or can surpass, the forefinger, or the fore and middle fingers of the left hand, or, in an ambidexter person, of either hand.

If a patient be so little under the anæsthetic influence of chloroform as to be capable of being roused to sensibility by the grip of a pair of artery-forceps on the tongue, he is certainly not deep enough under chloroform for almost the most ordinary surgical operation requiring its protecting and benign influence; but what is much more likely, the patient most probably has been in a common faint, from which he would have recovered *if simply let alone*. Professor Lister surely does not require to be reminded that the patient who is in a condition of deep anæsthesia—the depth requisite for amputation of the thigh, for instance—is, for the time being, as dead to all sensation and sensibility as a corpse; and until a certain amount of the poison is eliminated, he has expended itself, so long must the patient remain incapable of being roused. Such being the case, our first duty is *to administer an emetic by the lungs*, or, by means of an air-pump, empty the lungs and blood of the vapour of chloroform which they contain. In other words, *induce artificial respiration*, not by the Marshall Hall or Silvester methods, but by such method or methods as the operator finds to be the most convenient and the most successful. The method which I myself prefer must leave to another occasion.

If a poison such as alcohol, opium, or the like, has entered the system by the stomach in a quantity dangerous to life, we have recourse primarily, to the stomach-pump and emetics, secondarily, to antidotes, and thirdly, to stimulants. If another, but a similar and more powerful narcotic poison, has entered by the lungs and also makes its exit by these organs, what can be more rational than to follow the same order—namely, to assist Nature in expelling the poison from the lungs and blood, by keeping up artificially what she is prevented fulfilling by the virtue of the poison she has inhaled; secondly, by using antidotes—fresh air being the best known; and third and lastly (*not firstly*), by the use of stimulants. After the first two have been properly executed it will be time enough and not too late to stimulate the nervous system with artery-forceps or any other surgical or other means of rousing the vital powers. The *modus medendi* by the respiratory system is so new to us, we have not had time to realise our new position, or the difficulties of the situation. We have two "new tracks" to explore—the pulmonary and the areolar—and before long, if we have not had some of it already, we shall have the serous also to consider.

One word as to deaths from chloroform being preventable accidents. To some extent, I believe, they are so; but I do not and I can never believe, with Professor Lister, that they are altogether the result of carelessness and the omission of the simple precaution of forcible and firm traction of the tongue. Let him who thinketh he standeth, take heed lest he fall. The late Sir James Simpson was a man than whom no one ever had an equal confidence in himself and in chloroform—than whom no man ever had, or is likely to have, an equal, leave alone a greater experience of chloroform—and than whom no man could be more keenly jealous of anything going wrong with his darling offspring chloroform, in his own or in the hands of another; nevertheless, during the last year of his marvellously successful life, he was fated to lose a patient whilst under the influence of chloroform administered by his own

hands. Did the patient die for want of traction—firm traction on the tongue? Any one who has had the honour of Sir James's professional acquaintance, must know that, if a patient died under the influence of chloroform administered by himself, it was no fault of Sir James Simpson's, nor was it owing to any carelessness or neglect of the minutest measure necessary or likely to be of any use to assist in the resuscitation. There is a limit to all human power, and if we have honestly exerted our utmost to save life, we are in no way to blame—we can do no more. A death from chloroform is quite possible to occur even in the hands of Professor Lister, and all the more likely if he persists in placing his chief, if not entire, reliance in *firm traction on the tongue with artery-forceps*, a step of "unspeakable importance."

In conclusion, although accidents will and do occur, it is no reason why we should not strive our very utmost to lessen their number. In a future communication I may enter upon this point, and impart more of my experience on this deeply important and interesting subject.

I am, etc., THO. SKINNER, M.D.

Dunedin House, Liverpool, June 28th, 1871.

MEDICAL NEWS.

PAPERS FOR THE ANNUAL MEETING AT PLYMOUTH, 1871.

THE following are the names of the Honorary Secretaries of Sections for the approaching Annual Meeting.

Medicine.—Dr. Clay, Plymouth; Dr. Wade, Birmingham.

Surgery.—W. P. Swain, Esq., Devonport; C. Steele, Esq., Clifton, Bristol.

Midwifery.—Dr. J. Rolston, Stoke, Devonport; Dr. Phillips, 26, Finsbury Square, London.

Public Medicine.—Dr. Row, Devonport; David Davies, Esq., Queen Square, Bristol.

Gentlemen proposing to read papers or to forward communications for the Annual Meeting are requested to communicate with the least possible delay with the Sectional Secretaries, in order that the titles of their papers may be duly announced, and that arrangements may be made for the order in which they are to be read. Abstracts should at the same time be prepared, and communicated beforehand to the JOURNAL, in order that copies of such abstracts may be issued by us for the simultaneous use of the other medical papers.

COLLEGIATE ELECTION.

THE annual meeting for the election of Fellows into the Council of the Royal College of Surgeons took place on Thursday the 6th instant. The hour for commencing the proceedings was 2 o'clock, but long before that time many Fellows attended to examine the interesting collection of preparations about to be added to the Museum, which, owing to the great zeal of the Conservator, Professor Flower, increases in number and interest every year. An abstract of his able report appears in another page of the BRITISH MEDICAL JOURNAL.

Punctual to the time appointed, the President, Sir William Ferguson, accompanied by the Vice-Presidents, Messrs. Busk and Hancock, entered the Library, and, having shortly explained the objects of the meeting, added that three of the four retiring members of the Council offered themselves for re-election, viz., Messrs. Edward Cock, George Busk, and F. Le Gros Clark (Mr. S. A. Lane having declined being nominated); the other candidates, taking them in chronological order, were Messrs. T. Spencer Wells, George Critchett, and Barnard W. Holt. The voting then commenced, and was concluded at 5 o'clock, when Mr. Stone commenced recording the votes as they were announced by Mr. Trimmer, previously to which the President invited any Fellows, so inclined, to act as scrutineers. At the conclusion of this duty, the numbers having been declared correct, the President announced that the successful candidates were Messrs. Busk, Clark, Wells, and Critchett. The numbers polled by each candidate were as follows, viz.:

| | | |
|-------------------|----------|-----------------------|
| Mr. Wells..... | 131..... | including 4 plumpers. |
| Mr. Critchett ... | 130..... | " 7 " |
| Mr. Clark..... | 127..... | " 9 " |
| Mr. Busk | 117..... | " 1 " |
| Mr. Holt | 104..... | " 7 " |
| Mr. Cock | 74..... | " 10 " |

It appears that 228 Fellows recorded their votes;* and, as showing

* The facilities for voting were greatly increased on this occasion by adopting the plan of the School Board election, in having several compartments, where the voting-papers could be filled up with the secrecy necessary sometimes, and which was duly appreciated.

the continued interest taken in these elections, it may be mentioned that Fellows attended from distant provincial towns, as Messrs. Wiblin and Osborn, Southampton; Green, Bristol; Carden, Worcester; Fox, Broughton, Winchester; Southam, Manchester; Campbell, Stourbridge; Dalrymple, M.P., Norwich; Wood, Shrewsbury; Humphry, Cambridge; Smith, Stevenage; May, Reading; Holman, Huistpierpoint; Allard, Tewkesbury; Brown and Bell, Rochester.

In the evening a very large number sat down to dinner at the Albion Tavern, under the chairmanship of Mr. H. D. Carden of Worcester, who was supported by many distinguished visitors; and, thanks to the indefatigable exertions of Mr. T. Carr Jackson, the Honorary Secretary, every Fellow appeared thoroughly to enjoy the agreeable *réunion*.

UNIVERSITY OF DUBLIN.—At the recent examination for the Degree of Bachelor in Medicine, held in Trinity Term, the following candidates passed in the order of merit indicated.

1. Jacob O'Connor; 2. John G. Rogers; 3. David Kennedy; 4. Thomas Drapes, Patrick Molony; 6. Thomas B. Worthington, William M. Whittaker, Richard Quill; 9. Henry J. Tweedy; 10. Maurice Blunden; 11. Thomas Hamilton Moorhead; 12. James Armstrong; 13. Henry Comyn; 14. Andrew F. Dobson; 15. Richard D. White, George Gibson, Thomas J. Browne; 18. Christopher Elliott; 19. Otway P. Browne; 20. John Waugh.

The following gentlemen have passed the examination for the Degree of Master in Surgery.

1. Patrick J. Molony; 2. John G. Rogers; 3. James Armstrong; 4. Richard Henry Quill; 5. Thomas B. Worthington; 6. Edward M. Courtenay; 7. Francis G. Mayberry; 8. John Waugh; 9. Otway Peter Browne; 10. Henry Edward Comyn.

Previous Examination in Medicine.—The following have passed in all the subjects.

- Andrew Clarke, George A. Pearce, Charles A. Cooper, Thomas F. Fleetwood, Phineas B. Tuthill, John P. McNeill, George A. Bluett.

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BLACKBURN and EAST LANCASHIRE INFIRMARY—House-Surgeon.
BRIDGORTH UNION, Salop—Medical Officers for the Workhouse and Districts 3 and 4.
BRISTOL GENERAL HOSPITAL—Surgeon.
BURY, LANCASHIRE, DISPENSARY—Resident Medical Officer.
DERBYSHIRE GENERAL INFIRMARY, Derby—Resident Assistant House-Surgeon; Two Dental Surgeons; Non-Resident Dispenser.
DEWSBURY UNION, Yorkshire—Medical Officer for the Mirfield District.
GATESHEAD DISPENSARY—Resident Medical Officer.
GENERAL HOSPITAL and DISPENSARY for SICK CHILDREN, Bridge Street, Manchester—Resident Medical Officer.
GREAT YARMOUTH, Norfolk (Parish of)—Medical Officer for the North District.
GUISBOROUGH UNION, Yorkshire—Medical Officer for the Danby District.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street—Assistant-Physician.
HUDDERSFIELD and UPPER AGRIGG INFIRMARY—Physician.
HUNSLET UNION, Yorkshire—Medical Officer for the Templenewsam District.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
INFIRMARY for EPILEPSY and PARALYSIS, Charles Street, Portman Square—Physician.
LEEDS GENERAL INFIRMARY—Assistant Resident Medical Officer.
LEEDS PUBLIC DISPENSARY—Junior Resident Medical Officer.
LIVERPOOL ROYAL INFIRMARY—Physician.
LOUDOUN, Ayrshire—Parochial Medical Officer and Public Vaccinator.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Assistant-Physician.
MIDDLESEX HOSPITAL—Physician; Assistant-Surgeon.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Lecturer on Physiology, including Practical Physiology.
NAAS UNION, co. Kildare—Medical Officer and Public Vaccinator for the Clane and Timahoe North Dispensary District.
PLYMOUTH PUBLIC DISPENSARY—Dispenser.
RATHDOWN UNION, co. Dublin—Medical Officer for First Division of the Kingstown Dispensary District.
ROYAL ORTHOPÆDIC HOSPITAL—Resident House-Surgeon & Apothecary.
QUEEN'S COLLEGE, Birmingham—Joint Professor of Anatomy.
ST. MARTIN'S-IN-THE-FIELDS—Medical Officer of Health.
ST. PETER'S HOSPITAL FOR STONE, etc., Berners Street—House-Surgeon.
ST. THOMAS'S HOSPITAL—Resident Assistant-Physician; Assistant-Surgeon.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Physician.
WEST LONDON HOSPITAL—Junior Physician.
WESTMINSTER HOSPITAL—Assistant-Surgeon.
WIRRAL UNION, Cheshire—Medical Officer and Public Vaccinator for the Upton District.

[For Poor-law Vacancies see Poor-law Department.]

DR. F. D. LENTE has been appointed Professor of the Diseases of Women and Children in the University of New York.

SUSSEX AND BRIGHTON MEDICO-CHIRURGICAL SOCIETY.—Mr. Jardine Murray was elected President, and Mr. George Tatham, J.P., Vice-President, of the Sussex and Brighton Medico-Chirurgical Society, at the annual general meeting on Tuesday, 2nd July, 1871.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.

FRIDAY Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. GAMGEE'S CORRESPONDENCE.

MR. GAMGEE forwards to us a further correspondence between himself and the President of the Council, in which he complains of the editorial comment, and asserts that he is not locally concerned for any journal whatever. It is unnecessary to publish the correspondence, inasmuch as the comments were forwarded in proof for the approval of the President of the Council before they were printed, and have received that approval; and were likewise submitted to Mr. Gamgee in proof. His correction, therefore, would have come then with a better grace. He is of course aware the statement would not have been made without excellent authority; and in submitting it to Mr. Gamgee himself, additional precaution was taken.

DR. BAKEWELL, Colonial Medical Officer of Trinidad, writes in reference to Mr. Gamgee's communication, that he is one of a numerous class of members who are unable to attend either the annual or the branch meetings, and who, in joining the Association, are chiefly influenced by a desire to receive the JOURNAL in return for the subscription.

A MEMBER suggests that it would be easy to test how many of the members of the profession are willing to belong to the Association without the JOURNAL, by allowing those who do so, or who may wish to join, the privileges of membership only—that is, of attending annual and special general meetings, and joining Branches, for an annual subscription of five shillings. This, of course, should not include the JOURNAL; which, however, should, he thinks, be supplied to such members at the reduced subscription of eighteen shillings *per annum*, free by post. As to a *scientific* fund, he observes that those who imagine that an annual subscription of one guinea can at once supply a political, social, and scientific organisation, furnish the indispensable weekly publication in a satisfactory form, and provide grants also, evidently miscalculate the proportion of means to an end. The Society promotes science by its meetings, discussions, and facilities of publication, of which the JOURNAL affords weekly evidence. If a system of grants be introduced, a special fund should be provided; and for this, a capitation fee of one or two shillings would be sufficient; and we believe few, if any, would object to it. It would furnish from £200 to £400 for the purpose annually.

WE fear that Mr. Gamgee would consider the comments on his correspondence made by Mr. Fleischmann of Cheltenham and Mr. Lawson Tait of Birmingham as even more distressing than our own, of which he complains. They would provoke a long correspondence, and are probably best postponed till the annual meeting, when the opportunity will, no doubt, occur for satisfactorily disposing of the subjects of debate. The report of the Committee of Council, to be then presented, will, of course, give reasons for the steps recommended; and the discussion will then legitimately arise.

MR. HOLMES (Slough).—The explanations in question will be given at length in official documents.

EYES AND NO EYES.—Inquirer will observe that the medal has been awarded; and that the Prize Essay is in course of publication.

DR. GREENE AND DR. BAKEWELL alike condemn, and in terms by no means too strong in our opinion, the state of family relations in France which Dr. Drysdale so much admires, and which he manages to introduce into all his letters.

NAPOLEON AT WATERLOO.

SIR,—At the end of a lecture reported in the JOURNAL for May 13th, Dr. Handfield Jones mentions that "Napoleon sent this message from the field of Waterloo: 'I have beaten the English, but they won't go.'" Will Dr. Jones kindly inform me to whom this message was sent, and in what work the fact is recorded?

May 25th, 1871.

I am, etc.,

HISTORICUS.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

HOW NOT TO DO IT.

THE following exquisite illustration of the art "How not to do it", was afforded by the Committee of Works at St. George's. Subject: "The Watering of Streets with a Solution of Cooper's Salt". Result, as stated by the surveyor to St. George's: "Mr. Cooper's salts have no effect in this parish, and I hear they don't answer at Westminster." Says St. George's to Westminster: "Do Mr. Cooper's salts answer?" to which Westminster replies: "Mr. Cooper's salts answer perfectly." Whereupon it was proposed by Colonel Ogilvy, and seconded by Dr. Love: "That the board do pass on to the next business"; and so St. George's resolves not to use the deliquescent salts. The "next business", as it turned out, was a question of Water-troughs, and the consideration of a motion: "That a man should be employed to stand by troughs, and wipe the horses mouths."

REVACCINATION.—The following is a letter addressed to Mr. Wickham, Superintendent of the Lunatic Asylum, Newcastle-upon-Tyne, by the husband of one of his patients.

"Sir,—Having heard that you are revaccinating the patients in the asylum, I have thought it strange that I, as a relative of one of the patients, have not been made acquainted with it. I have therefore thought it my duty to make it known to you that I strongly object to my wife being made a victim of the lance.

"I remain, etc., _____."

TAPPING IN DROPSY.

SIR,—Thinking the following record of a case of dropsy, which I found in an old book some short time ago, might be interesting to the profession, I forward it to you *verbatim*. I am, etc., R. H. HUNTER.

Bridge House, Dartford, June 19th, 1871.

"The remarkable case of Miss Ann Mumford, of Sutton Place, near Dartford, who died in the 23rd year of her age, with a dropsy. She was tap'd 153 times. Of which in the whole 3725 pints of water drawn from her, which is 465 gallons, neare 7 hogsheds and a half. She had a good appetite, was chearfull, and a few days before her death could walk a mile or two to visett her friends. Died June 1778."

THE following advertisement in the columns of a Liverpool daily paper, is so good in its way, that we reproduce it for the edification of our readers. As a genuine sample of the puff direct, it is, in our experience, unique.

"Dr. Williams, No. 63, Shaw Street, having returned home, wishes to thank his friends and patients for their kindness and sympathy during his illness. He also desires to contradict the current report that he is consumptive, which is happily untrue; his sickness was caused by infection contracted from a family he attended through a long and dangerous illness."

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, July 1st; The New York Medical Record, June 22nd; The Boston Medical and Surgical Journal, June 22nd; The Madras Mail, April 24th; The Shield, July 1st; The Philadelphia Medical Times, June 14th; The Philadelphia Medical Independent, June 19th; The Birmingham Morning News, July 3rd; The Durham Chronicle, June 30th; The Sunderland Times, July 4th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

The Rev. Dr. Haughton, Dublin; Dr. T. L. Brunton, London; Dr. Clifford Allbutt, Leeds; Dr. W. T. Greene, London; Dr. Arthur Ransome, Manchester; Mr. W. H. Spencer, Preston; Dr. Falconer, Bath; The Secretary of the South Staffordshire Hospital; Mr. Wanklyn, London; Mr. T. Watkin Williams, Birmingham; Dr. E. Waters, Chester; Dr. T. Skinner, Liverpool; Dr. J. Crichton Browne, Wakefield; Mr. H. Greenway, Plymouth; Dr. Frederick J. Brown, Rochester; Dr. Wm. Ogle, Derby; Dr. Day, Torquay; Dr. A. S. Underhill, Birmingham; Dr. Peart, North Shields; Mr. W. Fairlie Clarke, London; The Secretary of the City of London Truss Society; Mr. S. Day, London; Dr. J. Rose Cormack, Paris; Dr. C. R. Drysdale, London; Dr. R. H. Bakewell, Leicester; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Kynsey, Dublin; Our Dublin Correspondent; Mr. F. Pollard, London; Mr. John Gamgee, London; Dr. A. P. Stewart, London; Dr. Carmichael, Burntisland; Mr. Nicholson, Hull; Mr. Clover, London; Dr. Bryan, Northampton; Dr. Macpherson, London; Mr. Lloyd, St. Bartholomew's Hospital; Inquirer; Mr. C. Holmes, Slough; Mr. Hodgson, Brighton; Mr. Lawson Tait, Birmingham; Mr. Fleischmann, Cheltenham; Dr. Broadbent, London; Mr. Lister, Edinburgh; The Secretary of the Royal Medical and Chirurgical Society; Mr. St. George Mivart, London; Dr. J. B. Pitt, Norwich; Dr. Samuel Griffiths, Portmadoc; Dr. A. Wiltshire, London; Mr. J. Sampson Gamgee, Birmingham; Dr. Carr, Blackheath; Mr. Berkeley Hill, London; Mr. J. G. Williams, Glasgow; Mr. George Lawson, London; Dr. Edis, London; Miss Jex Blake, Edinburgh; Mr. Robson, London; Dr. Meadows, London; Dr. Henry Thompson, London; Mr. G. C. Coles, London; etc.

BOOKS, ETC., RECEIVED.

Manual of the Duties of Poor-law Medical Officers. By William Golden Lumley, L.L.M. London: 1871.

The Desideratum: or Electricity made Plain and Useful. By a Lover of Mankind and of Common Sense. London: 1871.

On Aphasia or Loss of Speech, and the Localisation of the Faculty of Articulate Language. By Frederic Bateman, M.D., M.R.C.P. London: 1871.

A Manual of Practical Therapeutics. By Edward John Waring, M.D., F.L.S. Third Edition. London: 1871.

Corpalency, and its New Self-dietary Cure, etc. By A. W. Moore, M.R.C.S. Sixth Edition. London: 1871.

THE HASTINGS PRIZE ESSAY,

1870.

ON DIGITALIS: ITS MODE OF ACTION
AND ITS USE.*

By J. MILNER FOTHERGILL, M.D.,

Late Senior Resident Medical Officer to the Public Dispensary, Leeds.

WE will now proceed to the consideration of each proposition in detail.

1. *Increased Arterial Distension and Tension.*—The immediate effect of increased contraction of the ventricle and more complete emptying of the chamber is, that a greater volume of blood is thrown into the aorta, and a more perfect arterial tension produced. Thus we have improvement in the whole circulation, and relief of the systemic symptoms. Cyanosis or blood-stasis is relieved by the more perfect delivery of blood, by increasing the *vis a tergo*; while the emptying of the distended veins assists in inducing a more perfect general circulation. The pulmonic circulation shares in this improvement, and thus the congestion is abated, and with it the dyspnoea. For, when there is so much extra bulk of blood within a given thoracic space, there must be less room for the reception of air on inspiration. When there is an accumulation of carbonic acid in the blood, the improved circulation brings it more rapidly into contact with the pulmonary membrane, and a more perfect interchange of carbonic acid and oxygen takes place, the blood is more thoroughly purified, and the condition of carbonic acid poisoning—the result of wear within the organism—is relieved; thus one of the most dangerous sequelæ is, for a time at least, held at bay. Relief of other consequences, as dropsy, etc., follows for the same reason. The relief thus obtained is the direct result of a larger volume of blood being thrown into the aorta; for after that the arterial recoil completes the propelling impulse. As long as the arterial coats are sound and retain their elasticity, the ventricular contraction merely produces arterial tension; the arterial recoil is the propelling power after that. When the arteries are rendered less elastic by atheroma, or endarteritis deformans, hypertrophy of the ventricle follows, and the blood is propelled by a sustained effort, very evident in a good sphygmographic tracing, and evident in the pulse at the wrist. Ordinarily, however, the arterial elasticity and recoil complete the impulse received from the ventricular contraction. The greater, then, the distension, the greater the arterial recoil. We thus come to—

2. *Increased Arterial Recoil.*—The arterial recoil, besides completing the impulse received from the ventricular contraction, has an action which is rarely sufficiently recognised. The propelling power through the coronary circulation is the arterial systole. Contrary to other arteries, the propelling power into the coronary arteries is solely the arterial recoil or systole; opening out from the sinuses of Valsalva, they run in a direction opposite to the current occasioned by the ventricular contraction. But the arterial recoil, arrested in the backward direction by the semilunar valves, fills the coronary arteries, and that, too, during the diastole, or heart's period of rest. The question of arterial tension and recoil thus bears directly on the circulation through the coronary arteries—the nutrient arteries of the heart. Thus, too, the blood-supply is secured to the muscular walls of the heart during their period of rest, and not during their activity, which would oppose an obstruction to the circulation, and which would be the case if the ventricular systole were the propelling power through the coronaries. It is thus easy to see how the blood-supply of the heart itself is more perfect, from its being associated with the arterial, rather than the ventricular, systole. Thus increased arterial recoil leads directly to—

3. *Increased or Improved Coronary Circulation.*—It being thus seen how the coronary circulation takes its rise in the arterial recoil, it is easy to see how an improvement in the arterial distension leads to a more perfect circulation through the coronary arteries, and thus to a more perfect supply of blood to the heart's structure, and a freer supply of nutrition to it. The condition of the muscular structures is intimately associated with their blood-supply. Whenever the blood-supply is defective, the muscles deteriorate, and their efficiency is interfered with. However rich the blood may be, and supplied with nutritive material by perfect digestion, if the circulation through any part be interfered with, that part suffers, and does not benefit by the abundance

of nutritive material in the blood. If the blood be impoverished, then, of course, the nutrition of every part is interfered with, but still more so in the part also labouring under obstructed local flow. The arterial recoil has much to do with the general circulation, no doubt, and the unsustained pulse of unfilled—that is, undistended—arteries is well known; the sphygmograph shows a rapid fall after the rise of the systole. This unfilled condition affects all parts; but the heart-structure, through which the coronaries run, is most affected. Their impulse being solely that of arterial recoil, the want of it is a serious drawback to the coronary circulation; while, at the same time, the incessant action of the heart demands a very perfect nutrition to preserve its integrity. Thus, then, improved action of the ventricle leads to increased arterial tension, and through that, by its increasing recoil and improved coronary circulation, to more perfect self-nutrition. Thus hypertrophy tends to perpetuate itself, though to an inferior extent, where there is aortic regurgitation or atheroma; that is, loss of arterial elasticity. In these conditions the recoil no longer fills the coronaries, and a deficient flow sooner or later impairs the structural integrity of the heart. When, however, the dilated or distended heart, accompanied by a rapid, feeble pulse, evidencing a diminished arterial tension, is just pumping a little off the top of the contained blood, there is an inherent probability of tissue-degeneration following at no distant date. The feeble impulse and lessened recoil do not fill the coronary arteries; while the rapidity of the contractions, by infringing on the heart's period of rest between the beats, does not afford the pause during which the coronary arteries supply the heart-walls with nutrition. Thus we see how the improved ventricular contraction leads directly to a better tissue-nutrition; that is, to a consequent hypertrophy. Thus a more perfect action of the ventricle leads to a more perfect nutrition of itself by a special provision, as well as by the general law of increased action leading to increased nutrition, which holds good in all parts of the body equally.

4. *Increased Nutrition of the Heart.*—The improvement in the circulation by supplying more nutritive material to the muscular structure of the heart, and, at the same time, a more perfect removal of waste material, furnishes one factor in the question; the increased systole and lengthened diastole furnish a prolonged period of rest—another factor; and the increased muscular activity, a greater demand for nutrition. There are thus aggregated all the circumstances favourable to improved nutrition.

5. *Compensating Hypertrophy.*—This increased nutrition leads in a direct manner to hypertrophy. The well known instances of the arm of the blacksmith and the leg of a ballet-dancer demonstrate the growth which accompanies activity with a good supply of nutritive material. For, without the nutrition, the activity leads to degeneration, as seen in the muscles of the top-sawyer mentioned in Chambers's *Clinical Lectures*. But, with the improved circulation, all parts are improved; there is better appetite, and more perfect digestion. The relief of the systemic symptoms has set every organ into more perfect action. A more perfect elaboration furnishes more nutrition to the blood, now more rapidly circulated through every organ. From a widening circle of troubles, there is now a widening circle of improvement felt everywhere. The muscular activity, causing a greater demand for formative material, finds it provided by the very action that now calls for it, and tissue-activity leads directly to improved tissue-growth. It matters little whether this be by reduplication of fibres, or increase in length and strength; sufficient that it exists. Thus the muscular walls are better enabled either to resist the distending action of the blood forced in under greater pressure, or to overcome an obstruction to the flow of blood forward. Hypertrophy of muscular tissue is the restoration of the balance, as the result of natural processes. Compensatory hypertrophy frequently enables serious lesion to be borne without any great constitutional embarrassment. It is the way in which the system again strikes the balance in well-nourished individuals; and, as a natural process, it is only too desirable to imitate it and favour it. Compensatory hypertrophy, again, restores a balance between the opposing forces of propulsion and obstruction. When hypertrophy is sufficiently pronounced, an almost perfect compensation may be said to exist. Niemeyer states that a huntsman in Griefswald, who suffered from "extensive stenosis and aortic insufficiency, and immense excentric hypertrophy of the left ventricle, performed all the manoeuvres and forced marches of the army without difficulty" (vol. i, fol. 347). Compensatory hypertrophy is Nature's mode of repairing injuries to the heart's integrity; and in treatment I have striven to make it mine, and certainly not without success. By a proper recognition of this principle, and of the means by which it may be attained, a much more effective treatment of heart-lesions may be resorted to than is currently believed. *Experto crede.*

6. *Considerations on Atheroma and Fatty Degeneration.*—The question of atheroma, however, materially interferes with these changes at

* Continued from page 29 of last number.

every step. It may be desirable, and not un instructive, to follow for a while this interference. Atheroma is essentially a parenchymatous inflammation of the inner arterial tissues, and may either exist in patches or be more general, leading to dilatation of the arteries, and loss of elasticity. When the arterial elasticity is impaired, the artery distended by the ventricular systole is unable to recover itself. It thus remains more and more distended, and when possible, elongated—*i.e.*, tortuous. This impaired elasticity then lessens the recoil; the distension and elongation of the arteries interfere with the recoil, and instead of perfect recoil, the artery remains permanently enlarged. This change goes on gradually, incessantly aggravated by exertion and all calls on the heart for increased action. The arteries become elongated and distended, from the aorta to the tortuous temporal artery; they are increased in length and breadth; they become, too, more brittle and more easily ruptured by strain. Here, now, we see a wonderful instance of conservative change, tending directly to prolong the existence of the organism. The diseased arteries recoil less perfectly, and thus the coronary circulation becomes involved and its circulation diminished, and thus impaired nutrition of the heart; and from that, again, lessened and impaired activity, and thus diminished risk of the heart rupturing the diseased and friable arteries. Thus we see that not only is fatty degeneration a preservative lesion, as Sir William Jenner showed at Leeds, but that that very change which is preservative in its action, is entailed by the diseased condition of the arteries, which the very want of that lesion would endanger. Thus the changes go on, hand in hand; the more diseased, brittle, and non-elastic the arteries, the less their power of recoil, and thus impaired structural integrity of the heart and impaired contractile power. The diseased arteries thus fortunately lead to the very muscular change imperatively necessary in order to prevent the heart from rupturing them. Where the atheroma is general, there is a stronger probability of fatty degeneration following, and thus this condition is more favourable to life than when the atheroma is in patches. Where the atheroma is deposited in ring-like, annular patches, encircling the aorta at the branching off of some smaller artery—its favourite seat—it is more fraught with danger. The hypertrophy consequent on the obstruction to the flow, and increased tension resulting from the obstruction, does not so soon undergo preservative degeneration, as the sound parts preserve their elasticity and recoil fairly. Thus the obstruction of the isolated masses, especially if annular, keeps up the hypertrophy by increasing the tension behind them and the results of increased arterial tension, and thus endangers the patient's existence by the increased risk of some degenerate mass giving way. In these conditions, increased ventricular action could only render them more and more dangerous; the greater contraction and distension would try still farther the degenerate vessels, and could only slightly improve the coronary circulation, and thus only to a small extent diminish the risk of arrest of the heart's action, while it would certainly greatly enhance the more imminent risk of arterial rupture. If ever hypertrophy is to be regarded as otherwise than an unalloyed good, it is in these conditions. Certainly any attempt to secure it artificially in the manner described, would be detrimental to the patient's real interests; as the attempt to extenuate one danger would greatly enhance the hazard of another.

Use in Hypertrophy.—In hypertrophy of the heart, perhaps, the action of digitalis was first, and is perhaps most readily, observed. For, hypertrophy being essentially compensatory, balance between the blood to be driven and the power to drive it is being already re-established by the efforts of nature. Of course, the effect of a drug whose action is to drive the ventricle into contraction, would be most quickly and evidently apparent in this condition, where a restoration of the balance is being wrought out, than in dilatation where no such compensatory change is being attempted. In hypertrophy, no great amount of the drug would disturb the balance in the opposite direction, and then the symptoms of digitalis poisoning—*i.e.*, of the drug driving the ventricle into an abnormal state of contraction—would be readily produced. This condition was thought to be due to the drug producing a marked sedative effect on the heart, and was considered the strongest proof of its sedative action. The condition of collapse is due to a defective arterial distension, and if that is brought about by a small bulk of blood being thrown into the aorta at each ventricular systole, it matters not whether it be due to a distended ventricle just pumping a little off the top of the contained blood (as was thought the case), or to its being in a state of unnatural contraction, and only admitting partial distension on the auricular contraction. Of course, in dilatation much larger doses are not only tolerated, but required; and from there being no attempt at compensating hypertrophy to restore the disturbed balance, a greater stimulus to contraction is necessary to produce the desired results. It is thus comparatively easy to understand here how the early observers, who perceived such marked results follow the use of small doses

of digitalis in hypertrophy, conceived the idea of its being a sedative, and dreaded its use in dilatation; in fact, regarding the use of large doses in dilatation as open heresy. A knowledge of its real action, however, explains in a satisfactory manner the apparent anomaly, and explains its effects in each condition; its almost magical effect in hypertrophy in small doses; its tolerance in large doses in dilatation. Thus we see how digitalis is tolerated in large doses for months—nay, years—in cases of confirmed dilatation, where its action, or that of some substance of similar property, is necessary to the preservation of the organism. In dilatation, where the system is confessedly unequal to the establishment of compensatory muscular hypertrophy—of a balance again being struck between the forces of obstruction and the power to overcome it—the use of a drug whose action is to throw the ventricle into a state of tonic contraction is readily understood as being of the greatest service; and this also explains how its use in large and continued doses is not only not productive of symptoms of poisoning—*i.e.*, of ventricular spasm, which was once imagined to be due to an accumulation of the drug in the system in some mysterious inexplicable manner—but is even necessary to the continuance of life. Without it, or some similarly acting drug, dilatation must become only more and more extensive, and hand in hand with that extension must be an increasing inability on the part of the heart to recover itself; hence still more enfeebled circulation, blood-stasis and its consequences, until the widening vicious circle ends in somatic death. In hypertrophy, where the system is equal to an attempt at restoring the disturbed balance by increasing the muscular driving power, and where occasional palpitation alone reveals the remaining inequality, the use of digitalis soon enables the sympathetic ganglia and other muscular servants to get over the difficulty, and tides on the system, until a more perfect histogenesis has again struck a balance, and a permanent equilibrium is established. In this condition of compensatory growth and power, the continuance of the drug would soon be fraught with a new danger from the ventricular contraction becoming excessive. This, I believe, is the true explanation of an apparently opposite action of digitalis, which has long divided the ranks of medicine. It is not that hypertrophy is any bar to its administration, only it is required in less doses. As long as a heart is equal to its work, neither patient nor physician would interfere; but when its inability is revealed by palpitation and the other evidences of over-taxation, hypertrophy does not forbid the use of digitalis, but it is only required in small quantities, as by these small quantities the desired results can be obtained. But it must not be given on any idea of its tranquillising action being in its nature allied to that of a narcotic or a sedative; it is by enabling the heart to contract without laboured effort that it calms excitement. Niemeyer states: "Digitalis in pure uncomplicated hypertrophy is unsuitable. As has been brilliantly demonstrated by Reich, the results of experiments with this medicine on dogs stand in glaring contradiction to the conclusions drawn from experience at the bedside. (On the Employment of Digitalis in Disease of the Heart. Inaugural address under Professor Niemeyer, Tübingen, 1864.) The action of digitalis, under the use of which innumerable cases of disease of the heart, cyanosis, dropsy, hepatic engorgement, and suppression of urine have been made to subside, is not to lower the centrifugal pressure of the arteries, but rather to increase it. Its use is indicated in diseases in which the action of the heart is weakened, but never in cases where it is augmented" (vol. i, fol. 315) *Text-Book of Practical Medicine*.

In Valvular Disease.—In valvular disease, no effect must be expected from digitalis, except so far as it acts on the muscular walls. It happens, however, that alteration in the muscular walls is compensatory; in injured valves so much so, that life may be maintained for years, and sometimes with a fair share of activity, in the presence of serious valvular mischief. Dr. Chambers (*Clinical Lectures*) states: "The existence or non-existence of valvular disease lies not so much in the injury it inflicts itself, as in the likelihood of the induction of other lesions of the heart. If the muscular structure remain healthy, injured valves do not appear capable of causing death." In obstructive disease this is readily comprehended, for it can be reduced to simply this. It is necessary for the wants of the system that so much blood be driven through a certain orifice in a given time; and if that orifice be narrowed or otherwise partially occluded, for this to be accomplished it is imperative that the driving power be increased. In fact, hypertrophy is compensatory, and enables this to be done; and where there is this hypertrophy, the patient himself may not be conscious that any morbid change has gone on in him. In fact, between hypertrophy and dilatation again does the balance rock, and with it the prognosis; in hypertrophy, as long as it can be maintained, the patient's chance of life is a good one; in dilatation the aspect is clouded, and an artificial hypertrophy must be attempted. Artificial hypertrophy is no therapeutic fiction, and can be produced by more or less time and perseverance, in

a great many cases, by administering agents which produce a better ventricular contraction, and a system of nutritive support; for the law of increased action being followed by increased tissue nutrition in normal texture is unalterable, if healthy blood be furnished. The good effect of change in the muscular walls in regurgitant valvular disease is not at first sight so perceptible as in regurgitant mitral, for instance, where the question is far from an uncomplicated one. No observer of much experience will have any difficulty in recalling numerous instances of mitral regurgitation with hypertrophy, or dilatation, or both, of the left ventricle, and where the ventricular change is consequent. Let us see how, where no drug has been administered, the system's power of repair has set up compensatory changes. Valves, it must be remembered, are not found in hearts of the lowest grade, and are only belonging to complicated and involved hearts; the primitive heart is a mere "pulsatile sac", a thickened and dilated section of a tube. So, when the valves are injured, the heart is reduced to a lower type; that is, the muscular walls no longer get that aid from the valves to which they have been accustomed, and consequently augmented work and increased growth are entailed. In fact, the muscular structure is no longer aided by this beautiful mechanical contrivance, and so change in itself is necessitated. The blood is no longer thrown forward into the aorta at each ventricular systole completely, but a portion regurgitates through the imperfect auriculo-ventricular valve, and thus overloads the venous system behind. The pulmonic system and the right ventricle undergo compensatory changes of dilatation with thickening; the power of the pulmonic system, in fact, is generally increased; the blood pours into the left ventricle on its diastole, under greater pressure, and thus distension of it follows, with hypertrophy or dilatation as its usual concomitants; the usual question of restorative power of the system deciding whether. The consequence of this change is one little to be expected by any one who has not given the subject of compensatory changes its proper consideration. It is this; that, in spite of the regurgitation of a considerable amount of blood, it (the ventricle) remains capable of filling the aorta (Niemeyer). That it does so with more or less success is evidenced by the irregularity of the pulse—not irregularity in time, but irregularity in volume, sometimes nearly the whole amount of blood passing forward, and then again a great portion passing backwards. But to achieve this change in the left ventricle, increase of growth behind the lesion is unavoidably necessary; without the opposition of the blood in the pulmonic system, and the hypertrophied right ventricle, this would be unattainable. Thus we see that muscular change is compensatory in regurgitant disease behind, as well as obstructive disease before.

Sir Dominic Corrigan considered the advantage of administering digitalis (and the fact of relief being afforded by it as unquestionable, however defective the explanation) to lie in its rendering ventricular action slow. Thus in aortic obstruction it allowed the ventricle more time to perfectly empty itself into the aorta; that is, compensation took place by more time being allowed for the passing of the blood into the aorta through the narrowed orifice. The objection to this theory lies here: there is a diastole as well as a systole, and a prolonged systole must necessitate a shortened diastole, or no compensatory good can accrue. For the ventricle must be filled before systole, and that requires time; so that if the advantage lies in the retardation, it is difficult to see how it is any advantage. There must, on this explanation, be so many fewer contractions in the minute, and the wants of the system would be as unsupplied as ever. It is not, and cannot be, a question of time, but of power. What comes of the hypertrophy which occurs in obstruction? To what is it compensatory on the theory of time? After the ventricular action has been rendered slow, the hypertrophy ought to pass away, as it does in a parturient woman. Whether it does so or not, I cannot tell, as I have not found the pulse made slow in aortic obstruction in my experience. So in mitral obstruction it was supposed to be beneficial by allowing the auricle more time to empty itself into the ventricle. But, unfortunately, the same objection meets us here, and, further, the ventricle is nearly full when the auricle contracts. It is the distension of the auricle which evokes contraction; its contraction produces distension of the ventricle, which distension then provokes ventricular contraction, but the ventricle is nearly full when the auricle contracts. In mitral regurgitation, the retardation could have no good effect. The question is not one of time, but of power. In obstructive disease, a simple hypertrophy enables the ventricles to throw an equal quantity of blood through a narrowed space in a given time. In order that an equal quantity of blood may be driven through a narrowed orifice in an equal time, we must have increased power. No other arrangement could possibly achieve the result. In regurgitant disease, the question is not nearly so simple; and in order to comprehend exactly how digitalis can give relief in mitral regurgitation, a digression for a little time is absolutely necessary, so that we may review the changes which the

normal conservative power of the system, unaided by art, can produce; and it is in imitating or assisting these changes that we can alone hope to be of service. The effect, then, of mitral insufficiency is regurgitation into the pulmonary veins. The lung-space is unduly filled with blood, and therefore has not sufficient space for air; hence the dyspnoea commonly found as a symptom of this lesion. The circulation is impeded, and the blood is imperfectly aerated, and flows less readily into the pulmonary veins from the capillaries.* Thus there is further tendency to pulmonary engorgement and obstructed flow. This impediment to the flow of blood from the right ventricle entails in it changes. The right ventricle becomes dilated and hypertrophied. First there is dilatation, and then hypertrophy comes to the rescue. The overloading of the pulmonic circulation leads directly to changes in the muscular walls, and again the battle of life or death rests on the power of self-growth in the involuntary muscular fibre. If the yielding lead to degeneration, sudden death is the probable result at no distant period; if to a lesion in the tricuspid, then the stress falls back on the veins, and dropsy results, with all its train of troubles. The temporary effusion through the walls of the veins or venous capillaries often gives great relief to the patient; in fact, the blood, overladen with water, is relieved of part of its burden, the overcharged circulatory system is somewhat eased, and the improvement of all the systemic symptoms is consequent. But it has added another trouble in the future, and the passing relief is embittered by the reflection that it is a mere bill of accommodation that will soon be due again. The relief to the distended venous and pulmonic systems sometimes admits of their recovering themselves to some extent, but this is unfortunately only a rare occurrence. Dropsy, that is effusion from distended capillaries, is also taking place into the pulmonary tissues, and pulmonary oedema increases the patient's woes; blood even may be effused when the distension is great, and there is no more alarming consequential symptom of mitral regurgitation than hæmoptysis. The stress on the systemic veins directly affects the systemic circulation, and increases the stress on the left ventricle; increased difficulty of flow is superadded, and the pulmonary engorgement is redoubled. In addition, the liver is gorged, and the spleen distended; the kidneys are in a condition of asthenic congestion, and the pressure on the glomeruli is lessened; thus the flow of water by dialysis is interfered with, and the bulk of urine radically lessened; and thus we have an extended circle of mischiefs aiding and abetting each other, acting and reacting till it becomes difficult to ascertain the starting point. This is no exaggerated or even highly coloured picture of the condition of the patient suffering from mitral insufficiency and its consequences. But against this train of troubles must be set the power of hypertrophy in the right ventricle. If there be sufficient compensatory change, then all this may be arrested for a long period of time. Increased activity of the right ventricle gives relief to the general symptoms. The blood pouring into the left ventricle under greater pressure, and its reflux being opposed by a greater *vis a tergo*, more blood is thrown into the aorta, and thus better aortic distension follows the muscular activity as a necessary consequence. Thus the action of digitalis on the right ventricle is of the utmost importance, while its effects on the capillaries aid in sustaining the increased pressure on the pulmonic circulation. By its use, we aid that natural thickening and increase of substance which the system spontaneously sets on foot on its balance being disturbed. In some conditions, aid is unnecessary for years, or may only be required during some debilitating action, but it must never be withheld when a trying affection like bronchitis is testing to the utmost the patient's power of resistance. In other cases where the natural efforts are visibly unequal to the demand, and the struggle is being abandoned, the aid we can furnish may be less effective, and the restoration of balance more imperfect; still it is worth the trial, and tends to prolong the existence of the organism. We must never forget that, in regurgitation through the mitral valve, the condition of the right ventricle and its allies is the only hope of the physician. It is, then, to the action of the right ventricle that we must look for assistance when trouble is due to the mitral insufficiency; and it is by augmenting the contractile action of the ventricular fibres, and its effect on the capillaries by opposing their distension, that digitalis can be useful in mitral disease; for the troubles of mitral obstruction are those of mitral regurgitation. It is to the loss of compensatory action, or, rather, the inefficiency of it, that we must attribute the want of success in our treatment of tricuspid regurgitation. The increased action of the right ventricle is not lost over the short length of the pulmonic circulation, while the increased action of the left ventricle is lost over the length of the systemic circulation, and therefore exercises no useful effect in opposing the regurgitation of the blood in tricuspid insufficiency.

[To be continued.]

* The question of the readier flow of blood containing oxygen is not one to be entertained here.

HOW TO REFORM OUR PROFESSIONAL GRIEVANCES.*

By W. OGLE, M.A., M.D.Cantab., F.R.C.P.Lond., Physician to the Infirmary, Derby.

Concluded from page 31 of number for July 8th.

AND now, gentlemen, what have been the remedies proposed? and how far are you prepared to sanction them? It is with some satisfaction that I can say, more has been done of late years for the parish doctor, more for the pauper patient, than for any other class. For the club-doctor and the club-patient nothing, or worse than nothing, has been done. In general practice there have been some important changes in the right direction, but they are few; whilst physicians' practice has been, I fear, going either downward, or at best but "standing still"; whilst progress has been made in other departments; and in the moral and social world, no less than in the physical, this is tantamount to retrogression.

To physicians, therefore, and to all who aim at first-class practice, I would specially address myself. The changes in other departments are full of instruction to you, and this is the thing to be noted—so far as the patient has been made the first consideration, so far has real and substantial relief been accorded to the doctor. Many well-intentioned efforts towards reform have come to nought from their one-sidedness. There can be no question that Mr. Griffin's praiseworthy and self-sacrificing endeavours in behalf of parish doctors would have been more completely successful, had he put forward more prominently the sufferings of pauper patients.

So again in club practice; nothing, or worse than nothing, has been done. The strike at B—m two years ago, with the rattening of those who would not join, was worse than nothing. However much one might sympathise with the doctors, and feel that the attempt on the part of the club to reduce their pay was unjust and ill-advised, one could not wish well to the one-sided, unprofessional, patient-forgetting, measures of defence. He that can say only *Il faut vivre*, will get nothing more, and deserves nothing more, than *je n'en vois pas la nécessité*. In private practice little has been done directly, but there has been indirect movement—movement full of promise, if advantage be taken of the situation, but not without its dangers, for there is a general restlessness which is incompatible with security. To make the building firm some further attention to the foundation is necessary. But, as already intimated, it behoves physicians, most of all, to bestir themselves. The only hint that I can catch of relief to physicians is that which has often been whispered, and just now has been spoken with authority. A committee has been at work in London during the winter, and has issued a very valuable report. Among the recommendations there are three which I cordially approve; but a fourth, for the relief of young physicians, to give them an honorarium for their attendance in the out-patient room, is very questionable. The proposal is so fraught with danger to our professional character, and so obviously leaves the patients *in statu quo*, that I take this early opportunity of saying, "Save me from my friends". What, then, is to be done? I venture very earnestly to submit that the time is come when something ought to be done; and I think public opinion gives indications of preparedness for something, if only comprehensive measures on thoroughly sound principles could be devised.

Time will not permit me to give more than a sketch of the line of action which seems to me most promising. A very first necessity is, whilst listening to every grievance, to take an independent position, and to look at the profession as existing not for itself—*non sibi sed toti*. Consider the profession teleologically, as a portion of the body corporate, charged with the performance of certain duties peculiarly its own. See to it that every measure of reform has this object distinctly and primarily in view—that it is to enable the profession to do its duty better. The prevention and cure of disease, the prolongation of life, and the alleviation of suffering, are, in a few words, a summary of professional duty. Let the groundwork of our reform be this—a confession of shortcomings. We need not fear to acknowledge that there is more physical suffering than need be, considering the present state of medical science—that life might be more prolonged than it is, that more cures might be performed, that much more sickness and many more deaths might be prevented.

The Registrar-General furnishes a statement week by week which leaves no doubt as to the fact that much more might be done than is done. I hail with much satisfaction, as showing still more plainly what work is still undone, the disease-charts of Mr. Haviland. He has pub-

lished maps of the country, coloured in such a way that the eye perceives at once the registration districts in which mortality is in excess of the average, and that in which the mortality is below. Figures pass through the mind and produce little or no impression, but that which is seen is easily remembered. In these maps the healthy districts are painted red, in three shades—good, better, best; and the unhealthy in three shades of black—bad, worse, worst; so that any one can see at a glance what is the sanitary condition of his town and neighbourhood. If these maps could be published periodically, and hung in some public room in every town in the kingdom, it could hardly fail but that the work of the prevention of disease would secure more attention. People would not be satisfied to see Derby, for instance, painted black when Leicester was coloured red. I wish, therefore, to submit to you the possibility of our engaging in the work of prevention much more decidedly than has ever yet been attempted; and the bearing of this proposal upon my subject is very close, for I shall put my proposal to this very searching test of its merits. I shall propose it not merely as worthy in itself of your consideration, because of its preventive character, but also because it would tend more or less directly to the removal of every one of the grievances that I have already specified. I advocate a reform from *within*; and I am bold to declare that it would do more to place the profession in its own proper position of dignity than any Act of Parliament, however well devised, or indeed any measure of reform commencing from *without*.

This, then, is the practical conclusion which I wish to bring before you. Let the family doctor be a health-officer, whose first duty is to prevent disease; let his relation to the family be such that it is to his interest to cure disease, not prevented, as quickly and as thoroughly as possible; let him delegate the sale of physic, and the dispensing of it, whenever it is possible, to druggists. I submit that this might be done by arranging that the acknowledgment for his services should be so much per annum for all *ordinary* work, leaving a good margin for supplementary fees for *extraordinary* visits. The Chinese system of paying the doctor when the Emperor is well, and cutting his head off when his Highness dies, has often furnished point to a joke against the profession. Let us extract the sting by adopting the sound principle, which is nothing more than that embodied in the proverb, "Prevention is better than cure." The only difficulty that occurs to me as worthy of mention is that of determining how much the annual sum should be, or rather, I should say, how little, for it must be comparatively small to secure general acceptance; and I think it might fairly be so, in consideration of the relief given in other ways, and specially by the proviso made that there are to be supplementary fees for all extraordinary acts of service. The distinction between *ordinary* and *extraordinary* services might easily be made: for instance, ordinary service would include, as a matter of course, everything that the doctor can do in the way of prevention; and, to make the preventive service complete, it must also include a great deal of what is commonly called general practice, but it need not and ought not to include everything. For instance, it ought not to include night-visits—at least not such as are specially requested—nor Sunday visits specially requested, nor visits in obedience to a summons to come either immediately (as to an accident or to a confinement) nor to attend at some particular time specified by the patient (as for a consultation). These are all exceptional acts of service, and for these a fee should be demanded over and above any annual sum that might be agreed upon. All other work, even though it should amount to an attendance through a long illness, might be covered by the annual sum, subject to readjustment at the close of the year; all work, in fact, for which request has been made at an early hour—say by the time of the first postal delivery—and for which it is an understood thing that the doctor is at liberty to call or to send a substitute at whatever time in the course of the day is most convenient to himself. On the other hand, extraordinary visits for which fees are to be paid would be, as already stated, night visits, but of these only such as are specially requested—Sunday visits specially requested, visits in obedience to messages to come "immediately", or at some particular time named by the patient.

And now, gentlemen, for the crucial test proposed. What would be the effect upon our grievances of such a change—shall I say such a revolution, in medical practice? What would be the effect upon the doctor's grievances? what upon those of the patient? Take, first, the family doctor—family physician, if you please, for he would be entitled to claim in virtue of his office the highest title possible. He would be freed from all trading accessories; he would have no pecuniary interests in the physic, much or little, that his patient took; nay, even in regard to visits, he would have no trade stimulus, but only those that are strictly professional; he would visit his patients just as often and just as seldom as he felt was good for them. The protection of the patients would be that the sooner they got well and the longer they remained so the better

* President's Address, delivered at the annual meeting of the Midland Branch, 1871.

it would be for the doctor. The doctor's bills would now no longer be questioned, for "particulars" would be given in full—they would simply be fees for extraordinary visits. He would also know, as a general rule, what was his day's work by breakfast time; and, this work being done, he would not only be comparatively free, but would have the very great comfort of feeling so; and when a summons did come he would be sure that it was not a mere whim of some inconsiderate or fanciful patient: whims and fancies would at least be reduced to a minimum if the doctor's house were surrounded by a cordon which could only be broken by a golden key. I anticipate, farther, that the relation between the doctor and the family would be immensely improved, and that he would no longer be a "servant" and his patients "slaves"; their relation to each other would be that of "friends", and it would be much less liable to disturbance. People would, no doubt, be more careful, and take a longer time in making their choice of a doctor, but, having made it, would be less likely to change.

Turn, now, to the condition of the patients: their grievances have vanished into thin air. Their interest has been put first, and it coincides so entirely with that of the doctor that there is no room left for suspicions and misunderstandings. Again, under such a system, club-doctors would cease to exist, for the annual sum for ordinary work would obviously admit of graduation far more easily than is possible in charging per visit or even per bottle.

Club doctors—at least men with duties such as are now expected—would not be wanted; possibly such officers might be appointed, but their duties would be different. The payment would still be small, but the service demanded would not be great: their duties would be to look after the interests of the club, to protect it against the admission of unhealthy members, and against ill-founded declarations against the funds of sick members, and to perform other such general and highly honourable service. The power of combination for such a purpose as to provide medical aid may be inferred from the extraordinary results obtained by two or three of the provident dispensaries, in which the benefiting members contribute so small a sum as 1d. a week, or 4s. 4d. a year. From the fortieth report of the Derby Provident Dispensary, it appears that members of this class contribute more than £1000 a year. If so much can be done by pennies, how much more might be done if arrangements on a better plan could be made for the twopenny, threepenny, etc., class? Let the provident, or, as I would rather say, the preventive principle, have full play, and imagination could hardly say too much as to what might be achieved.

Forty years ago, Mr. Jones of Derby and Mr. Smith of Southam had the sagacity to perceive and the benevolence and courage to make the experiment with the least productive element; and, though the result is not such that I can conscientiously recommend you, now in 1871, to adopt their plan, it is abundantly sufficient to show the soundness of the principle upon which they acted, and further to prove that it needs only that we trust those principles more thoroughly to realise still greater results—greater in every way, both commercially, and, more important still, greater in the sense of being more thoroughly efficient and free from certain professional faults which have, no doubt, been a principal cause why provident dispensaries, even where most successful (as at Coventry, Northampton, and Derby), have never attained to anything more than mediocrity. All honour, however, be to Mr. Jones and to Mr. Smith for having done so much; anything that we do will be by standing upon their shoulders.

I see no reason to doubt that, in a well-managed local association, five or six medical men working together under a well constituted representative board of management, the working classes might provide themselves with thoroughly efficient medical aid, including even payment for their admission when necessary into hospitals, and including many other things which at present are beyond their reach. Those arrangements would bring relief more or less directly to the whole profession, but primarily to those who are connected with hospitals. A better system of attendance for the working classes at home would relieve these noble institutions very much of the routine work which overwhelms them; and if arrangements were made for members of such associations to pay for admission, hospitals would be relieved financially—they would become gradually more or less self-supporting. When this comes to pass, but not till then—that is, when patients are admitted on their own right by payment—can I look with anything but jealousy upon the proposal to give salaries to any portion of the medical staff. Meanwhile, relieve us of all work that ought to be done by the parish—of all work that might be done outside the hospital; put us in a position to attend exclusively to urgent cases, and we will ask no more. This will require from the public no little sum of money. We have ourselves spent recently some £20,000 in altering (would that it had been in rebuilding) our Hospital. When I ask for this as a necessary expenditure, I do in effect ask for a sum which, if capitalised,

would have produced £800 a year. The medical staff might have received this for their services with a clear conscience; but, I ask my colleagues, had the Hospital remained as it was ten years ago, with this difference, that we were now in receipt of £200 a year each for our services, should we, as professional men, have been in as good a position as at present? I repeat, all that honorary medical officers ought to ask at present in return for their services is protection against the admission of improper cases, and that every facility possible should be afforded to enable them to do their work thoroughly well. As to what I will call first-class practice, independent of that in connexion with hospitals, I would simply ask that the physician or surgeon be left to take care of himself, and that attention be directed entirely, or at least primarily, to the improvement of the character of the service. A consultation at present is a very unsatisfactory proceeding to all parties. It lacks that first element of satisfaction, in that no care is taken to secure that the second opinion shall be formed independently. On the contrary, the first thing done is for the doctors to talk the case over privately: this makes it impossible for the second to form a perfectly independent opinion, and this mars the whole proceeding. That which I should wish to do, and to be compelled to do in any case wherein my opinion was desired, is to examine the case thoroughly for myself. This, done, I am prepared to meet the family doctor and to consult with him and then the patient obtains the benefit of two opinions; and two heads are better than one. As things, however, are at present, the family doctor paid per visit and per bottle, and the doctor called in paid in the same way, this freedom of action is almost impossible; but, if the family doctor were paid *per annum*, the difficulty would be lessened, if not entirely removed.

Did time permit, I might easily show the effect of such an arrangement upon counter practice, and on quackery, and on special practice, which is often but a disguised form of quackery; but I have already detained you longer than I ought to have done. It remains, therefore, for me to thank you for your patient and indulgent attention, and to conclude by giving you a most cordial welcome to Derby. By the kindness of the Weekly Board of Management, we meet in this room. I regret that time will not now allow me to show you over the Hospital; but be assured that at any time when business or inclination may bring you to Derby, we, the honorary medical staff, shall be prepared to receive you as brethren, and to show you what has been done; and, for myself at least, I will add, not merely to act as your guide, but to look for instruction from your visit. If any should think that the views herein so imperfectly set forth are worthy of further consideration, I shall count it no less my privilege than my duty to confer with them further, and to give any assistance in my power to towards putting them into practice. I shall also ever receive with respectful attention all remarks (publicly or privately expressed) from those who differ from me; whilst to those who agree with me I will only offer a word of caution against being too sanguine of speedy success or of personal gain. Evils such as I have enumerated can only be removed very gradually; work such as remains to be done must be encountered with a single eye, and, by God's help, in the spirit of the "Iron Duke", who used to say in the face of every difficulty, "I know nothing of difficulties, but that they are things to be overcome".

ON THE THEORY OF DISINFECTANTS.*

By T. P. BLUNT, M.A., F.C.S.

THE light which has recently been thrown upon the nature of contagion and infection by the labours of Pasteur and others, the results of which have been ably summarised by the President of the British Association in his late inaugural address at Liverpool, seems to point the way to clearer and more comprehensive views than those commonly entertained at present regarding the operation of the substances known as disinfectants.

These may be divided into two classes: 1. Those which act by the oxidation and total destruction of the virus contained in infected matters, together with the foul gases which usually accompany it, and which are, in fact, Nature's danger-signals of its presence. 2. Those substances which do not possess the active chemical properties of the first class, yet are proved by experience to have a similar power of arresting and checking the spread of infection. The latter are, for the most part, the more ancient and popular, having apparently in some cases been suggested by a just but unreasoning instinct. Thus we find that the use of sulphurous acid, as evolved from burning sulphur, dates even from Homeric days; while the burning of pitch and

* Read before the annual meeting of the Shropshire Scientific Branch.

aromatic gums for disinfectant purposes has an origin at least equally remote.

An attempt will be made, in the course of the observations which follow, to bring the operation of the large majority of the latter class under a general law which shall furnish us with an explanation of their true character. This is especially desirable, since it is to be feared that, for want of such an explanation, many good and valuable disinfectants have been condemned by chemists, on theoretical grounds, as mere deodorisers—not assailing the virus of infected substances, but rather masking their poisonous character by precipitating their offensive gases. An objection to this view at once meets us, in the utter disproportion between the volume of the gases to be fixed and the quantity of salt practically found sufficient for the object required, while it breaks down altogether when applied to such disinfectants as the new “chloralum” or chloride of aluminium of Mr. John Gamgee, or the well known carbolic acid. Before endeavouring to supply a more probable theory, it may be well to remind you that the researches already mentioned have established the fact that contagion and putrefaction, if not actually identical, are processes so closely allied that they require exactly similar conditions; the latter appearing to consist of a kind of disease propagated from particle to particle of a decomposing substance, and ending in its entire destruction. Hence it may be inferred with perfect safety, that any agent which arrests putrefaction is capable also of abolishing the properties of contagion and infection.

This conclusion at once puts into our hands a valuable instrument of research; for while it is difficult, and often impossible, to investigate directly the disinfectant action of a substance, the inquiry being surrounded by innumerable sources of error, the properties of an antiseptic are perfectly well defined, and open to the clearest demonstration. Thus, in the case of the two bodies mentioned above, carbolic acid and chloride of aluminium, the antiseptic action of the first is well known, and has long been usefully applied; while that of the latter is maintained in the most positive manner by its introducer, Mr. John Gamgee, who certainly brings forward overwhelming proof of it in his recorded experiments upon meat and fish; and hence, on the grounds given, we are justified in regarding these substances as good and useful disinfectants. It may be stated, in passing, that the deodorising power which these and other similar bodies possess is probably due to their antiseptic action; the offensive gases of decomposition being sooner lost by diffusion, and their fresh production being entirely suspended.

Let us now proceed to a consideration of the origin of the remarkable properties which we have described. This appears to have been traced with some degree of probability, in the case of carbolic acid, by Dr. Joseph Hirsch, the writer of an article which appeared in the *Chemical News* about the end of February 1869. He advances the bold and ingenious speculation, that the disinfecting action of that substance depends upon its power of coagulating albumen. He supposes that the acid finds its way into the minute organisms, which propagate disease by diffusion through their investing membrane; that it coagulates the albumen which they, in common with all germinal matter, contain as a necessary constituent; and thus practically destroys their vitality as perfectly as immersion in boiling water terminates that of an egg.

In order to test the accuracy of the view thus enunciated, I selected a substance of which the albumen-coagulating power was well known, and examined it with regard to its antiseptic, and therefore disinfectant, properties. The substance chosen was nitro-muriatic acid, which has long been in use as a test for albumen in urine. The experiments were conducted as follows.

a. Two samples of fresh healthy urine, passed at the same time, each measuring about one ounce, were placed side by side. To one of them six drops of strong nitro-muriatic acid were added. In a few days, the unacidified specimen was covered with a thick crust of mould; while that to which the acid had been added was unaltered, except by a slight darkening of colour and deposition of crystals of uric acid.

b. Some fresh meat was pounded into an emulsion with water—the whole divided into two equal portions of about six drachms each. To one of them six drops of strong nitro-muriatic acid were added, as in the former case. In a day or two, the unacidified sample was quite putrid and offensive; while that to which the acid had been added retained the smell of fresh meat, and continues to do so still, after the lapse of nearly a month.

I now proceeded to test some of the salts commonly used as disinfectants, with respect to their possession of this power of coagulating albumen. The examination was conducted thus. One part of the salt to be tested was dissolved in one thousand parts of distilled water, and the solution was mixed thoroughly with the fresh white of egg. The salts examined were iron-alum, sesquichloride of iron, common alum, chloride of zinc, and nitrate of lead. Coagulation fol-

lowed immediately in every instance. In one or two cases, the dilution was carried much further—one part of the salt to three or four thousand of water. Here, too, coagulation followed in one or two seconds.

It may be remarked, in passing, that the hæmostatic action of the iron-salts is probably to be attributed in great measure to this faculty of coagulating albumen, exercised upon the serum of the blood.

The attempt to obtain similar results from the sulphites entirely failed. They appeared, indeed, to retard coagulation by other reagents. The coagulating power of sulphurous acid was faint and ill defined.

If we review the evidence now before us, we shall find that it stands thus.

We start with two assumptions—the first justified by recent research, the second borne out by analogy; viz., that infection results from the transference and development of minute germs; and that these germs contain albuminous matter as a necessary constituent, the coagulation of which terminates their existence. Upon these assumptions we frame our major premiss—that “all coagulators of albumen are disinfectants”; and, having arrived at this result by a process of pure reasoning, we proceed to prove its truth by experiments upon the antiseptic, and so upon the disinfectant, properties of a well known albumen-coagulator. Having thus established our fundamental proposition, we produce experimental proof of our minor premiss—that “nearly all the substances to which popular experience has assigned the property of arresting the spread of infectious diseases, where that power is at present unexplained, are coagulators of albumen.” The conclusion then necessarily follows, that these substances are disinfectants; and thus a vindication of their efficiency is furnished in those cases where it has been called in question by chemists on the ground that no sufficient explanation of their action had been offered.

The above conclusion does not apply to sulphurous acid and the sulphites. In their case, we must probably look for some more remote physiological effect upon germinal existence.

Note on the Use of Hydrochloric Acid as an Antiseptic.

It is probable that hydrochloric acid, which shares the properties attributed to nitrohydrochloric acid in the foregoing remarks, will be found to be a valuable preservative of animal food. A piece of meat, immersed for fifteen minutes in a mixture of one part of the acid to three of water, remained entirely free from putrefactive change after nearly a fortnight, though the action of the acid was not sufficiently powerful to prevent the appearance of a small quantity of mould. The meat was then immersed in a dilute solution of carbonate of soda, and the superficially absorbed acid was thus converted into common salt. This reaction obviously gives hydrochloric acid a great advantage over other antiseptics, which introduce into the food a foreign substance, inimical by its very nature, in most cases, to the process of digestion.

GYNÆCOLOGICAL NOTES.

By ROBERT BARNES, M.D.,

Obstetric Physician, and Lecturer on Midwifery and Diseases of Women and Children, at St. Thomas's Hospital.

IV.—SUDDEN DEATH IN PATIENTS SUFFERING FROM CANCER.

PATIENTS suffering from cancer of the uterus or ovaries not unfrequently die suddenly. The causes of this event have not attracted much attention. The late Dr. Todd (*Clinical Lectures*, Beale's edition) remarked that death may occur suddenly from malignant disease in the abdomen, as of the peritoneum. He was of opinion that cancerous matter passes suddenly into the circulation, causing prostration by poisoning, as in pyæmia.

There can be little doubt that, in some cases, where cancerous growth invades the walls of blood-vessels, portions may be detached and then swept into the circulation. I have, however, searched for these cancer-emboli without success in cases where the final symptoms seemed to point to pulmonary embolism; but in a woman suffering from encephaloid disease of the ovary and uterus, who recently died suddenly in St. Thomas's Hospital, my attention was fixed upon a condition which, I think, accounts for the catastrophe by a mechanism altogether different from embolism.

A woman aged 60 was admitted with the usual symptoms of cancerous cachexia of some duration. I found the pelvis filled with the morbid growth, involving uterus, vagina, rectum, and bladder, in one mass. Rest and good diet seemed to improve her condition; but one day after being about she complained of difficulty of breathing, quickly became collapsed, and, without losing consciousness, died in a few minutes.

The mode of death, as it was reported to me, made me surmise cardiac or pulmonary embolism; and at the autopsy, careful examination was made to verify this conjecture. Nothing in the nature of embolism or thrombosis was found; there were, however, extensive secondary cancerous deposits or growths in the abdomen and chest. The pelvic peritoneum was studded with small cancerous nodules; others were scattered over the liver and spleen; the left psoas muscle was involved. The glands and subperitoneal tissue in the lumbar region and the vicinity of the left kidney were involved in dense masses of cancerous tissue. A condition which struck me was that the diseased glands, lymphatics, and connective tissue around the aorta and vena cava, made one compact solid mass from the pelvis to the diaphragm, in which the aorta and vena cava ran like tunnels bored through unyielding substance. In many places the coats of the aorta were bent inwards, forming nodular projections into its channel. The result was that the aorta was no longer an elastic tube, expanding under the heart's systole and then contracting, but a rigid tunnel, utterly wanting in resiliency, and with its interior no longer smooth, but distorted by irregular projections.

Such an aorta, accompanied by a vena cava similarly affected, is mechanically unfitted to do its work. Under very moderately increased exertion or emotion, causing unusual action in the heart, this rigid tube would throw back upon the heart a portion of the column of blood which the aorta ought to receive and propel. This retrograde dynamic disturbance would overwhelm the feeble heart, and thus death would follow.

In another case, where the ovaries were involved in malignant disease, and where secondary growths were found in the intestinal peritoneum, the patient, coming from the country during cold weather, died next day, almost suddenly, overpowered by dyspnoea. The pericardium and both pleuræ were found distended with recent effusion of blood-stained serum.

These cases show that to prolong life the strictest care should be taken to avoid excitement, exposure, or exertion.

CASE OF PERITYPHLITIS.

By MARSH JACKSON, M.R.C.S., SMETHWICK.

E. P., aged 24, a spare, active, steady man, of a nervous disposition, had always had good health till within the nine or ten months before I saw him; during which time he had suffered from "indigestion", irregularity of the bowels, flatulence, and occasional hiccough. I first saw him on March 9th, 1871. He then complained of great pain in the right inguinal region, about the umbilicus, and down the right thigh; the testicle was retracted. On examination, the pain, which was exquisite on both the slightest and on continued pressure, was especially referred to a line about an inch and a half above, and parallel to the crest of the ilium, extending almost from the edge of the quadratus lumborum to within two inches of the pubes. There was no swelling, but a distinct hardness could be felt, and there was dulness on percussion along that line. He was in bed, and lay on the right side, with that thigh flexed upon the abdomen; the slightest movement increased the pain. The bowels had not been moved within the last twenty-four hours. The tongue was furred and moist; the breath had a faecal odour. There had been some vomiting. The heart and lungs were healthy. The urine was abundant, and, on being tested, gave no special indications. He had had no rigors. Pulse 92; temperature 100.2 deg. Fahr.; respiration 24. The treatment consisted of hot linseed poultices to the side; a pillow to support the right knee; one grain of opium every four hours; an injection of castor oil. The diet was milk, beef-tea, eggs, etc.

I saw him at 8 A.M., and between 7 and 9 P.M. each succeeding day, till the 13th, during which time the above symptoms remained pretty constant. On the morning of the 13th, the pain was most acute, and had extended more round to the back, up to between the scapulae, to the buttock, and down the side of the thigh. There was a marked line of swelling along the line described above, and here the pain was most acute. I ordered six leeches to be applied over the swelling, and increased the frequency of the doses of opium. In the afternoon, I saw him with Dr. Heslop, who concurred as to the diagnosis and treatment. In consequence of the pain having abated somewhat, the leeches had not been applied; and Dr. Heslop advised their immediate application, thinking they would relieve the local congestion, though suppuration was a consequence to be feared. Notwithstanding daily injections of castor oil, the opium had confined the bowels too much, and Dr. Heslop recommended in addition to them a daily small dose of castor oil by the mouth. The next day he was much easier; the leeches had drawn a fair quantity of blood. He had passed two pale lumpy motions,

though with great pain, and was very feeble. Temperature 38.3 deg. On the 15th, he had had a most restless night, and had been delirious. The pain was much worse, and the swelling more marked than it was the previous day. He had had no rigors. Pulse 100; temperature 102.9 deg. Fahr.; respirations 28. Six fresh leeches were ordered to be applied. At 8 P.M., the pulse was 96; temperature 101.5 deg. Fahr.; respirations 28. The leeches had drawn well. The pain had almost gone: considerable pressure could be borne. The swelling had subsided very much. The opium was ordered to be discontinued altogether, and a dose of castor oil to be taken in the morning.

On the 16th, at 8 A.M., the pulse was 100; temperature 103.3 deg. Fahr. Respirations 28. He had passed a restless night. The intestines were distended with flatus; the bowels had not yet been moved. At 7.30 P.M., the pulse 80; temperature 101.1 deg. Fahr.; respirations 28. The bowels were moved during the morning; after a free motion, he broke out into a profuse perspiration, and had several hours' sound sleep. He was in no pain, and for the first time could straighten the leg.

Next day, the temperature was 100 deg. Fahr. From this date he progressed towards complete recovery; the induration disappeared; and the bowels acted spontaneously. He sat up dressed on the 20th, and I ceased to visit him on the 23rd. He was taking quinine, and ate with a good appetite.

On May 1st, he called on me, quite well. Till within the last fortnight, he has felt a slight soreness on receiving any jar, as coming down stairs, or stepping off the curb-stone. Now he has lost this feeling, and looks robust and strong.

The specially interesting features of the case are the steady persistence of so high a degree of temperature, the marked benefit resulting from the use of leeches and castor oil, and the speedy and complete recovery.

CLINICAL MEMORANDA.

CHLORAL IN DELIRIUM TREMENS.

AMONG the many communications respecting the use of chloral in delirium tremens, I do not remember any mention of an antagonism to the action of this drug such as that manifested in the following case. On the afternoon of the 1st instant, I was called to see a man, aged 25, who was fast lapsing into delirium tremens. He had not then any delusions, but he had been sleepless for two nights, was excessively restless, and for twenty-four hours had vomited everything taken; a mixture containing chloral in small doses being always rejected the moment it was swallowed. In place of this, I ordered him a mixture containing hydrocyanic acid and morphia, which he took, with much relief to the gastric irritability; that night he had two hours' sleep, and three more in the afternoon of the following day. On the evening of the 2nd, he seemed much better, and presented a fair chance of escaping the worst features of the disease. He had, however, a very restless night; and the next morning, being without proper control, he got up and wandered about the house and neighbourhood; in the evening, all the phenomena of the disease in an aggravated form were present. Chloral having been at an earlier stage so intolerable to the stomach, I was unwilling to return to it, and ordered him bromide of potassium in thirty-grain doses every hour, in the hope of allaying his great violence and excitement. Three doses were taken without any mitigation of his symptoms; and at midnight I ordered a draught containing eighty grains of chloral, one half to be given at once, and the remainder in an hour and a half, if sleep did not come on. Both doses were taken and retained without producing any effect; and he spent the night in a state of great excitement, requiring the continuous exertions of two men to keep him in bed. At 8 A.M., a draught containing sixty grains of chloral was given; sleep came on in a quarter of an hour, and lasted for two hours. He then awoke, certainly much less violent, but the delusions and restlessness were as bad as ever. Pulse 120, small and feeble. This state of things continuing until 2 P.M., he took an additional sixty grains of chloral, and, between 4 and 5 P.M., being still restless and sleepless, another sixty grains. He fell asleep about 5 P.M. He woke up two or three times during the night and took nourishment, but went quietly off to sleep again. The next forenoon he was quite rational, and free from his complaint; pulse 88, comparatively full and strong. In rather less than seventeen hours, then, this patient took two hundred and sixty grains of chloral before curative sleep was induced. He had no vomiting for the last twenty-four hours of his illness, and during that time he partook freely of a solution of Liebig's extract of meat, to which whipped white of egg had been added.

GEORGE F. ELLIOTT, M.D., Physician to Hull Infirmary.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.NOTES ON THE TREATMENT OF GANGLION IN THE
LONDON HOSPITALS.

[Continued from page 38 of last number.]

WE have received the following additional particulars from the two following metropolitan hospitals.

UNIVERSITY COLLEGE HOSPITAL.

Ganglion at the wrist Mr. BERKELEY HILL never forcibly ruptures, but evacuates subcutaneously by first incising the sac freely with a tenotome, then squeezing out the contents of the sac, and firmly pressing the walls together with a compress and strap of plaster. Should it recur, a fine silk thread is carried through the swelling with an ordinary suture-needle, and left for three or four days. To prevent the ligature from exciting too great irritation and suppuration, the patient is always directed to attend the following day at the hospital, that a dresser may examine the seton, and remove it if the action be too great. Injection of iodine is a less satisfactory mode; but it is employed by Mr. Hill for the deeply seated ganglia of the ham, where the abscess that may follow the seton is extremely troublesome to heal. A ganglion now and then forms between the tibia and the inner hamstring, which Mr. Hill has found very tedious. In one case, the patient was obliged to relinquish his occupation through the pain which he felt in walking. His ganglion, being close to the knee-joint, was at first simply tapped and injected with iodine; but, as the fluid accumulated again, a thread was passed through, which was worn a week without much inconvenience; and the swelling gradually grew less, but did not disappear wholly, causing, not in ordinary walking, but when the limb was used to raise the body, as in going upstairs, a tolerably sharp pain. An attempt was then made to dislodge the hard nodule subcutaneously; this was so far accomplished that the tumour vanished, but some pain is still felt on going upstairs. The knee-joint was quite unaffected throughout these experiments. The ganglia that result from fluid collecting in the synovial sheath common to the tendons in the palm, and in that which lubricates the peronei behind the outer malleolus, Mr. Hill has tapped and injected with success, and without causing troublesome symptoms or stiffness afterwards. The application of pressure and blisters over these compound ganglia, in Mr. Hill's experience, is a waste of time, as these agents do not cause absorption of the fluid.

GREAT NORTHERN HOSPITAL.

Mr. VINCENT has treated cases of ganglion in various ways, and with variable success. Forcible rupture by digital pressure, followed by continued pressure, and, if possible, a splint, have given the best results. Mr. Vincent considers the use of the latter advisable, to obtain the perfect cure of ganglion, as, in some cases of old standing, the ganglion, instead of being confined, as in recent cases, to the tissue between the tendon and the skin, extends around the tendon, and thus every movement of the tendon after the rupture prevents the adhesion of the walls of the sac; and hence the recurrence of the disease, and the necessity for the splint in cases where the patient can and will submit to its application. In private practice, the splint should always be insisted on. As hospital patients, however, refuse to discontinue their work, this plan is frequently impracticable.

[To be continued.]

GUY'S HOSPITAL.

GANGLION IN CONNEXION WITH THE SEMI-MEMBRANOSUS
TENDON: RECOVERY.

(Under the care of Mr. POLAND.)

WM. L., aged 17, was admitted with a tumour behind the inner hamstring tendon of the right knee. It was two inches in vertical direction, and an inch and a half across. It was very elastic, and gave a sensation of fluctuation. It could not be made to diminish in size, and did not seem to have any connexion with the knee-joint, although it seemed close upon it. He stated that it had been growing eighteen months; that he had never received any injury; that it had caused but little inconvenience or pain. He had used this leg more especially to set the lathe in motion, he being a brass-finisher. A straight outside splint was applied, to keep the knee fixed; and iodine ointment applied. In the course of a fortnight, the tumour not having diminished, it was

explored, when some gelatinous clear substance exuded, similar to what is found in ganglion at the back of the wrist. The tumour was then freely laid open, and the whole of the gelatinous contents completely emptied out. Pressure was then applied, and the knee kept perfectly stiff by the splint. The sac never refilled, and the patient left in all respects perfectly cured. The case was evidently one of ganglion in connexion with the insertion of the semimembranosus tendon.

BRADFORD INFIRMARY.

CASE OF DIABETES MELLITUS UNDER MILK-TREATMENT: DEATH.

(Under the care of Dr. NICOL.)

FOR the following notes we are indebted to Mr. Roberts.

J. B., aged 15, living at Saltaire, was admitted under Dr. Nicol on May 30th, suffering from diabetes mellitus. He was small and ill-developed, but had enjoyed good health up to six months previously. At this time, he drank a great deal of water, and passed a considerable amount of urine. Some of his relations are phthisical. He attended a short time as an out-patient. On admission, the lad was put principally on meat-diet, with occasionally fish; and was ordered not to eat much bread and butter, or to have sugar in his tea. He also had the following draught three times a day: Tincture of sesquichloride of iron, 5 minims; spirit of chloroform, 10 minims; water, 1 ounce. A week afterwards, his feet and legs were noticed to be oedematous. The hepatic dulness was increased; and at the apex of the heart there was a distinct though faint systolic *bruit*. The lad gained in weight, but the amount of urine passed did not diminish.

On June 14th, the patient was ordered to have six pints of skimmed milk in the twenty-four hours; the mixture to be omitted, and nothing else but the milk taken. Three days afterwards, he complained of being hungry. The milk was increased to eight pints *per diem*. For the first three days of the skimmed milk treatment, the amount of urine passed considerably decreased; the oedema of the legs and feet disappeared; and the patient was apparently improving. On June 17th, his urine commenced gradually increasing, and continued so. He seemed reconciled to the milk, which was continued. On the morning of the 19th, at five o'clock, he was very restless, and complained of acute pain in the hypogastric region, with a frequent desire to go to stool, without any relief. A hot linseed-meal poultice gave much ease. At the morning visit (9.30), he was in a semi-comatose state, still able to answer a few questions. He had no pain; the pupils were dilated; pulse 156; respirations 32, deep and sighing; temperature 97.2. An enema of castor oil partly returned soon after introduction, without any faecal matter. He was able to swallow, and was given an ounce of wine-whey with three ounces of milk and water every two hours. He vomited occasionally until his death at 2 P.M. The urine this morning was acid, of specific gravity 1034. His motions throughout were clay-coloured.

POST MORTEM EXAMINATION, twenty-four hours after death.—The body was very thin; rigor mortis was present. The peritoneal cavity contained some fluid. The heart was soft; otherwise normal, except a little atheroma of the aortic semilunar valves and the neighbouring aorta. The lungs were passively congested, crepitant. The liver was enlarged, pale, hard, but friable, evidently fatty; the capsule was firmly adherent. The spleen was normal; the pancreas was normal; the stomach large. The small intestines were distended with gas, and for some inches in the ileum were very congested. Faeces were present in the large intestine, from the sigmoid flexure downwards. The kidneys were very pale in the cortical portion (to all appearance fatty). The capsules were normal; a thick yellow fluid contained in them was found to be concentrated urine, with crystals of grape-sugar. On opening the skull-cavity, a good deal of fluid escaped from the arachnoid cavity. The visceral arachnoid and the pia mater were considerably congested; and the former was milky on the vessels, especially over the middle and anterior lobes. The brain was firm; the white matter was not so white as usual; puncta sanguinea were rather numerous; there was no fluid in the ventricles.

NOTE BY DR. NICOL.—The lad was in a very weak state from the first, just able to creep about, and much emaciated. No evidence could be got of his having resorted to the water-tap; nor did he have other food than the milk.

The amount of urine passed in twenty-four hours, ending 9 A.M., was as follows: on June 10th, 224 oz.; 11th, 228 oz.; 12th, 218 oz.; 13th, 224 oz.; 14th, 170 oz. (skimmed milk commenced); 15th, 165 oz.; 16th, 160 oz.; 17th, 181 oz.; 18th, 220 oz.; 19th, 280 oz. Specific gravity about 1030 at first and last; not taken constantly. The weight of the patient on May 23rd was 4 st. 5½ lbs.; June 1st, 4st. 6½ lbs.; 8th, 4 st. 7 lbs.; 14th, 4 st. 5½ lbs.

THE
GENERAL MEDICAL COUNCIL
ON
EDUCATION AND REGISTRATION.
SESSION, 1871.

Thursday, July 6th.

THE President, Dr. Paget, took the chair at 2 P.M.

Professional Education.—A draft report of the Committee on Professional Education was presented and ordered to be taken as read; and the Council proceeded to the discussion of certain resolutions founded thereon.

1. *Instruction in Pharmacy and Therapeutics.*—The resolution proposed on this subject was founded in the following sentences in the draft Report of the Committee.

"The separation of the teaching of pharmacy and therapeutics, the former being made an early and the latter a late course in the curriculum. The opinion of the Committee on Education, which included Dr. Christison and Dr. Aquilla Smith, and the views of all the best teachers of materia medica, were in favour of this separation. But some licensing bodies consider that therapeutics should not form the subject of a separate course of study, but should be considered an essential part of the courses on practical medicine and surgery. It must be admitted to be so, but still there is a necessity for special instruction, and without it, it may be confidently asserted that the progress in therapeutics will be slow. It seems desirable that a definite opinion should be come to on this point, and we propose to move a resolution to take the sense of the Council on this matter. So, also, it will be for consideration how far practical instruction in drugs and pharmaceutical preparations might not be substituted for formal lectures. For the last two sessions a plan of the kind has been carried on by Dr. Harvey at Aberdeen, and is said to have been highly successful."

Dr. PARKES said that, in dealing with the resolutions of which notice had been given, the Council would virtually dispose of the whole report except three or four paragraphs at the end, which referred to the mode of conducting professional examinations. The Council had great reason to be satisfied with the results of the influence which it had exercised. Almost all its recommendations to the examining boards had been attended to and adopted; and this was an answer to those who had spoken of the Council as wanting in influence. The first resolution which he had to propose was—

"That it is desirable that the instruction in Pharmacy should be separated from that in Therapeutics, and that the former should be obtained at an early, and the latter at a later, period of the professional curriculum."

It was scarcely necessary to enter into any argument in favour of separating the instruction in the elementary subject of pharmacy from that in therapeutics, which could only be understood after the study of physiology, medicine, and surgery. The Committee had collected the opinions of twelve teachers of materia medica. Of these, eight strongly recommended the separation; one was adverse; and three expressed no opinion, or did not give a decided one. Of these three, however, he had reason to believe that one was in favour of the separation; and the adverse opinion was expressed only in a modified form. In addition, there were in the Council itself two high authorities on the subject—Dr. Christison and Dr. Aquilla Smith; both these agreed that the proposed alteration was desirable; and at the end of the education report of 1869 there was appended a treatise by Dr. Christison in which the separation of the teaching of pharmacy from that of therapeutics was recommended. The Committee did not make any proposal as to the manner in which pharmacy should be taught, as the Council was adverse to giving opinions on matters of detail which would be better left to the discretion of the teaching and examining bodies. The report contained an allusion to Dr. Harvey's course of pharmacy at Aberdeen. No resolution regarding this was proposed, because it might be that it was only theoretically good; but he (Dr. Parkes) hoped that the plan would be made public. In Dr. Harvey's hands, the result had been that the students were taught the characters of drugs and the preparation of medicines in a more simple and agreeable manner than under the old system of causing them to acquire such knowledge in druggists' shops. They had been enabled to learn the subject in a thorough and satisfactory way.

Dr. CHRISTISON seconded the motion. He had taken great interest

in the subject—indeed, he believed he was the first to moot it. His experience as a teacher of materia medica for many years had shown him the defects of the present system. The Society of Apothecaries of London required materia medica to be studied in the first year. Now it was well known that therapeutics—which science was included in materia medica as commonly understood—could not be studied properly until the last year of professional education. It was argued by some, that in these days pharmacy might be entirely left to the druggists. If all medical men were prescribing physicians or surgeons only, this view would be admissible. But those who proposed it, forgot that country practitioners and those in the public services must of necessity practise pharmacy. In many parts, medicines could not be got from druggists; and there were many districts in which a druggist could not get a living. The study of pharmacy on the part of the intending practitioner of medicine might be restricted; but it could not be altogether dispensed with. It should be studied practically; a few lectures might be given, but the main part of the teaching should be practical. Dispensing could be very well taught by a competent dispenser in any medical school, provided sufficient accommodation were afforded. The period of the study of pharmacy should be very early; it should come after chemistry. As to therapeutics, it had been asked by some why the study should be distinct, and whether it would not form a part of the instruction in practice of medicine and surgery. It was no wonder that many had no faith in medicines, from the way in which therapeutics was taught. It was impossible to expect complete instruction in therapeutics to be included in a course of practice of medicine. They were beginning to devote their energy to the study of the action of medicine; and if the same energy were bestowed on this study as there had been on that of pathology and diagnosis during the last fifty years, there was no doubt that therapeutics would be advanced to a very high degree of perfection. Therapeutics formed one of the most important and most advanced of all the branches of the professional curriculum; and it should be one of the very last taught. The knowledge of pathology and diagnosis was of little value unless the remedies for the cure of disease and their action were also known.

Dr. MACROBIN considered that therapeutics should be taught after one systematic course of lectures on medicine, and before the commencement of hospital study. Dr. Harvey's success in teaching pharmacy was well known to him; he had ample accommodation, and was ably assisted by two pharmacists. He believed that a separate course of therapeutics was required.

Dr. HUMPHRY said that all proposed alterations must be looked on with care, especially when they tended to increase the already grievous burdens of students. He doubted whether it was expedient to come to a resolution which implied the establishment of a separate course of therapeutics. The information in the report was derived from teachers of materia medica; and it was known that every teacher held his own branch as of higher value than any others. Nothing could be more grievous to the student, or more likely to interfere with efficient class-examinations, than the addition of courses of lectures. He himself, while a student, had been obliged to neglect some courses in order to attend others. He agreed that the instruction in pharmacy should be practical; but demurred from the proposal to establish a separate course of therapeutics. The science, difficult as it was and founded on recondite physiological investigation, was at present in a scarcely sufficiently advanced state to form the subject of a special compulsory course. It had been said that the study of therapeutics in this way would promote science; but it must be remembered that the Council were not directly concerned with this, but had to see that students acquired a reasonable knowledge of science in its existing state. He proposed as an amendment—

"That practical instruction in pharmacy may with advantage be substituted for formal lectures on the subject, and should be attended at an early period of the medical curriculum; and that instruction in therapeutics should be conducted at a later period of the professional curriculum, either by a special course of lectures, or as an essential part of the courses of lectures on medicine and surgery."

Dr. APJOHN seconded the amendment.

Dr. ANDREW WOOD said that if there were a branch of medicine in a more unsatisfactory condition than any other, it was therapeutics, both as regarded the state of the science and the manner of teaching it. It was very well to say that the Council ought not to increase the burdens of students; but the burdens of patients required also to be diminished. In the present system, materia medica was studied at a time when the proper understanding of therapeutics was impossible. Therapeutics formed the coping-stone of professional education, and should be taught at the end of the course or in the last summer. He believed that the establishment of a distinct course of therapeutics would give an impetus to the science.

Dr. STORRAR called Dr. Humphry's attention to the fact that the Council had avoided recommending courses of lectures; it spoke of instruction, no matter how obtained.

Dr. AQUILLA SMITH had, as a teacher of materia medica, been long convinced of the necessity of separating pharmacy from therapeutics. In Ireland, students attended the materia medica course in the first or second year; and he had found it an utter waste of time to attempt to teach therapeutics to first year's students, who had not even had time to acquire a knowledge of the characters of drugs. There was no occasion for increasing the courses of lectures; pharmacy could be taught by demonstration. Pharmacy was very imperfectly taught in Ireland; but there ought to be no difficulty in organising a course of instruction such as had been instituted by Dr. Harvey in Aberdeen. He spoke in favour of a separate course of therapeutics, to be attended towards the end of the curriculum.

Dr. APJOHN said that the plan proposed by Dr. Parkes would lead to an increase of the courses of lectures, and of the number of professors.

Mr. HARGRAVE described the plan followed in the Royal College of Surgeons of Ireland by Dr. Macnamara, who gave two courses.

After a few remarks from Dr. Allen Thomson, Dr. Christison, Dr. Sharpey, Sir D. Corrigan, and Dr. Parkes, the amendment was put to the vote and lost. The original motion was carried, 15 voting in its favour.

2. *Instruction in Midwifery.*—The draft Report contained the following remarks on the subject.

"The length of time assigned to midwifery in most of the present curricula is too short, and the Committee on Education recommended that one entire winter session should be assigned to this subject, and that the amount of practical instruction should be increased. This opinion was shared by all the experienced teachers in midwifery, whose replies are given in the appendix to the Education Report of 1869. We, therefore, advise that the Council shall recommend that the systematic lectures on midwifery shall be given in the third or fourth winter course, and that the candidates shall be required to attend not less than twenty labours in addition to practical instruction in the diseases of women."

Dr. PARKES moved—

"That it is desirable that the course on midwifery should be extended, and that every candidate for a licence shall be required to attend not less than twenty labours."

The Committee did not wish to increase the labours of students. If this resolution were adopted, the Council would have to consider how to relieve the student in some other direction. Out of a number of experienced teachers of midwifery in London whose opinions had been taken, all with one or two exceptions agreed that it was not possible to do justice to the subject within the limited time allotted to it. The course of midwifery comprehended a portion of practice of medicine; it included the diseases of women and children. From the shortness of the time, however, the course was almost entirely confined to midwifery proper; and, the diseases of women and children not being treated of in the course of medicine, students got very little instruction in these important subjects. As to the number of labours attendance on which should be required, there was a variety of opinions; and the Committee had recommended the number which appeared to be required by most boards.

Mr. HARGRAVE seconded the motion.

Dr. HUMPHRY thought that the matter might be left to the examining bodies. He considered it unwise to require attendance on twenty labours. After the first few cases, the instruction obtained did not compensate for the time and trouble spent.

Dr. ALEXANDER WOOD objected to the motion. He thought that, if the Council overburdened students with lectures, other important sources of instruction would be neglected. He agreed with Dr. Humphry that attendance on more than a few labours was of little value to the student.

Dr. MACROBIN thought that ten cases were sufficient. It would be necessary to prolong the course to five months if it were to include the diseases of women and children. He proposed as an amendment—

"That it is desirable that instruction in Midwifery should be extended beyond three months, so as to embrace instruction in the Diseases of Women and Children, and that every candidate for a licence should be required to attend not less than ten cases of labour."

Dr. ANDREW WOOD seconded the amendment.

Dr. CHRISTISON said that courses of five months had long been given in some of the schools in Scotland.

Sir DOMINIC CORRIGAN would vote against both the motion and the amendment. The matter ought to be left entirely to the licensing bodies. The proposal would lead to a mere increase of the sale of certificates.

Dr. ANDREW WOOD did not think the remark as to the sale of certificates a fair one. He did not see how twenty cases of labour could be supplied to each student in Edinburgh; he thought that ten would be enough. No class of diseases formed so important a subject of study as those of women and children. It was impossible to include instruction in these subjects in a midwifery course of three months; and, under the present system, many students got no instruction in them.

Dr. STOKES said that the Council ought to endeavour to lighten the burdens of the student, and give him more time for self-instruction. Dr. Parkes's resolution went in a wrong direction. He would prefer to lessen the number of lectures and to increase the whole period of study.

Dr. RISDON BENNETT considered that the diseases of women and children ought not to be allocated to special professors. All that was peculiar in them could be taught in the ordinary courses of medicine and surgery and in the wards of hospitals. Accoucheurs, however, wished to absorb all operations on females, and all diseases connected with the female constitution, as well as those of children.

Dr. QUAIN agreed that the Council would be taking a wrong course in prescribing the length of a course of lectures. It was, at the same time, desirable that students should be better instructed in the diseases of women and children.

Dr. FLEMING thought that a three months' course was sufficient for midwifery proper. It would be difficult in all circumstances to supply twenty cases of labour.

Mr. QUAIN believed that resolutions passed with the object of extending courses of lectures were founded on a fallacy. It seemed as if the students of the present day were treated as if they were less zealous than those of former days. It was only in late years that attendance on lectures on midwifery was required; yet he remembered the time when the lectures on the course at University College were largely attended, though not demanded by the boards. No student in France or Germany was compelled to attend a course of lectures; yet large numbers did so. Again, there were now hospitals for diseases of children, and special wards for the same in the general hospitals; and these were frequented by students, although such attendance was not demanded by the boards. Diseases of women, also, were clinically studied in the hospitals under the teachers of midwifery.

After some remarks from Dr. Parkes, Dr. Macrobin's amendment was put to the vote and lost.

Dr. ANDREW WOOD moved as a further amendment, and Dr. MACROBIN seconded—

"That it is desirable that the instruction in midwifery should be extended, and that every candidate for a licence shall be required to attend not less than ten labours."

The amendment was negatived. The original motion was then put to the vote and was also lost.

3. *Pathological Anatomy.*—The next resolution was founded on the following remarks in the draft Report.

"The recommendation that Pathological Anatomy shall be made a separate course has not been carried out in all cases, but several of the licensing bodies have endeavoured to meet it by requiring a certificate of attendance and of practical instruction in the dead-house. We think that a certain number of systematic lectures should be added to this practical instruction."

Dr. PARKES proposed, and Dr. ANDREW WOOD seconded—

"That it is desirable that instruction in Pathological Anatomy should include a certain number of systematic lectures."

Dr. HUMPHRY objected to the addition of a course of lectures. He admitted, however, the importance of instruction in pathological anatomy, which was one of those subjects of which a knowledge must be obtained by the student in early life; while his knowledge of others, such as midwifery, could be gained afterwards. He remembered the great advantage which he had himself derived from the systematic teaching of pathology by Mr. Paget at St. Bartholomew's Hospital. He proposed as an amendment—

"That it is desirable that systematic instruction in Pathological Anatomy should form a part of professional education."

Dr. STOKES seconded the amendment.

Sir DOMINIC CORRIGAN said that pathological anatomy could not be taught separately from clinical medicine.

Dr. CHRISTISON preferred the amendment, as allowing most freedom. A chair of General Pathology had been instituted in the University of Edinburgh forty years ago. The first occupant—the late Dr. Thomson—and his successor Dr. Henderson, did not think that the terms of their appointment required them to teach pathological anatomy practically and minutely. Since the appointment of the present professor, Dr. Sanders, this difficulty had been got over; the subject was now taught both generally and in detail, and the lectures were among the most popular in Edinburgh. The fact that the students

took an interest in the subject, as they did in Edinburgh and as he understood them to do in London, was in itself a reason why the Council should make some such recommendation as was proposed.

Dr. ALLEN THOMSON said that his father, the first professor of general pathology in Edinburgh, was advanced in age at the time of his appointment, and was not able to avail himself fully of the means of practical instruction. Various circumstances, especially the introduction of the microscope, had produced since that time a great change in the study of pathological anatomy and had increased its popularity.

Dr. SHARPEY would support either of the proposals before the Council. Their object was to substitute systematic for desultory instruction. Pathological anatomy had been taught for many years in London. When he was appointed to University College, he found the late Sir Robert Carswell there as professor of pathological anatomy. The present professor in the College devoted two hours each week to special meetings for the demonstration of fresh pathological specimens.

Dr. GULL dissented from Sir D. Corrigan's remark that pathological anatomy could only be studied in dependence on clinical medicine. Morbid anatomy ought to be so taught as to enable the student to reason up from it to the clinical history of a case. The Council ought to express an opinion on the teaching of pathological anatomy.

The amendment was carried; and having been put as a substantive motion, was also carried.

4. *Class Examinations.*—The draft report of the Committee stated that "The Committee on Education strongly advised the enforcement of more regular Class Examinations. The Society of Apothecaries of London has ordered that all students shall produce evidence of having undergone these examinations; and we advise the Council to urge on all the licensing bodies to issue regulations requiring that written class examinations shall be frequent."

Dr. PARKES moved, and Dr. HUMPHRY seconded—

"That it is desirable that class-examinations should be compulsory, and that the Licensing Bodies should require them in all cases."

Sir DOMINIC CORRIGAN moved as an amendment, and Dr. AQUILLA SMITH seconded—

"That it is desirable that Class Examinations should form a part of every course of lectures, whether systematic or clinical." This amendment was lost.

Dr. ACLAND moved as an amendment, and Mr. QUAIN seconded—

"That it is desirable that Class Examinations should be compulsory on students." This amendment was also negatived.

A third amendment was then moved by Mr. QUAIN, and seconded by Dr. A. SMITH—

"That it is desirable that Class Examinations should form a necessary part of every course of instruction." This amendment was carried, and having been put as a substantive motion, was also carried.

Friday, July 7th.

Conjoint Examinations.—Dr. RISDON BENNETT made a statement in reference to arrangements for a Conjoint Examining Board for England, agreed to by a Conjoint Committee of the Royal Colleges of Physicians and Surgeons of England. He said that, before the introduction of the Medical Acts Amendment Bill by the Government in 1870, an endeavour had been made to form a conjoint examining board. When the Bill was introduced, the negotiations fell into abeyance; and were resumed when the Bill was withdrawn. The College of Physicians had taken great pains in the formation of a plan. Many schemes had been discussed and abandoned; sometimes on account of objections on the part of the Universities, but more generally through the difficulties raised by the Society of Apothecaries, who considered themselves precluded by their Act of Parliament from agreeing to proposals to which they might otherwise have been inclined to accede. A joint Committee of the Colleges of Physicians and Surgeons had at length framed a scheme, in such a way as to admit the co-operation of other examining boards. He believed that the Universities would concur in it. The scheme had not yet received the official sanction of the governing bodies of the two colleges; but there was no doubt that it would do so. It was proposed to appoint the Board of Examiners by means of a Committee of Reference, consisting of four members to be chosen by the College of Physicians, four by the College of Surgeons, and one by each of the Universities agreeing to the scheme. The difficulties in the way of forming conjoint boards were not insuperable; and their voluntary formation would probably modify the action of the Council in regard to medical legislation.

Mr. QUAIN expressed his general concurrence with Dr. Bennett's statement.

Clinical Instruction.—Dr. FLEMING proposed—

"That it is desirable that Clinical Instruction in Medicine and

Surgery should not be conducted so much by formal lectures in classrooms as appears from the evidence before the Council to be the case at present; but that hospital students should be divided into classes of limited numbers, so as to enable them individually to observe cases of disease, and to be examined upon them conversationally at the bedside or in proximity to it. Further, that it is desirable that, where possible, all students should serve as clinical assistants or dressers."

He said that much of the value of clinical instruction depended on the manner in which it was imparted. He was not satisfied with its present state; the immense advantages afforded by the large hospitals were not utilised as they ought to be. It was too much the fashion for students to merely go round the wards, and not be instructed in the particulars of cases, which were reserved for clinical lectures. Such lectures, as published in the periodicals, were usually very good treatises on some rare forms of disease; but they did not constitute clinical instruction in its proper sense. The College of Surgeons of England had to its credit taken steps in this matter; but the period required was too short. He read, in support of his view, extracts from the opinions furnished to the Council by Dr. Sieveking, Sir T. Watson, Mr. H. Labatt, Mr. Simon, Mr. Teale, etc. It was, he thought, an evil to require attendance on clinical medicine and on clinical surgery at the same time.

Dr. MACROBIN seconded the motion. In the Infirmary at Aberdeen, classes of limited number were assigned to the physicians and surgeons; and the students were not allowed to attend the medical and surgical cases at the same time.

Sir DOMINIC CORRIGAN considered that it would be quite impossible to carry out the plan proposed. Was it intended that students should be compelled to follow an incompetent teacher for three months? He objected to the compelling attendance on medicine and surgery at different times. If a rare case were admitted, all the students ought to have an opportunity of seeing it. The plan of limited classes would succeed only in small hospitals.

Dr. GULL proposed as an amendment—

"That the Council express their sense of the importance of making clinical instruction year by year more practical, and more consonant with the phenomena of disease, and less dependent upon formal clinical lectures."

It was not desirable to enter into details in the way proposed by Dr. Fleming. Clinical study must be made more practical; it should bear the same relation to the lectures on medicine and surgery that the work of the dissecting-room did to the course of anatomy.

Dr. STOKES seconded the amendment. He did not know any hospital in Dublin where formal clinical lectures had been delivered for many years. The physicians and surgeons usually lectured on the cases immediately on leaving the wards. To lecture on the cases in the wards would be cruel and barbarous. At the Meath Hospital, the practice was to give a short explanation of each case at the bedside, avoiding all painful topics; and to have a meeting after the visit, at which those students who had cases under their observation read their reports and were examined on them. He had found that only about one-fifth of the students attending really availed themselves of the special advantages offered; and he held that it was better to produce a small number of good and willing men than a large number of indifferent. Students could not be made diligent by law; and any attempt at coercion was quite beneath the Council.

Dr. CHRISTISON objected to minute details. During the last few years, there had been great improvement in clinical instruction; and all that was wanted was encouragement on the part of the Council. Clinical lectures were first instituted in Edinburgh in 1747; they consisted for a long time of mere reading of reports of cases, but in 1831 he (Dr. Christison) instituted clinical examinations. The students were often very desirous of a clinical lecture on a number of cases, as when an accumulation of instances of some one affection occurred; *e. g.*, partial paralysis of the nerves of the face. His practice was to lecture on the cases and refer to their differences; and then to take the students to the wards and illustrate his remarks. He hoped that there would be no interference with the action of the medical authorities; but that at the same time it would be made known that the Council attached great importance to instruction at the bedside. He objected to lecturing to and examining students in the presence of the patients.

Dr. HUMPHRY advised that the Council should refrain from excessive interference, lest it should diminish the value of its opinion and its authority. Year by year there had been improvement in clinical instruction. He had personally visited the London hospitals to observe how the regulations of the College of Surgeons were carried out; and he found that clinical instruction was given in the large hospitals more perfectly than he had thought possible. It must be remembered, that this improvement in clinical teaching entailed great labour on the

medical staff of the hospitals. He thought it would be much the best plan for the Council to simply express its opinion of the importance of clinical instruction, and to leave its regulation in the hands of the examining bodies.

After some remarks from Mr. HARGRAVE, Dr. ANDREW WOOD, Dr. ALEXANDER WOOD, Dr. A. SMITH, Dr. QUAIN, Dr. PARKES, and the President, the amendment was put to the vote and lost; 7 voting for and 8 against it.

The original motion was then put to the vote and lost, three only voting for it.

Chemistry.—Dr. STORRAR moved—

“That it is desirable that students should have the option of acquiring an adequate knowledge of chemistry, and of passing an examination in it, before they enter upon the period recognised by the licensing bodies as the course of professional study.”

The four years of professional study were at present overcrowded; and if the Council could lighten the burdens of the students and teachers, they should do so. In England, instruction in physical science was being introduced into the higher grammar schools, such as Eton, Marlborough, Clifton, etc. At the latter institution, the science-master had an annual salary of £300. He believed that youths of 17 would leave these schools with a good knowledge of chemistry. Besides, schools of science were springing up in many provincial towns; e.g., the College of Science at Newcastle-on-Tyne.

Mr. QUAIN seconded the motion. It was strange that chemistry was considered a medical science; it ought to be regarded as a part of general education. He was much pleased to see what was being done in the schools; for the ignorance in regard to physical science among men of high standing in the universities was lamentable. The Royal College of Surgeons of England allowed chemistry to be taken as part of the preliminary examination. He had inquired as to the effect of this regulation; and had found that, of 330 candidates at the last preliminary examination in general knowledge, 126 took chemistry, of whom 30 failed. It was not the duty of a medical body to examine in chemistry as such; but to ascertain whether the student understood its application to those branches of medicine in which a knowledge of it was required.

Dr. THOMSON agreed with the principle of the motion, but thought it should refer rather to the general principles of chemistry. He had been much impressed with the want of capacity in students for receiving scientific instruction; and he knew no better preparation than a preliminary education in chemistry and physics—to which he would even be disposed to add the elements of anatomy.

Dr. APJOHN said that it could not be possible to acquire any useful knowledge of chemistry in schools. He had no high opinion of the smattering acquired by boys. It would not be for the advantage of medicine that the limited knowledge of chemistry which they could obtain should be regarded as sufficient. He proposed as an amendment—

“That chemistry is a most important branch of medical education, and that the Council does not think it desirable to adopt any resolution which, if it had any practical effect, would tend to discourage the efficient study of the subject by medical students.”

Dr. ANDREW WOOD seconded the amendment.

Dr. SHARPEY supported the original motion.

Dr. STORRAR intended that such an ordinary knowledge of chemistry should be required as was demanded of medical students. There were other parts of medical education in which it was necessary to keep up a knowledge of the science. He would avoid smattering, and anything like mere fireworks and explosions in schools; the instruction should be sound. Dr. Apjohn would be surprised to hear what was being done in some of the schools.

The amendment was lost, 8 voting for and 9 against it. The original motion was also lost, the votes being, for, 8; against, 11.

Conjoint Examining Boards.—Dr. PARKES proposed—

“That a letter be addressed to each licensing body transmitting a copy of the resolution of the Council of the 26th February, 1870, on the formation of conjoint examining boards, and urging that arrangements for the formation of such boards shall be undertaken without delay, and shall be communicated to the President of this Council before the close of the year.”

Dr. STORRAR seconded the motion; which was opposed by Sir D. CORRIGAN, and supported by Dr. GULL and a number of other members.—Dr. HUMPHRY, Dr. APJOHN, and Dr. EMBLETON, expressed their belief that the Universities which they represented (Cambridge, Dublin, and Durham) would consent to take part in schemes of conjoint examination. In the absence of Dr. Acland, Dr. Humphry believed that he might make the same statement regarding the University of Oxford.

The motion was then put to the vote, when 21 hands were held up

in its favour. Sir Dominic Corrigan declined to vote; and two members of the Council, Mr. Cooper and Dr. Acland, were absent.

The following is a copy of the resolution referred to in the motion.

“*Resolution of the 26th February, 1870.*—That this Council is of opinion that a joint examining board should be formed in each of the three divisions of the kingdom, and that every person who desires to be registered under any of the qualifications recognised in Schedule A to the Medical Act, shall be required, previously to such registration, to appear before one of these boards, and be examined on all the subjects which may be deemed advisable by the Medical Council; the rights and privileges of the Universities and Corporations being left, in all other respects, the same as at present.”

Dr. PARKES moved, Dr. ANDREW WOOD seconded, and it was resolved—

“That the first resolution of the 28th February, 1870, be also transmitted to the licensing bodies at the same time as the previous resolution.”

The following is a copy.

“*Resolution of 28th February, 1870.*—That, in accordance with the foregoing resolution, the Universities and Medical Corporations established in each division of the United Kingdom shall be requested to concert a scheme for the constitution and regulation of a conjoint examining board for that part of the kingdom to which they belong, and shall, on or before June 1st, 1870, transmit such scheme to the consideration of the General Medical Council.”

Dr. ANDREW WOOD moved, Mr. HARGRAVE seconded, and it was agreed—

“That the Report of the Committee on Education be recommitted, and brought up to-morrow in a form adapted to the resolutions of the Council.”

Saturday, July 8th.

Removal of a Name from the Register.—The Registrar was directed to erase from the Register the name of Frederick Henry Morris, of Swindon, Wilts, the Council being satisfied that he was the same person who was convicted at Devizes, on March 27th, 1871, of a misdemeanour, and of whose conviction a legal certificate had been submitted to the Council.

Preliminary Examination.—Dr. STORRAR moved, Dr. PARKES seconded, and it was resolved—“That the Report of the Committee on the application from the Board of Public Examiners of the Cape of Good Hope, be received and adopted.” The report stated that the examinations corresponded generally with the matriculation examination at the University of London.

Executive Committee.—The Council having balloted for the Executive Committee, the following were found to be elected: Dr. Bennett; Dr. Acland; Dr. Sharpey; Dr. Quain; Dr. Andrew Wood; Dr. A. Smith.

Proceedings under Penal Clauses of Medical Act.—Mr. QUAIN raised a debate on this subject, stating that the promotion of the punishment of registered persons under Clauses XVIII and XXIX ought to be dealt with by the Council in its collective capacity, and that individual members ought not to be required to propose resolutions for carrying out the powers of the Council in such cases. He said that there ought not to be any pretext for the imputation of personal feeling.—Sir DOMINIC CORRIGAN did not think that any inconvenience had ever arisen from the plan usually followed by the Council.—Dr. GULL supported Mr. Quain's view. The procedure in case of punishment was thrown on individual members, whereas it was the duty of the Council as a whole.—After some further discussion in which Dr. Andrew Wood, Dr. Alexander Wood, Dr. Storrar, Dr. Risdon Bennett, Dr. A. Smith, and the President, took part—

Dr. BENNETT moved, Dr. A. THOMSON seconded, and it was resolved by a majority of 9 to 7—“That it be referred to the Executive Committee to report on the most desirable mode of procedure in the case of motions having reference to any penal measures.”

Report of the Finance Committee.—Dr. SHARPEY, Treasurer, read the following report. The Finance Committee beg leave to present a statement of the income and expenditure of the year 1870, compared with the income and expenditure of the preceding year, also an estimate for 1871. It will be seen that there has been an increase of income in 1870, and that this is partly due to an increase in the number of registration fees; but it includes also the balance of the *Pharmacopæia* account and the proceeds of sales, making together £607:6, which, by direction of the Council, is now included in the ordinary income. The debt still owing to the Council on account of the *Pharmacopæia* was reduced in January last to £104:14. The expenditure of 1870 is less by £302:13:8 than that of 1869. The reduction is to a considerable extent due to a diminished charge for printing, especially for printed

reports of committees. It is expected that a considerable permanent saving under this head of expense will be effected by an arrangement that has been entered into for printing and binding the *Medical Register* at a reduced cost through the agency of Her Majesty's Stationary Office.

The table which accompanied the report showed that the income for the year 1870 amounted to £5,829:2:10, and the expenditure to £5,187:0:4; leaving a balance in favour of the Council of £642:2:6.

On the motion of Dr. SHARPEY, seconded by Dr. STORRAR, the report was received and adopted.

The Office of Treasurer.—Dr. SHARPEY having signified his desire to resign the office of Treasurer of the General Medical Council, which he had held during ten years, the PRESIDENT proposed, and it was assented to by acclamation—"That the hearty thanks of the Council be returned to Dr. Sharpey for his long and valuable services as Treasurer."

Dr. SMITH moved, Dr. PARKES seconded, and it was resolved—"That Dr. Bennett be elected Treasurer of the General Medical Council."

The Returns from the Army and Indian Medical Boards.—The Committee appointed on July 4th to consider and report on the returns from the Army and Indian Medical Boards, presented a report embodying communications which they recommended to be addressed to the Director-General of the Army Medical Department, and to the Military Secretary of the India Office, regarding the forms in which the returns were made. The modification proposed was that the returns should be made in the following form (taking, for example, the return from the Army Medical Board): "Total number of candidates, 57:—Succeeded in obtaining appointments, 36; Succeeded in examination, but not in obtaining appointments, there being only 36 vacancies, 17; Failed in examination, 4. Total, 57."

On the motion of Sir D. CORRIGAN, seconded by Dr. PARKES, the Report was received and adopted, and the letters drafted therein were ordered to be signed by the Registrar, and forwarded by him as directed.

Report of the Pharmacopœia Committee.—Dr. CHRISTISON read the following report.

"The Pharmacopœia Committee appointed by Minute of the Council, July 12, 1869, beg to report that, owing to the pressure of important business during the Sessions of the Council last year, no meeting of the Committee was held, and no Report was prepared for their consideration by Dr. Redwood. The Committee met on the 7th instant, and received a Report from Dr. Redwood, on the progress of Pharmacy since the date of his last Report. Some points of importance in connection with pharmaceutical preparations were discussed, and Dr. Redwood was requested to continue his services. It was also resolved that Dr. Christison, Dr. Quain, and Dr. Aquilla Smith be requested to continue their inquiries as regards additions or other changes in the *Pharmacopœia*, and that Dr. Redwood be requested, in addition to his duty of reporting on the progress of Pharmacy, to investigate, from time to time, the composition of articles in the *Pharmacopœia*, concerning which questions have been raised. As the sum of £75 remains as balance in the hands of the Committee, it will be unnecessary to ask the Council to place any further sum at the disposal of the Committee for use during the ensuing year."

After some discussion, it was resolved, on the motion of Dr. CHRISTISON, seconded by Dr. QUAIN, that the Report be received and adopted.

The Pharmacopœia Committee of last year, consisting of Dr. Christison, Dr. Quain, Dr. Sharpey, and Dr. A. Smith, was reappointed.

Visitation of Examinations.—Dr. ALEXANDER WOOD moved, Dr. HUMPHRY seconded, and it was resolved—

"That it is desirable that the visitation of the preliminary examinations and of those of the licensing boards be recommenced, and that a Committee be appointed to consider the best means of doing so." The Committee was appointed to consist of Dr. Alexander Wood, Chairman; Dr. Humphry; Dr. Thomson; Mr. Quain; Dr. A. Smith; Dr. Sharpey; Dr. Storrar.

Monday, July 10th.

Report of the Committee on Professional Education.—The draft report, as amended by the Committee, was brought up; and a large portion of the time of the meeting was spent in discussing it and making alterations. The discussion having been concluded,

Dr. PARKES moved, Dr. ANDREW WOOD seconded, and it was resolved—

"That the Report of the Committee on Professional Education, as now amended, be received and adopted, and that copies be sent to the several licensing bodies for their consideration."

Dr. RISDON BENNETT commented on the publication in medical journals of draft reports presented by Committees of the Council, before such reports had been duly considered and finally approved. He thought the proceeding undesirable; and suggested that the attention of the Business Committee should be directed to the subject.

Conjoint Examining Boards.—Dr. PARKES moved—

"That in case the arrangements for Conjoint Examining Boards are not completed in each division of the kingdom by the close of the year, in accordance with the recommendations of the Council on the subject, the Executive Committee shall be authorised to seek an interview with the Lord-President of the Privy Council, and to urge upon him the desirability of such medical legislation in the session of 1872 as may carry out the object the General Medical Council had in view, in passing the resolutions of the 26th and 28th February, 1870, and of the 7th July, 1871."

He said that the Council had sent to the licensing bodies its resolutions on the subject of forming conjoint examining boards; but he believed that this course thus taken would prove quite nugatory. Taking first England, the scheme agreed on by the joint Committee of the Colleges of Physicians and Surgeons seemed admirable; but difficulties still remained. The conjoint examining board ought to be perfect; but that which was proposed was not so, as it did not include the Apothecaries' Society, which would continue to grant its licence. The licentiates of the Society would still have the right to be registered; and the Society must either make arrangements with the College of Surgeons for a diploma in surgery, or with other licensing bodies. He had been glad to hear Dr. Christison's opinion that in Scotland there would be no insuperable objections on the part of the Universities to taking part in the formation of a conjoint examining board. In Ireland, he considered that a conjoint board could not be formed. After the close of the session of 1869, he had had much correspondence with the licensing bodies there; and had found that, while there was sometimes an apparent willingness to agree on a scheme, some of them would soon diverge greatly. He felt that there were unsurmountable difficulties with regard to Ireland; the principal of which was the opposing influence of Sir D. Corrigan. If the licensing bodies refused to amalgamate, the only plan remaining was to apply to Parliament for a bill to compel them to do so. He thought it would be the best plan to leave the matter at first in the hands of the Executive Committee, and to have a meeting of the Council to consider the bill after its introduction. The Council could not allow matters to go on from year to year as had been the case; if they did not carry out this duty, it would be done for them.

Dr. GULL seconded the motion.

Dr. ALEXANDER WOOD moved the previous question. He objected to any intimation of an intention to coerce the boards.

Dr. ANDREW WOOD supported Dr. Parkes's proposal. If the Council did not take the matter in hand, there were others who would. It was the duty of the Medical Council, if it deserved its name, to counsel the licensing bodies as to how they should act, so as to make the maintenance of their own rights conformable with the interests of the general public.

Mr. HARGRAVE said that he did not think that the formation of a conjoint board for Ireland was impossible.

Sir D. CORRIGAN opposed the resolution, which was supported by Dr. RISDON BENNETT.

Dr. STORRAR moved an amendment to the effect that the Council should meet early next year to receive reports as to the formation of conjoint examining boards, and to take such measures as might be necessary. This amendment was carried.

Some ordinary concluding formal business having been transacted, the session terminated.

TESTIMONIAL TO A POOR-LAW MEDICAL OFFICER.—On the 5th instant, a testimonial was presented to Mr. Richard Ley, surgeon, late of South Molton, Devon, by the parishioners of Chittlehampton, Warkleigh, and Salterleigh, of which places he had for many years been medical officer. The testimonial, which was presented by the Rev. R. E. Trefusis, vicar of Chittlehampton, in the names of the donors, consisted of a handsome tea-service, with a dozen dessert knives and forks. The vicar, in presenting the testimonial, alluded to Mr. Ley's valuable services in attending to the sanitary state of the parish, especially during an epidemic of typhoid fever which prevailed in the district last year.

THERAPEUTIC RECORD.

PREVENTIVE TREATMENT OF LEAD-POISONING.—M. Péligot, director of one of the principal glass manufactories in France, noticed some time ago that two of his workmen, who were in the habit of drinking a quantity of milk daily, were quite free from symptoms of lead-poisoning, from which the other persons employed suffered extensively. He consequently caused each of his workpeople to bring to the manufactory a quart of milk daily; and from the time when this mode of diet was commenced, there has not been a single case of lead-colic. Dr. Méhu recommends, as a means of removing the fine lead-particles from the skin, the use of baths of hydrochlorate of soda. A solution is prepared by mixing 400 grammes (about 13 ounces) of dry chloride of lime, 800 grammes of crystallised carbonate of soda, and 10 litres of water. This is sufficient for a bath of 44 gallons. The person remains in the bath about half an hour, and rubs with his hand or with a brush the parts where the lead has been deposited.—*Journal de Méd. et de Chirurgie Pratiques*, Mars 1871.

CARBOLIC ACID IN SNAKE-BITE.—Dr. Weir Mitchell, from observations on the bite of the rattlesnake, and MM. Gicquian and Viaud Grand-Maraîs, from observations on that of the viper, have arrived at the conclusion that the application of carbolic acid immediately on the receipt of the injury prevents both local and general poisoning. The pure acid, however, if applied in too great quantity, is liable to produce sloughing, and even dangerous symptoms: hence it is best used in the proportion of two parts of acid and one of alcohol. Given internally, or applied to the wound at a late period, it produces no effect. It is believed to act, not by neutralising the poison, but by causing contraction of the small vessels, and thus preventing its absorption.—*Journal de Méd. de l'Ouest.*, and *Bull. Génér. de Thér.*, March 30, 1871.

AN ANTIPARASITIC OINTMENT.—*Lo Sperimentale* for June quotes from *L'Igea* the following formula, which is said to be useful in itch, favus, and other parasitic skin-diseases: Sublimed sulphur, 9 grammes; ammonio-chloride of mercury, 75 centigrammes; sulphide of mercury, 75 centigrammes; olive-oil, 6 grammes; fresh lard, 24 grammes; creasote, 2 grammes.

THE INDUCED GALVANIC CURRENT IN ILEUS.—Dr. Macario relates in the *Annario delle Scienze Mediche* for 1870 the case of a man aged 70, who had long been subject to obstinate constipation, and who was suddenly seized with severe pain in the umbilical region, violent cramps, and abundant vomiting, first of bilious, and then of stercoraceous matters. He was in a state of semi-stupor, with small weak pulse and singultus. One pole of a Gaiffe's induction-apparatus was introduced into the rectum, and the other was applied by means of a wet sponge to the abdominal wall over the transverse colon. Energetic contractions of the abdominal muscles were produced, and were attended with much pain; but, at the end of ten minutes, the pain and vomiting had ceased. Four hours afterwards, the patient had a spontaneous evacuation of the bowels, followed by two others in the course of the night; and the next day he was convalescent.

SULPHOCARBOLATE OF ZINC IN OTORRHOEA.—At a recent congress of German surgeons in Prague, Dr. Zaufal said that he had used solution of the sulphocarbolate of zinc in fourteen cases of otorrhœa, with satisfactory results. The strength of the solution was one or two grains to the ounce.

SPASMODIC CONTRACTIONS OF A FRACTURED LIMB: ARTERIAL COMPRESSION.—M. Broca had under his care a few months ago, in the Hôpital de la Pitié, a man who had broken both bones of the leg an hour before his admission to the hospital. The muscular contraction was so violent that it was impossible to reduce the fracture. M. Broca thereon employed a method which he had found successful in several cases of painful cramps of the lower limb—viz., compression of the femoral artery. Almost immediately the muscles became relaxed, and reduction was effected with ease. Subsequently, in reapplying the splints, the contraction returned, and was again overcome by the same means. The *Journal de Médecine et de Chirurgie Pratiques* for March, in relating the case, says that the simple and easy means employed by M. Broca ought always to have a trial before giving chloroform, which is often done in such cases.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 15TH, 1871.

MEDICAL LEGISLATION.

DR. DALRYMPLE has been favourably known since he entered the House of Commons by a clear, intelligent, and earnest advocacy of some measures for affording relief to an acknowledged, pressing, but as yet untouched evil. The irresistible passion for alcoholic drinks becomes, under some circumstances, a mental malady. Ferocious, not to be resisted by its victims, it works misery, ruin, and destruction so frequently and painfully, that a measure for the restraint of such persons has been favourably considered in principle by men of all opinions. The inherent difficulties of any measure for the purpose have probably alone deterred legislators from dealing with it before now. Combining technical professional skill with the legislative position, Dr. Dalrymple courageously attacked the difficulties which have daunted those who came before him in their consideration. He has succeeded in combining the support of divers and powerful sections of society. The opinions of the medical profession have been with him from the first. The medical faculties of more than one Scottish University were among his early supporters. The Parliamentary Bills Committee of the British Medical Association, after hearing a personal explanation from Dr. Dalrymple of the character of his Bill, pledged itself to support the measure; and, at the recent deputation to the Home Secretary, representatives of bodies as widely differing as the Licensed Victuallers' Association and the Licensing Amendment Association combined to favour the Bill. Our own Association was prepared to take energetic parliamentary action to assist in securing a full hearing for a measure bearing so largely on public interests, and so desirable in many ways, but that, at the interview with Mr. Bruce, an arrangement was arrived at that, after taking a debate on the second reading, with a view to the adequate discussion of the subject, a Select Committee of the House should be granted to investigate the results of the experience in other countries, and to take evidence of the working of such voluntary institutions as exist here and elsewhere for the treatment of habitual drunkards. Dr. Dalrymple explained the machinery of his Bill, and defended its provisions with great clearness and force. The Bill adopted the machinery of the lunacy laws, which he would have avoided if he could, but thought it a lesser evil to avail himself of this machinery than to create new machinery. Moreover, his contention was, that an habitual drunkard was *ipso facto non compos mentis*. He was told that the Commissioners in Lunacy objected to the Bill; and he was not surprised, because the *genus* Commissioner, like everybody else, did not like increased work without increased pay. But he thought that the work imposed on them by the Bill would be comparatively small, unless, indeed the Bill succeeded beyond his expectations, and then its success would be its own justification. There were three modes in which the habitual drunkard might be placed under restraint—by voluntary action, which had nearly failed through inability to keep the person sufficiently long in restraint; by the action of relatives; and by magisterial action in committing to these reformatory persons who had been three times committed within six months either for drunkenness or for offences committed under the influence of drunkenness. The chief objection to the Bill was its infringement on personal liberty. People were supposed to have an inherent and indefeasible right to get drunk as they liked; but he maintained that when, through the abuse of alcoholic liquor, a man became dangerous to himself and to others and ruinous to

his family, making them burdens on society, and leading them into poverty, disease, and crime, personal liberty must succumb to public exigencies; and this principle was constantly acted upon. Then it was said that the power given to relatives would, for interested and sordid motives, be abused. He did not deny that persons had been unjustly detained as lunatics, though such cases were far less frequent than they were supposed to be; but the Bill provided against such an abuse of it, and he hoped effectually. He conceived that a man proved to be in the habit of endangering his own life and the lives of others, and ruining his family, from his indulgence in drink, might fairly come under the operation of the Bill. There was no chance of an undue infringement of personal liberty; because, to bring about such a result, there must be a combination of unscrupulous relatives, reformatory proprietors ready to incur the penalties imposed by the Act of the 8th and 9th Victoria, two corrupt medical men to sign certificates, blind magistrates, hoodwinked inspectors, and patients who could not talk and give any explanation of their own condition.

Under one of the provisions of the Bill no person admitted to a reformatory on his own application, or on the application of his friends, should be detained for less than three months, or more than twelve months; but power would be given to proper authorities to extend or shorten the period of detention. He had been told that it would be matter of immense difficulty to define an "habitual drunkard," but he maintained that a sufficient definition was given in the first part of the Bill, where an habitual drunkard was described as a person who, by reason of frequent, excessive, or constant use of intoxicating liquors, was incapable of self-control, was dangerous to himself or others, or incapable of taking care of himself and family. The Home Secretary, who had stated that a generation ago a distinguished statesman and an eminent poet would, under the present Bill, have been shut up in a reformatory as habitual drunkards, could not have given sufficient attention to that definition, because it was evident that men who obtained such a high character and position could not have drunk to such an excess as to render themselves incapable of managing their affairs. With regard to the objection raised against the Bill on account of the cost it would entail, he might put against that expenditure the present cost of criminals, and show that the measure, in preventing crime, would result in economy to ratepayers; and it was to be observed that in certain reformatories for the inebriated, established in the United States, 40 or 60 per cent. were cured. Under these circumstances, he proposed that power should be given to magistrates and Boards of Guardians to establish and maintain reformatories under the Bill, and there was no need to fear that those functionaries would rush recklessly and unnecessarily into expense. In his opinion, the first effect of the Bill would be to cause these reformatories to be established for the upper and middle classes. Their working would then be watched, and if they proved successful, their success would justify magistrates and guardians in providing similar institutions for the poorer classes. He admitted that relapses into drunkenness were at present frequent; but he contended that, if there should be 75 per cent. of failures in the first year of such a system as he recommended, there would only be 50 per cent. in the next year, fewer in the year after, and so on until they came down to a residuum beyond which they could not hope to go, for there would be some irrecoverable drunkards just as there were some irrecoverable lunatics. He was told that the measure partook too much of the parental character; but the system which he advocated existed in America, and he asked whether there was any country in the world where self-government was more carried out than in America.

SPIRITUALISM TESTED.

I.

"SPIRITUALISM is a religion. As such, it is held tenaciously and honestly by many well-meaning people. To reason with these would be a waste of words, just as much as would be the attempt to persuade a madman out of his delusion. But there are some who halt between

belief and unbelief, for the reason mainly that they have no clear conception of what knowledge is, and of how things are to be proved."

It is for the benefit of the latter class that several eminent physiologists and psychologists, and pre-eminently Dr. Hammond of New York (the Professor of Diseases of the Mind and Nervous System in the Bellevue Hospital College, and the Editor of the *Journal of Psychological Medicine*), from whom we have borrowed the above quotation, have taken the trouble to show in a popular manner that all the wondrous so-called facts of spiritualism may be accounted for without any appeal to unknown powers. As any of our medical brethren may be unexpectedly called upon to argue a weak-minded patient out of the follies of spiritualism, we may possibly be doing a good service to those who have little leisure for psychological study, if we briefly touch upon some of the points which forcibly tell against the present popular delusion, and which show how its most startling facts can be rationally explained. Many of the phenomena that are passed off upon an excited party of willing believers, as spiritualistic manifestations, are simply clever acts of sleight-of-hand; and the perfection to which this art is carried by accomplished performers is almost incredible.

The learned American physician to whom we have already referred invited several medical and other friends to witness, in his own library some surprising spiritualistic exhibitions by a first-class "medium". The operator went through all the performances of the celebrated Davenport brothers, who a few years ago created a great sensation in London. He was securely tied by an old naval officer, who exhausted his strength and ingenuity in devising bands and knots which, he felt assured, would render any movement of the limbs impossible. A screen was then placed in front of the "medium", and in an instant an accordion was played, a bell rung, and a tambourine struck. The performer then requested that the screen might be removed; and, on this being done, he was found to be tied in precisely the same way as when the officer finished his task, not a cord or knot having been interfered with. In a second experiment he was tied with, if possible, additional care, and yet the instant he was concealed he rang a bell. Moreover, the "rappings" of this gentleman—a Dr. von Vleck, who is devoting his time and talents to the exposure of the impositions of the spiritualists—were perfect; and he read communications from the dead, made on folded slips of paper, with fully as much skill as if he had truly been a professional medium. Even after he had fully explained to the spectators the manner in which he accomplished his marvellous performances, it was difficult to make some of them believe that they had not witnessed something supernatural.

Many of our readers are doubtless aware that one of the most remarkable phenomena of spiritualism is the facility of rising in the air in opposition to the force of gravity. This property is claimed not only for inanimate objects, as tables, chairs, etc., but also for the human body. Some years ago, a well-known literary man of undoubted credibility—the late Mr. Bell—described in the *Cornhill Magazine* the sights that he saw, or believed that he saw, at a spiritualistic *séance*; and in this chapter of wonders he declared that he saw Mr. Home floating for some minutes near the ceiling of a partly darkened room. (Unfortunately, however, for the cause of spiritualism, he did not succeed in rising in the air during his late visit to St. Petersburg, when a distinguished Russian professor was present by invitation to witness the ascent.) Only a few weeks ago a writer in *Once a Week* declared that some years ago, when at Baltimore, he saw an electro-biologist raise a man larger and heavier than himself six inches in the air, where he remained suspended for some seconds; and we have no reason to doubt his good faith, although we may question his powers of observation. Long before the present spiritualistic era cases are recorded in which persons have been raised from the ground without the aid of material agencies. Philostratus, who lived in the latter part of the second century, states in his *Life of Apollonius of Tyana*, who flourished about a hundred years earlier, that this philosopher saw the Bramins of India rise in the air to the height of two cubits and walk there without earthly support. The Indian jugglers of all ages have been celebrated for their feats of legerdemain; and not

many years ago, a Colonel Stodare, who had resided in the East, and had learnt the mysterious trick, when exhibiting his powers in the Egyptian Hall, caused a woman to remain suspended in the air after a table, on which she had been reclining, was removed. Long wands were passed through the air above and below her, without any support being detected, except a small cane which she openly held in her hand and which rested lightly on the floor.

Dr. Hammond, who has carefully investigated all the recorded cases of "levitation", shows in an unquestionable manner that all of them may be explained by a reference to one or other of the following causes: 1. An hallucination on the part of the subject or of those asserting themselves to be witnesses; 2. Unintentional exaggeration, misinterpretation, or an inaccuracy of statement; 3. Insufficient evidence (to which most cases must be referred); 4. Intentional misstatement; and 5. Legerdemain, which is sufficient to account for cases that have had any kind of real existence.

On the whole, there are about fifty cases of levitation on record, a large proportion of them occurring amongst the saints of the Roman Catholic Church. Far rarer are the cases of an opposite kind, in which the force of gravity is so increased as to prevent the affected person from rising. Dr. Hammond, when he was writing his interesting and valuable little book on *The Physics and Physiology of Spiritualism*, had under his care "a lady who declares that she cannot rise from her chair, and who has convinced several friends that she speaks the truth", although in reality she has the free use of her limbs; and he tells us the following amusing story of a still more remarkable case that occurred in the olden times.

"In the northern borders of England, and on the other side of the Humber, in the parish of Hoveden, lived the rector of that church with his concubine. This concubine one day sat rather imprudently on the tomb of St. Osanna, sister to King Ofred, which was made of wood and raised above the ground in the shape of a seat. When she attempted to rise from the place her posteriors stuck to the wood, in such a manner that she could never be parted from it, till, in the presence of the people who ran to see her, she had suffered her clothes to be torn from her, and had received a severe discipline on her naked body, and that to a great effusion of blood, and with many tears and devout supplications on her part; which done, and after she had engaged to submit to further penitence, she was divinely released."

A remedy so potent in gravitation, says Dr. Hammond, would probably prove equally efficacious in levitation, and we heartily concur with him.

We shall resume and conclude this subject in an early number, when we shall show that many so-called spiritualistic manifestations are simply due to a particular nervous temperament, and to certain forms of disease which have been long recognised and are thoroughly understood by the medical profession.

THE NEW PUBLIC HEALTH AND RELIEF DEPARTMENT.

THE Bill, often promised and long desired, for consolidating the Health Department of the Government, has at last been drawn. It was read for the first time on the 6th instant, and is now in print. As this is a matter of great medical as well as public interest, we give a *resumé* of the principal clauses of the Bill. The Act may be cited as "The Local Government Board Act, 1871."

Clause II enacts that a Board shall be established to be called "The Local Government Board"; and that on its establishment the Poor Law Board shall cease to exist, all its powers relating to the relief of the poor, as also of the Secretary of State relating to the registration of births, deaths, and marriages, to public health and sanitary matters (including local government, drainage-works, baths and washhouses, town and public improvements, artisans' and labourers' dwellings), local taxation returns, etc., and of the Privy Council for the prevention of disease, the ensuring of the performance of vaccination, and other powers for protecting the public health, being transferred to the new Board.

Clause III enacts that the Local Government Board shall consist of a President, to be appointed by the Crown, and of the Lord-President of the Privy Council, all the principal Secretaries of State, the Lord Privy Seal, and the Chancellor of the Exchequer. The Clause further enacts that the Board shall become established so soon as the first President is appointed; it also provides for the official staff.

Clause VI provides for the transfer to the authority of the Local Government Board of the official staff of the several departments which are to become consolidated into the Local Government Board.

Clause VII (the last) provides for the validity of all documents and contracts passed or entered into under the several powers possessed respectively by the departments which are to be consolidated into the one department of the Local Government Board; and directs that the title "Local Government Board" shall be deemed to be substituted where necessary for any title in any documents where a different title is expressed under Acts now in force.

We will defer until next week our remarks on this Bill.

THE annual dinner of the Middlesex Hospital Club will take place at Willis's Rooms on Friday, G. H. Makins, Esq., in the chair.

THE health of Paris is good; the death-rate continues sensibly to diminish, 872 deaths only having occurred this week against 1106 in the preceding one.

A RUSSIAN lady, Marie Bokowa, of St. Petersburg, has just graduated with distinction at Zurich in medicine, surgery, and obstetrics. This lady rendered valuable services in the War Hospital at Hericourt.

MR. ARTHUR KEMPE has resigned the office of surgeon to the Devon and Exeter Hospital; and, at a special Court of the Governors held on June 30th, was appointed consulting surgeon and honorary governor. On the same occasion, Mr. Wilson Caird was, by a majority of votes, elected surgeon to the hospital.

DR. MINTER, of the royal yacht, has been nominated to succeed Deputy-Inspector of Hospitals and Fleets W. T. Domville at Malta Hospital. We (*Army and Navy Gazette*) understand that Dr. Minter's appointment has been made at the request of the Court, and that the authorities now in office could not reasonably refuse to comply with a wish of the kind.

HONOURS TO MEDICAL MEN.

THE order of the Iron Crown of the second class has been conferred on Dr. Frerichs of Berlin. M. Ricord and M. Demarquay have been promoted to the grades of Grand Officer and Commander respectively of the Legion of Honour, for their services during the siege of Paris.

THE LATE DR. JOHN HATTON.

At a meeting on Thursday last of the Royal National Life Boat Institution, a contribution of £700 was received from Mrs. Jane Hatton, to defray the cost of the Dungeness new Life Boat Station, in memory of her late husband, Dr. Hatton, F.R.C.S., of Belvedere, Kent, who died a few months ago.

INTERNATIONAL COURTESIES.

THE Count Flavigny and Drs. Ricord and Demarquay have arrived in London, representing the French Government and the French International Aid Society. They are the bearers of thanks and honourable recognition of the friendly assistance rendered to the sick and wounded of the French army by the officers of the British Society under the presidency of Colonel Loyd Lindsay. Colonel Lindsay entertains all the principal members of the staff of the society who served during the war at a banquet at Greenwich on Saturday. The French delegates will be present. They have brought with them four ambulance-waggons, fully equipped, after the new model, as presents to the British Society. These have been taken to Wimbledon, where they are now being shown.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

OUR Leeds correspondent writes :—"A soirée in connection with the Sheffield Medico-Chirurgical Society was held at the Infirmary on June 28th. Mr. Barber, the President, in an eloquent address, directed the attention of the profession to the importance of such gatherings, and said that, owing in part to the introduction of 'new blood' in the town, he had no doubt that Sheffield would soon take a high scientific position. Among many objects of interest exhibited was the melanometer, an instrument for detecting the exact amount of pigment in urine, invented by Dr. Frank-Smith."

THE CONJOINT BOARD.

THERE will be a meeting of the Committees of the Royal Colleges of Physicians and Surgeons on the Conjoint Board this (Friday) evening, at half-past eight, at the College of Physicians. Mr. Edward Cock, not having been re-elected on the Council of the College of Surgeons, ceases to be a member of the Committee.

MANCHESTER ROYAL INFIRMARY.

By the death of Mr. Dumville, Mr. Bowring becomes full Surgeon to the Manchester Royal Infirmary. This appointment leaves no vacancy, however, as the Board decided some years ago not to elect any more dispensary surgeons until those already on the staff had succeeded to the post of full surgeon in due rotation. Mr. Bowring being the last dispensary surgeon on the list, the next death or resignation will, of course, leave a vacancy. The last election took place in 1854, when Mr. Bowring was appointed dispensary surgeon.

THE MEDICAL ARRANGEMENTS AT THE WIMBLEDON CAMP.

THE medical arrangements are in every respect the same as last year. Surgeon-Major Wyatt, Coldstream Guards, is the surgeon in charge, while Assistant-Surgeon Temple, V.C., Royal Artillery, and Dr. Mayo, Assistant-Surgeon Inns of Court Volunteers, are the assistant-surgeons in charge of the troops and volunteers respectively. Dr. Mayo has just returned decorated from Darmstadt, where he has had medical charge of one of the National Aid Society's ambulances. With the exception of an inordinate amount of rheumatism, which is quite intelligible, the health of the camp has been pretty good.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

THE summer session of this Association was held at Maidenhead on Friday, July 7th; the President of the Association, Dr. Day of Stamford, in the chair. This Association, with much practical wisdom and no little zeal, devotes its summer session to the "cultivation of social intercourse and good fellowship", leaving "the advancement of the science and art of medicine" for its winter work. With "Skindle's" well known hotel for head-quarters and commissariat centre, creature-comforts were well provided for; and the brilliant sunny day lent an additional charm to the glorious Thames, the lovely Clieveden woods, the stately house of Hedsor (which, by the great kindness of Lord Boston, was visited), and the wonderful pines of Dropmore. The holiday was a success and a pleasure, too infrequent in a busy doctor's life. Not the least welcome guest was M. Jules Sarazin, the Surgeon-in-chief of the late Hundred Guards of the Emperor of the French.

THE SANITARY CONDITION OF LIVERPOOL.

DRS. PARKES and SANDERSON, appointed some time ago to conduct investigations with regard to the sanitary condition of Liverpool, have forwarded to the local corporation a first instalment of their report. A prominent part of their duties was to inquire into the influence of cinder refuse deposits, containing in a greater or less degree animal and vegetable matter, on the health of persons inhabiting houses built upon it. On this point, they say "the refuse has only lately been used; and as it certainly does not produce any one special disease, it would be impossible without very prolonged and careful comparison of the health of those living on it, and of classes of the same rank and occupation living on other soils, to give an opinion. There could be no doubt, however,

that from a soil formed of such refuse and gradually decomposing, some effluvia must be given out, which would be likely to pass into houses placed on the soil, and, on the general principle of requiring purity of air, such a soil is objectionable—at any rate when first laid down." They therefore make the following recommendations :—"That no excavation should be used for the reception of cinder refuse unless it is sufficiently drained; that the cinder refuse-soil should not be built upon for at least two years from the date of the last deposit; that inquiry should be made as to the practicability of getting rid of road scrapings without mixing them with cinder refuse; and that much greater care than is exercised at present should be taken by the Health Committee officials in the selection of material deposited. With respect to building upon old deposits of chemical refuse, Drs. Parkes and Sanderson do not think that health must, of necessity, be injuriously affected by the practice of itself; but they found in one district examined sulphuretted hydrogen gas evolved from products of chemical manufactories passed into houses from the sewers. To obviate this, it would seem to be necessary to prohibit the passing of acid liquids into the sewers. A considerable portion of the report relates to the condition of the sewers. The recommendations of the Commissioners on this subject are thus summed up :—"1. We recommend that a complete and exhaustive inquiry be made as to the existence of deposits in the sewers, and that in all cases in which such deposits are, in the opinion of the borough engineer, dependent on defective construction, defective inclination, or insufficient supply of water, the works necessary for the remedy of these defects be immediately commenced. 2. In those cases in which the foul condition of the sewers appears to be unavoidable—*e.g.*, in those sewers which are affected by the tide—we recommend ventilation. For this purpose, we think that spacious and lofty shafts afford the only effective means. 3. We do not recommend the adoption of any general system of ventilation, entirely agreeing with your borough engineer in the opinion that for well-constructed sewers of good inclination, with sufficient supply of water, it is unnecessary. 4. We recommend that a complete report be made as to the quantity of waste water discharged into the sewers by manufacturers, with a view, first, to the prevention of its introduction into the sewers in a warm state; and, second, to its being, if possible, utilised for surface cleaning and sewer flushing."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

By order of the Council, the library (on account of the alterations in progress connected with the meeting room) will be closed during the months of August and September—closing on Saturday, July 29th, and re-opening on Monday, October 2nd. No books can be taken out of the library during the above period; but those in the possession of Fellows at the time of the closing may be retained till the re-opening of the library. The front room will remain open as a reading-room for periodicals till August 12th, as usual.

SEVENTEEN CHILDREN POISONED.

ON Friday in Liverpool no fewer than seventeen children were poisoned by eating Calabar beans, which they had picked up on some vacant land. Medical aid was at once invoked, and before evening set in they were pronounced out of danger. The corporation carts in three loads removed the whole of the rubbish to a pit where the beans were properly covered with clay. It is supposed that the beans were brought from the docks, but from what ship or dock has not yet transpired.

DR. MEADOWS'S CASE OF NEPHROTOMY.

THIS case, which we noticed last week, unfortunately proved fatal on the sixth day from hæmorrhage, which took place from the pedicle, which was secured by a ligature, and not a clamp, as we stated by mistake. There was no pedicle that would admit the application of the clamp; for the mass was separated close to the spine, and the ligature was applied within an inch of the vena cava. There was not the slightest trace of inflammation anywhere. The gradual and ultimately complete destruction of the secreting substance of the kidney no doubt

led to complementary enlargement of the healthy organ on the opposite side, and diminished to a minimum the chances of uræmic symptoms supervening after the operation; but such would likely be the condition in the majority of cases in which it might be advisable to perform the operation of nephrotomy. The cause of death appears to have been purely accidental, and altogether the case lends support to the view that the operation is not so intrinsically formidable as has been generally supposed.

NEW FELLOWS.

At a meeting of the Council of the Royal College of Surgeons on Thursday last, the following members of the College, having been elected Fellows at a previous meeting, were admitted as such, viz.: Messrs. John Morgan Puddicombe, L.S.A., coroner for the borough of Dartmouth, Devon, diploma of membership dated March 31, 1837; and Edward Glover Bartlam, L.S.A., coroner for the borough of Wenlock, of Broseley, Salop, October 25, 1839.

CHOLERA IN ST. PETERSBURG.

THE following are further particulars of the mortality from cholera in St. Petersburg, so far as the bulletins which have appeared from time to time in the St. Petersburg papers record the progress of the epidemic.

| | CASES. | DEATHS. |
|----------------|---------|---------|
| On June 3..... | 21..... | 8 |
| „ 4..... | 7..... | 7 |
| „ 7..... | 15..... | 7 |
| „ 8..... | 16..... | 7 |
| „ 9..... | 28..... | 11 |
| „ 10..... | 21..... | 5 |
| „ 11..... | 23..... | 12 |
| „ 12..... | 27..... | 13 |
| „ 13..... | 33..... | 13 |

The total numbers since the commencement of the epidemic (August 17th, 1870) to June 14th, 1871, are as follows:

| | CASES. | RECOVERIES. | DEATHS. |
|--------------|------------|-------------|---------|
| Male | 3,236..... | 1,724..... | 1,353 |
| Female | 1,654..... | 939..... | 615 |
| TOTAL..... | 4,890 | 2,663 | 1,968 |

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual assemblage of this Association will be held in the Freemasons' Tavern, Great Queen Street, Lincoln's Inn Fields, on Wednesday, July 26th, at half-past 4 P.M. precisely, when, as we understand, several subjects of much importance to the service and the profession will be brought before the meeting. The question of Poor-law Medical Reform is just now attracting very considerable public attention; and, as Mr. Corrance has given notice of his intention to bring on a discussion of the subject in the House of Commons on the 21st, it is most desirable that, whatever may be the conclusion at which the House shall arrive after hearing his statement, there should be no appearance even of falling off in earnestness on the part of the friends of the cause. We, therefore, trust there will be a full attendance of members and friends of the Association. In the evening at half-past six the annual banquet will take place. Gentlemen desirous of attending the dinner should at once write and announce their intention of so doing to Mr. J. Wickham Barnes, Honorary Secretary, 126, Gower Street, Bedford Square. We also urge on all gentlemen interested in this question to immediately communicate with such members of Parliament as they may happen to know, and urge them to attend and support Mr. Corrance's motion.

MANCHESTER AND SALFORD SANITARY ASSOCIATION.

AT the last meeting of the Manchester and Salford Sanitary Association, the serious increase of small-pox in the city came under discussion, and it was unanimously decided to support the corporation in their attempts to institute disinfecting ovens in various central parts of the town. The state of the river Irwell was then discussed; and, it being considered futile to urge the corporation to petition Parliament

in the matter, it was suggested that a public meeting should be called under the auspices of the Society, to direct attention to the foul and poisonous character of the stream of liquid mud which rolls past our doors under the pleasing verbal fiction of a river. The chairman, Dr. Noble, opposed this resolution, on the grounds that the duty of the Society was scientific, not practical; that its function was to suggest, not to step into the gladiatorial arena of debate; adding that, by keeping aloof from public inspection, they threw a kind of glamour over society, and so stood for more than they were. This argument did not weigh much with some of the members, who remarked that the Society had in truth little to fear from, for they had little to lose by, a public appearance; that at present the Association was looked upon as a hole-and-corner affair; and that it was time that they were, as a sanitary society, of some sanitary value to the town, or that they voluntarily ended their existence. The "happy despatch" was not then administered, but the subject will be taken up again at the next meeting. If the Society come to an end, it will have to be recorded of them that, they at least instituted the first set of reliable statistics of disease in the English provinces.

MEDICAL SOCIETY OF LONDON.

DR. HABERSHON has been chosen Lettsomian Lecturer in the Medical Society of London, in place of Dr. Hyde Salter, who has resigned the appointment.

ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Council yesterday, the 13th instant, Messrs. Thos. Spencer Wells of Grosvenor Street, and George Critchett of Harley Street, the recently elected members of the Council, were sworn in and took their seats as such. At the same meeting the following annual elections took place. Mr. George Busk, F.R.S., Consulting Surgeon to the Seaman's Hospital, Greenwich, was elected President, in the vacancy caused by the retirement of Sir William Fergusson, Bart.; and Messrs. Henry Hancock of the Charing Cross Hospital, and Mr. Thos. Blizard Curling, F.R.S., Consulting Surgeon to the London Hospital, were elected Vice-Presidents. Mr. Timothy Holmes, B.A. Cantab, was elected Professor of Surgery and Pathology; Mr. W. H. Flower, F.R.S., Professor of Comparative Anatomy and Physiology; Mr. Erasmus Wilson, F.R.S., Professor of Dermatology; and Dr. Humphry, F.R.S., Lecturer on Anatomy and Physiology. Dr. A. Farre, Dr. Barnes, and Dr. Priestley, were elected Examiners in Midwifery. The following committees were also nominated: *Museum*, Mr. Holden, Mr. Birkett, and Mr. Erichsen; *Library*, Mr. Simon, Mr. Gay, and Mr. Wilson; *Jacksonian*, Dr. Humphry, Mr. Paget, and Mr. Hewett; *General Purposes*, Sir W. Fergusson, Mr. Le Gros Clark, and Mr. Charles Hawkins; *Audit*, Mr. H. Lee, Mr. Spencer Wells, and Mr. Critchett. Mr. T. Madden Stone was re-elected Clerk, an appointment which, with that of the former one of Librarian, he has now held for forty years, during which he has served the interests of the College and all its members with unsurpassable zeal and fidelity.

TESTIMONIAL TO DR. HALFORD.

THE *Melbourne Argus*, of May 20, says that Professor Halford has been presented with a testimonial, consisting of a handsomely-bound book and a purse of one hundred and twenty sovereigns, as a recognition of the merits of his method of treating cases of snake-bite by the injection of ammonia. The presentation was made by Mr. J. Wilberforce Stephen at Scott's Hotel, in the presence of a considerable number of medical and lay gentlemen. In making his acknowledgments, Professor Halford gave an interesting explanation of the circumstances which had led to his discovery, and expressed his belief that his mode of treatment was capable of extension to constitutional diseases. An influential committee was then appointed by those present to wait upon the Government in order to ask that a sum of money might be placed at the disposal of Professor Halford to enable him to make experiments in this direction.

DRS. RICORD AND DEMARQUAY.

It is proposed to take advantage of the presence in London of our eminent *confrères* Drs. Ricord and Demarquay, on a mission of sympathy and acknowledgment from their countrymen, to invite them to a banquet, at which may be expressed the cordial sentiments entertained towards them personally, and our admiration of the devotion of themselves and their colleagues to their suffering fellow-countrymen during the siege of Paris and throughout the war. MM. Ricord and Demarquay were the chiefs of the great ambulances supported by the French press, and gave continued and distinguished proofs of their professional zeal and fine examples of the high principles which, under such circumstances, never fail to actuate the members of the medical profession in all countries. Sir William Fergusson, Bart., will preside. Mr. Busk (President of the Royal College of Surgeons), Mr. Hilton (President of the Pathological Society), Mr. Paget, Mr. Curling (President of the Royal Medical and Chirurgical Society), Mr. Hancock, Mr. Erichsen, Mr. Erasmus Wilson, Sir Henry Thompson, and Mr. Ernest Hart, will form the committee of arrangement; and gentlemen who wish to take part in this act of international courtesy, are requested to signify at once their intention to be present to Sir Henry Thompson, 35, Wimpole Street, or Mr. Ernest Hart, 42, Harley Street, the Honorary Secretaries.

FESTIVAL OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

AFTER the annual election of members of the Council of the Royal College of Surgeons on Thursday last, the Fellows, to the number of about ninety, dined together at the Albion Tavern, under the chairmanship of Mr. Henry Douglas Carden of Worcester. Amongst the visitors were Sir A. Armstrong, the Director-General of the Naval Medical Department; the Presidents of the Medical Council (Dr. Paget), of the Royal Colleges of Physicians and Surgeons (Dr. Burrows and Sir William Fergusson, Bart.); Dr. Dalrymple, M.P.; Dr. Sayre of New York; etc.

After the usual loyal toasts, that of "The Navy, Army, and Reserve Forces", was given by the Chairman, and responded to by Sir A. Armstrong, Mr. Bloxam, and Mr. Cooper. "The Medical Council" was proposed in felicitous terms by Dr. Donald Dalrymple, M.P., and the President replied in an able speech.

Dr. ORSBORN of Bitterne, Southampton, said: I have the honour of proposing the next toast—an honour which I should most fully appreciate were it not for the consideration that I am altogether unqualified for this important duty, which ought to command greater erudition, a more familiar acquaintance with the institutions that are the subject of the toast, and a higher degree of eloquence than I can possibly attain. The toast is, "The Medical Corporations of this Kingdom"; and when we remember the great and important influence which these institutions have exercised, and must of necessity continue to exercise, over the destinies of our profession, it is impossible that such a toast can be received with indifference in an assembly composed of medical men. The Royal College of Physicians has fostered some of the ablest men who have adorned the ranks of our profession and contributed to its scientific advancement—men whose names will go down to posterity surrounded with a halo of brightness which the lapse of ages can never dim, which the revolution of centuries can never impair. And to us in the present day it is a matter of congratulation that the mantle of these distinguished individuals has fallen upon one who, as President of the College, is fully competent to sustain the honour which has devolved upon him with dignity and with credit, and advantage to the institution over which he so ably presides. [*Cheers.*] Of the College of Surgeons I am bound to speak in terms of admiration and respect. We cannot mention that noble institution without calling to mind the memory of one whose name will ever rank amongst the greatest of our race—one who was a giant in his day (for in relation to anatomy and surgery Hunter was as great as is Shakespeare in relation to our own dramatic literature). He can never be surpassed, probably will never be equalled; and his vast labours have raised to his memory a monument noble as it is enduring. Other luminaries of greater or lesser magnitude have shone forth on its horizon; but amongst these are probably

few who will reflect greater honour on their noble institution than will he who is at present the occupant of its presidential chair—whose practical skill and grand surgical achievements have won for him a reputation that has extended throughout the civilised world. And now, gentlemen, let us say one word on behalf of the Society of Apothecaries—a body which has deserved well of our profession, and of which I would fain speak in terms of considerate respect. I cannot forget that probably one of the proudest moments of my life was that when I escaped from its portals carrying with me its licence to practise. It may not have done all that we could have wished, but it has done much towards promoting a higher standard of medical education; and in this respect has contributed towards the advancement of the science of our profession and its practice as an art. [*Cheers.*] I have the opportunity and the privilege of associating with this toast "The Representative Institutions of America"; and I do so with the greater pleasure from the circumstance that we are this day honoured by the presence of Dr. Sayre, a distinguished member of our profession from New York, a gentleman who has won renown by his practical benevolence and bold achievements in surgery. We all feel a great interest in everything relating to our transatlantic brethren. We know them to be characterised by a strong tendency "to go ahead"; we are cognisant of the valuable improvements they have made in surgical practice and of their researches in scientific and practical medicine; and we are willing to acknowledge that we are indebted to them for many important additions they have made to the literature of our profession. I am persuaded you will join with me in the expression of a hope that those difficulties which have for some time existed and led to an estrangement between the two peoples may speedily be removed, and that henceforth there may be between them no other rivalry than such as may arise from a desire to see which can contribute the most largely towards the promotion of the interests and welfare of our common race. Let us hope, gentlemen, that those clouds which have been so long looming in the distance may now be dispersed, and that there may burst over both nations an unclouded sunshine of prosperity and peace. [*Cheers.*]

Dr. Burrows, Sir W. Fergusson, and Dr. Sayre, responded.

Sir W. FERGUSSON expressed his gratification with the manner in which the toast had been so pleasingly brought before the meeting by Dr. Orsborn. The President of the Royal College of Physicians had responded in such comprehensive terms that he might rest satisfied with declaring his assent to all that had been said by his friend Dr. Burrows. He thought, however, that it was incumbent on him to say a little more. He was glad to perceive that the toast of the College of Surgeons had been so well received; yet, after all, they were only drinking their own health as it were, for they in a manner represented their own College. In doing so they had, however, evinced their respect for the sister institution, and in particular for the College of Physicians. He was specially glad to corroborate the statement of Dr. Burrows about the harmony which prevailed between the two Colleges in regard to the development of a conjoint board for the examination of those desirous of entering the medical profession. For the College of Surgeons he could say, with the utmost sincerity, that the best feelings prevailed towards the physicians. There was respect, affection—he might almost say love—towards the sister institution; and so much did the latter feeling prevail that a bond of matrimony seemed not far distant which would give a strength and unity to the profession as a whole, such as had often been talked of but had never yet been realised. [*Cheers.*] The Council of the College of Surgeons had cordially gone into the consideration of a scheme for a conjoint board of examination; and he was strongly of opinion that on such a board their sister institutions, which represented so large a portion of the profession in England, should have a proportionate position. A board of examiners distinct from these institutions had been proposed; but he was firmly impressed with the opinion that, whilst other kindred institutions were duly represented, the main pillars of the proposed one portal should be formed by and from the two Colleges which had long and fully represented the profession in this country. It was well that on such an occasion as this the Fellows should toast their own institution. They must bear in mind that it was the head-quarters of some 15,000 of the practitioners in Britain; and, whatever defects there might be about it, there was much that they might all be proud of. He would only refer to the great museum which was their own; and, in particular, as evidence of the activity which prevailed within the walls of the Colleges, to those numerous additions to the collection which had been made since last year, and which had been specially displayed that day for inspection. Some of them were rare, others unique, and such, therefore, as had never been seen previously.* [*Loud cheers.*]

* Sir William alluded to the interesting preparations of the skeleton, stomach, etc., of the young hippopotamus, which had attracted particular attention, and of which an account was lately published in the JOURNAL.

Dr. SAYRE responded in the following terms:—I am so overwhelmed by the applause with which you have been kind enough to receive the sentiment in honour of my country, that I feel totally inadequate to express in language a proper sense of my gratitude for the honour conferred, not upon me, but upon my native land. I most sincerely regret that some one more competent than myself is not present to respond in fitting language to the high compliment you have been pleased to pass upon American surgery. My distinguished friend Sir William Fergusson has just alluded to the "go ahead" principle exhibited by American surgeons, and to the desire now existing among the profession in England to unite the two branches of the profession, which at the present time are so distinctly separate. It is my impression, that one of the principal reasons for the rapid strides in our profession in America is the fact that we have already had the marriage ceremony performed, and are thus living in a normal professional condition, which necessarily keeps us in a healthy, active, and vigorous vitality. Celibacy, even in the church—inasmuch as it is in violation of the laws of nature—is necessarily injurious to the physical condition of man; so in our profession, things which naturally assimilate together, and to be perfect must be united, should never be separated by conventional rules. It is impossible for a man to be a thoroughly qualified surgeon, unless he be also a competent physician. Neither can a man be a properly qualified physician, unless he be also competent to judge of the proper time when to call in the aid of the acting surgeon. As far as my observation goes, the difference between English, French, and German medicine and surgery is this. We go to France to learn the alphabet of our profession, correctness of diagnosis, to be able to give the name, nature, and exact locality of any given disease; and if, when death takes place, the *post mortem* examination reveal the correctness of the diagnosis, the Frenchman is content. We go to Germany to learn the exact pathological changes that have occurred during disease, and through it. Months, and even years, of the most laborious scientific research have been spent in the minutest investigation by the microscope, and by chemical tests and analyses of the different structures of the human body, to ascertain the various changes that have been produced in their composition by different diseases. And both of these great nations have contributed much to the advancement of our profession. But we have to come to the plain practical sense of old John Bull for the application of the best means of preventing suffering, and relieving man from the various ills to which human flesh is heir. [Cheers.] But, Mr. President, you must excuse me. I came to this country, not to make dinner-speeches, but to study and to learn; and I am happy to say that I have been amply repaid for my time and trouble. I have had the privilege of witnessing the most difficult operation performed by that master-hand, Spencer Wells, who was perfectly ready with the only appropriate relief at the moment of each particular emergency, thus proving himself to be the perfect master of the situation. I have also had the honour of seeing many operations performed by that most dexterous and scientific manipulator, Sir Henry Thompson, and have learned much from his pithy and practical observations. I have looked with wonder and amazement at the number and extent of your hospitals and various public charities, and the almost innumerable crowds that daily attend them—making a field for practical study scarcely equalled on the face of the globe. But what most commanded my admiration was the wonderful museum in your Royal College of Surgeons, the nucleus of which was founded by the incessant labour of one of England's greatest surgeons—the immortal John Hunter. The collection and preservation of the labours of this great man's life, and the constant addition made thereto, and the careful and scientific manner in which they are arranged and preserved, must command for England the admiration of the civilised world. Mr. President and gentlemen,—Pardon me for detaining you so long, and permit me to close with this single sentiment—that, forgetting and forgiving all past differences, let our future efforts be to emulate each other in our endeavours to alleviate human suffering, and to promote the best interests of mankind. [Applause.]

"The Provincial Schools" was given by Mr. HANCOCK, one of the Vice-Presidents of the College, who said that he proposed the health of a body of gentlemen who did good service, and who did so to within a few years ago under difficulties. He alluded to the lecturers at the provincial schools of medicine. A very few years ago these gentlemen were placed in a most anomalous position; they were told they were competent to teach the theoretical portion of medical study, or they might teach the practical, either one or the other, but that they were incompetent to teach both; and, consequently, the student was obliged to come up to London to complete his education. At the present time that anomaly no longer existed. They now had a fair field and no favour; and he sincerely trusted that the provincial schools would not only vie with each other, but with the schools of this great metropolis,

in their endeavours to maintain and promote the welfare, the dignity, and progress, of our noble profession. [Cheers.]

Mr. VOSE SOLOMON of Birmingham replied.

"The Metropolitan Schools" was ably given by Dr. HUMPHRY, F.R.S., of Cambridge, who had no doubt of the hearty acceptance of the toast, which was that if not of the authors of our professional existence, yet certainly of our nursing mothers, from whom we had drawn milk rich with the very cream of knowledge, and which were among the most important institutions in the country. For what would those corporate bodies of which mention had just been made—what would the profession—be without the metropolitan medical schools? By that he meant the metropolitan medical teachers, who had a great work to perform, and were under a great responsibility. They had received a noble heritage—the heritage of a banner inscribed with the names of Abernethy and Cooper, of Lawrence and Travers, of Bright and Latham, and others of equal renown; and they bore that banner bravely forward, and would hand it on illuminated with additional names no less bright than those of their predecessors. [Cheers.] Dr. Humphry doubted not that those who heard him had left their respective schools with the same feelings of filial regard and honest respect for their teachers which he had carried away with him from St. Bartholomew's thirty years ago; and that many were pleased, with him, to see some of their teachers present, still active and young and fresh in work. The feelings which he carried away with him from London he had retained during the interval; and now that he was, by the suffrages of the Fellows, brought again into contact with those teachers in the Council of the College of Surgeons and in the Committees of the College of Physicians and Surgeons, who had held so many meetings and done so much to promote the matrimonial alliance that had been alluded to between the two Colleges, he could honestly say that increasing knowledge of those gentlemen in another capacity had been productive of increased respect. He found them actuated by the simple, sincere desire to promote the welfare of the profession; and their efforts to maintain the position, and, if possible, add to the influence and dignity of their respective corporate bodies, were consequent on the conviction which the profession, and, he believed, those present fully shared, that the prosperity of those bodies was intimately associated with the prosperity and status of the profession. He spoke of the good work which was being done in the metropolitan schools, and concluded by associating with the toast the name of Mr. Holmes Coote, so well known to the Fellows by the practical and scientific work he had done, and to the students by the ability with which he instructed them, and the courtesy which he showed them. [Applause.]

Mr. HOLMES COOTE, of St. Bartholomew's Hospital, replied that the great honour conferred upon him to respond was unexpected. He felt much gratified to think that the London schools of medicine still retained the confidence of the profession, and he thought that much of that confidence was acquired by the greater freedom of professional intercourse, and the valuable medical and surgical contributions which could now be readily obtained from all known quarters. The schools of England, Scotland, and Ireland, the patient reports so admirably got up and printed by our brethren in America—these were advantages which those of past ages did not enjoy. [Cheers.]

"The Chairman" was proposed, with his usual eloquence, by Mr. JAMES PAGET, F.R.S., who said that, as an old and esteemed friend, a distinguished surgeon, and one of the best representatives of the provincial division of the profession, Mr. Carden's great knowledge, skill, and common sense had gained for him the complete confidence of both the profession and the public in a wide field of practice; and in the same field his personal character had won respect not only for himself, but for all his brethren. And for this all were indebted to him; for the estimation in which our profession was held depended more on the provincial than on the metropolitan members. They lived nearer to their neighbours; their social influence was more felt; the good they did, and the good tone of their lives, were closely observed, and misconduct was more evident and more likely to be regarded as discreditable to the whole profession. Mr. Carden's health, therefore, as that of a good surgeon and a good example, ought to be drank very heartily. [Cheers.]

The CHAIRMAN feelingly and eloquently returned thanks, and proposed the health of the Honorary Secretary, Mr. T. Carr Jackson, who was enthusiastically cheered; especially when he announced, before sitting down, that Sir William Fergusson, Bart., the greatest, as he was the most popular surgeon of the day, had consented to take the chair at the next annual festival.

As showing the great interest taken in the annual election of Fellows into the Council of the College it may, as it deserves to, be recorded that gentlemen attended from distant provincial towns, as will be seen in the accompanying list. Messrs. Adams (Maidstone), Allard (Tewks-

bury), Ashley (Staines), Anderson (Derby), Ambler (Hemel Hempstead), Bell, Brown, and Hutchins (Rochester), Carden (Worcester), Cattlin and Rugg (Brighton), Crosse (Norwich), Curling (Ramsgate), Dalrymple, M.P. (Norwich), Fox (Broughton, Hants), Green (Bristol), Havers (Berkhamstead), Holman (Hurstpierpoint), Hulme (Guildford), Jones (Brackley), Lowe (Burton-on-Trent), Lowes (Gosport) Lush and Scriven (Weymouth), May (Reading), Monckton (Rugeley), Morris (Spalding), Nankivell (Chatham), Nicholls (Chelmsford), Orsborn (Bitterne), Pern (Botley), Orton (Narborough), Pranker (Langport), Ryatt (Newbury), Smith (Stevenage), Heckstall Smith (St. Mary's Cray), Southam (Manchester), Spurrell (Belvedere), Symonds (Oxford), Thomas and Tait (Birmingham), Thomson (Ross), Ward (Huntingdon), Wilbin (Southampton), and Winchester (Maidenhead).

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING.

THE Thirty-ninth Annual Meeting of the British Medical Association will be held in Plymouth, on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th of August next.

President—E. CHARLTON, M.D., D.C.L., Physician to the Newcastle-upon-Tyne Infirmary.

President-elect—JOHN WHIPPLE, Esq., F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital.

An *Address in Medicine* will be delivered by GEORGE JOHNSON, M.D., F.R.C.P., Professor of Medicine in King's College, London.

An *Address in Surgery* will be delivered by JOSEPH LISTER, Esq., F.R.S., Professor of Clinical Surgery in the University of Edinburgh.

Notices of Motion.—The following notices have been given.

The PRESIDENT OF THE COUNCIL: Rule 4. To insert "President-elect", and to omit "Secretary".—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting."—Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary".—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District", and to erase the words "the Secretary of the Association".—Rule 9. To omit the words between "The President of the Council" and "shall be elected"—Rule 10. To omit the words between "The Treasurer" and "shall be elected".—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office". To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting".—Rule 13. To erase the words "Secretary shall call", and to substitute "President of Council shall direct to be called".—Rule 14. Between "shall" and "be recommended", to insert "express his desire in writing, and shall be".—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea". To erase the words after "such member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding".—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association".—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and".

Dr. STEELE (Liverpool): Election of Committee of Council. Every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: "I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed) ———." Together with a nomination-paper signed by six members of the Association, in the following terms: "We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association." The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the BRITISH MEDICAL JOURNAL not later than months prior to the Annual Meeting of the Association.

Mr. NICHOLSON (Hull): To alter Law 16, line 2. For "three", insert "two".

Dr. WADE (Birmingham): In Law 8, Paragraph No. 3, of the duties of Council, to alter "ten" into "twenty-five"; and to omit the words "and one Secretary from each Branch".

Invitation to Torquay.—The members of the medical profession at Torquay request the pleasure of the company at luncheon, on Saturday, August 12th, at 3 o'clock, of any member of the British Medical Association residing beyond fifty miles from the place. Their object in this limitation as to distance is that of furnishing an opportunity to strangers unfamiliar with Devonshire to become acquainted with Torquay and its immediate neighbourhood. Any member who may wish to favour them with his presence, will oblige by notifying the same at his early convenience—and not later than on the Wednesday of the Plymouth meeting—to the Honorary Secretary, Dr. Powell, Infirmary, Torquay.

Special Railway Arrangements.—First and second class ordinary and express return tickets issued at any South Devon, Cornwall, or West Cornwall Station to Plymouth, on August 7th and following days, will be available for the return journey any day up to and including Monday, August 21st. First and second class return tickets, at single fare for the double journey, available as above, may be issued from any Station on these lines to Plymouth, or from Plymouth to any South Devon, Cornwall, or West Cornwall station, on August 7th and following days to August 21st inclusive, to the members of the British Medical Association producing a certificate or the Association card of membership. Unless such documents are produced, return tickets at ordinary or express fares must be issued. When tickets at single fare for the double journey are issued, the booking clerks must write "return" upon them, and place their initials below the word "return". Ordinary tickets endorsed "return" will be available by express trains without payment of the difference of fare.—The Bristol and Exeter Railway have agreed to the same conditions as the South Devon, Cornwall, and South Cornwall Railways.—The South Devon, Cornwall, and West Cornwall Railways have also promised to convey any instruments, medical and surgical appliances, etc., for the Annual Museum, at *half the usual fares*, at the owner's risk.—Members intending to avail themselves of the return tickets should communicate at once with Dr. Littleton, Lansdown Terrace, Plymouth.

Gentlemen desirous of reading papers, cases, or any other communications, are requested to give notice of the same to the General Secretary at their earliest convenience.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary*.

13, Newhall Street, Birmingham, June 13th, 1871.

THE ANNUAL MEETING IN 1871.

THE Local Committee appointed by "The Three Towns", Plymouth, Devonport, and Stonehouse, to prepare for the annual meeting of the British Medical Association in 1871, have much pleasure in acquainting the members that they have succeeded in obtaining the cordial co-operation and assistance of the civil and military authorities; so that every facility will be furnished them for inspecting this naval and military arsenal; Her Majesty's ships of war in the Hamoaze and Plymouth Sound; Her Majesty's dockyards at Devonport and Keyham; the Royal William Victualling Yard and the naval and military hospitals in Stonehouse; the Breakwater and its lighthouse; the Eddystone Lighthouse; the Plymouth Citadel, the Hoe, and the forts recently erected within a radius of five miles.

By the kind permission of His Grace the Duke of Bedford, the Right Honourables the Earl of Mount Edgcumbe, the Earl of St. Germans, and the Earl of Morley, and other gentlemen, opportunities will be offered to the members of surveying the grounds and the extensive views commanded in the parks attached to their mansions on the banks of the Tamar and Plym; whereby they will be enabled to pass in review the objects before-named, as well as the magazines at Bull Point; Antony House, the seat of W. H. Pole-Carew, Esq., whereat is preserved Holbein's portrait of Dr. Butts, Physician to Henry VIII; Ince Castle, the residence (*temp.* Charles II) of the Wit of Cornwall, Killegrew; St. German's Church, the site of Cornwall's ancient Cathedral, and Port Eliot (the ancient Priory); Trematon Castle, the residence of the Norman Earls of Cornwall; the late Brunel's master-piece, the Royal Albert Bridge at Saltash; Landulph Church; Buckland Abbey, the seat of Drake, the great circumnavigator; Maristowe; Cothele House; Pentillie Castle; Morwell Rocks; Harewood, the scene of the fair Elfreda's treachery; and other objects of interest in a trip of twenty miles by steamboat.

Other excursions will be arranged, with the sanction of the Directors, etc., of the Railways—to Launceston Castle, the Ancient Cornish stronghold; to the Saxon Abbey at Tavistock; to Endsleigh Cottage; and to the wild and romantic scenery of Dartmoor.

A most interesting excursion into West Cornwall has also been planned to take place during the Association's visit.

The Royal Institution of Cornwall, under the presidency of Mr. D. J. Henwood, F.R.S., in order that opportunity may be given to the members of the British Medical Association for seeing the most noted and interesting objects in the extreme West of England under the most favourable circumstances, will make its annual excursion on Monday and Tuesday, the 14th and 15th of August. Penzance, the approach to which affords an excellent view of St. Michael's Mount, will be the place of rendezvous on the first day; and, after an inspection of this most westerly and mildest of British Winter resorts, the party will visit the Logan Rock and Land's End, concluding the day with an evening meeting at St. Just. On the morrow, the famous mine of Botallack will be explored, the fine northern coast line will be skirted, and the excursion will terminate in the picturesque neighbourhood of St. Ives, in time for the return journey to Plymouth. The line of route presents a great many remarkable objects of antiquity, especially primeval ones.

A steamer will be engaged to make short trips daily, and at stated hours, during the visit of the Association, thus enabling those members who may not be desirous of hearing the delivery of certain papers, to spend their time agreeably in viewing the rich scenery of the port.

PAPERS FOR THE ANNUAL MEETING AT PLYMOUTH, 1871.

THE following are the names of the Honorary Secretaries of Sections for the approaching Annual Meeting.

Medicine.—Dr. Clay, Plymouth; Dr. Wade, Birmingham.

Surgery.—W. P. Swain, Esq., Ker Street, Devonport; C. Steele, Esq., Clifton, Bristol.

Midwifery.—Dr. J. Rolston, Stoke, Devonport; Dr. Phillips, 26, Finsbury Square, London.

Public Medicine.—Dr. Row, Devonport; David Davies, Esq., Queen Square, Bristol.

Gentlemen proposing to read papers or to forward communications for the Annual Meeting are requested to communicate with the least possible delay with the Sectional Secretaries, in order that the titles of their papers may be duly announced, and that arrangements may be made for the order in which they are to be read. Abstracts should at the same time be prepared, and communicated beforehand to the JOURNAL, in order that copies of such abstracts may be issued by us for the simultaneous use of the other medical papers.

THE ANNUAL MUSEUM.

THE "Annual Museum" of this Association will be open during the four days of the meeting, for the exhibition of:

1. The latest inventions in medical and surgical instruments and appliances of every kind. Also, for the special exhibition of ancient and modern fracture apparatus, or diagrams of such, thus setting forth the history of the treatment of fractures from the earliest records down to the present day.

2. New drugs and their preparations.

3. New articles of diet for invalids.

4. Pathological Specimens; also photographs, casts, etc., illustrating disease.

5. New works on medicine, surgery, etc.

6. Models or drawings of any object of professional interest not included in the above list.

Notice to Exhibitors.—Application should be made as soon as possible; at the same time giving a list of the objects to be exhibited, and mentioning the space required. All objects sent must have a description attached. Parcels for the Museum should be addressed—"British Medical Association, the Assembly Rooms, Plymouth; care of H. Greenway, Esq." They must be delivered on or before July 31st, and be removed within three days after the termination of the meeting. Expenses of carriage and all risk must be borne by the exhibitors. A card, bearing the name and address of the exhibitor, must be enclosed in each package, ready to be fixed on the outside. All communications respecting the Museum to be addressed to "Henry Greenway, Esq., Surgeon, Plymouth", the Secretary for that department.

YORKSHIRE BRANCH.

THE annual meeting of the above Branch will be held at the Infirmary, Bradford, on Wednesday, 26th July, at 2.15 P.M.; R. H. MEADE, Esq., President, in the Chair.

The dinner will take place at the Victoria Hotel, at 5 P.M. Tickets (exclusive of wine), 7s. each.

Gentlemen having papers or cases to communicate, or who intend dining, are requested to send an early intimation to the Secretary, so that the necessary arrangements may be made.

W. PROCTER, M.D., *Honorary Secretary*.

York, July 12th, 1871.

SOUTH-EASTERN BRANCH: ANNUAL MEETING.

THE twenty-seventh annual meeting of this Branch was held at the Steyne Hotel, Worthing, on Friday, June 30th.

Mr. JOHN M. BURTON (Lee), the President for 1870-71, opened the proceedings, and briefly referred to the operations of the Association during the past year. General politics had so occupied the time of Parliament, that there was no prospect of carrying a Medical Reform Bill this session. The Bill that was introduced by the proprietors of the *Lancet* had fallen still-born from the authors' hands. As regarded the affairs of the Branch, it was quite gratifying to mention how the district meetings had flourished during the past year. The meeting at Dartford at the beginning of the year was a great success. One important point in connexion with these meetings was, that they brought the members together from all parts, and formed a recruiting-ground for the Association. With respect to his own position as President, he had had exceedingly little to do; but he was afraid his successor would have a great deal more responsibility devolving upon him. After thanking the members for the kindness they had shown him, Mr. Burton vacated the chair, and introduced his successor, Dr. Tyacke, to the meeting.

Dr. TYACKE, on taking the chair, was received with considerable applause.

Vote of Thanks.—Dr. ALFRED HALL (Brighton) proposed—"That the thanks of the members be given to the President and Vice-Presidents for the past year, Mr. John Burton, Dr. Jeaffreson, and Mr. Pinching." All those who were present at the last meeting would not fail to remember how admirably the President fulfilled his duty on that occasion. It was one of the most pleasant meetings he had ever attended; and the members living at a distance regretted having to leave early. With regard to the other two gentlemen mentioned in the resolution, there could not possibly have been appointed more efficient officers.

The resolution, having been seconded, was carried unanimously.

Mr. BURTON, on behalf of himself and colleagues, returned thanks.

President's Address.—Dr. TYACKE, who, on rising, was greeted with cheers, said: My grateful thanks are due to you, and most sincerely and cordially do I proffer them, for the honour you have been pleased to confer on me in electing me to the position which I now occupy. My claim to such a distinguished mark of your approbation is not such as I should have desired it to be; and, had I been present at the meeting at which the election took place, I feel that I should have ventured to suggest a more worthy representative, especially for this occasion. Residing as I do at the western extremity of our district, inconvenient means of communication and other impediments have prevented me from attending the meetings of the Association nearly so frequently as I should have desired; but, as a member of some thirty years' standing, I have always felt very great interest in the Association, as the most effectual means of promoting the interests of the medical profession, as well as of extending the results of its practical and scientific investigations for the benefit of the public at large. At the annual meetings of our Branch, I believe it is desired that the proceedings should be of a sociable, rather than of a scientific kind; and that long papers and long speeches should be transferred to our district meetings. I must not, therefore, occupy your time by many words. Our weekly JOURNAL and other periodicals fully detail the current topics connected with medical science and policy, so that a general *résumé* of them is not desirable; but perhaps a few words may be expected from me in reference to the still prevalent epidemic—small-pox. Notwithstanding that Dr. Seaton and others had warned us that, in consequence of the neglect by many of the prophylactic influence handed down to us from Jenner, the enemy might any day fall on us unprepared, such a virulent attack of the disease was little anticipated either by the profession or by the public. Like a neighbouring nation, lulled by the *prestige* of former victories, they little heeded the means of defence within their

reach, till the enemy appeared around and among them. The havoc that has followed is too well known. But may we not hope that the consequent panic may lead to good, by rousing the careless to a keener sense of their danger, and thus, by the more general employment of vaccination and revaccination, leave at least the present generation fairly assured against a return of the disease in an epidemic form? With regard to the future, however, the remembrance of the past must leave us apprehensive of the recurrence of the former indifference among the many, and of the want of confidence in the value of vaccination among the few. And by what means can such a result and its consequences be guarded against? In the first place, by speedy legislative action. Vaccination should be performed within a limited period, under penalty; and the result should be certified by medical authority. And the importance of revaccination about the age of puberty should be urgently inculcated. The Vaccination Amendment Bill may effect probably as much as is practicable in these days, when people claim the right, for profit or pleasure, or other selfish motive, to endanger the health and lives not only of themselves and their own households, but also of the public at large. As regards sanitary measures in general, the ignorance and prejudices of the masses render the efforts of the enlightened few to a serious extent inoperative. Even strong governments in this country shrink from enforcing the law against proved violation of the most recent Sanitary Acts; and insanitary abuses are allowed to continue, to the danger of health and life, and increasing burden of local rates. Perhaps the only remedy for such a state of things—and it can be only gradually brought about—is the special education of the people in sanitary matters. They should be taught that the means for the prevention of disease are more important even than those for the cure of it. They should be instructed as to the conditions and circumstances that influence, favourably or prejudicially, their physical and moral well. To this end, efforts should be made in our parish and district schools, as well as in our higher educational establishments. Much might be effected by the ministers of religion, the city magistrate, and the country gentleman. But medical men, by position and knowledge, are especially qualified to assist in the promotion of education of the desired kind; and we shall be found, I trust, ready and desirous, at all times and on all occasions, to exert ourselves in the furtherance of sanitary measures, and to instruct the minds of those with whom we may have influence in a just appreciation of them. Most of us, in the treatment of diseases, especially of the typhoid type, must have observed that, in certain houses and localities, the usual remedies fail in their effect; that fevers of the severer kind are more than ordinarily fatal; and that convalescence from slight attacks is tedious or impossible without change to another more healthy district. Such cases frequently come under my observation, and I find it very difficult to persuade the patients or their friends that the obstacle to their recovery lies in the insanitary condition of their own houses and premises. It is not sufficient to inform them that the close tainted air they breathe and the impure water they drink are injuring their constitutions: the facts must be proved to them by examples in which they themselves are the subjects; and thus I have been able to convince many of the danger by which they are surrounded, after all attempts at persuasion had failed. Let us then, gentlemen, not only observe, but *register*, such sad but useful instances as in daily practice pass before us, as a means of persuading those whom ordinary reasoning cannot reach. I have ventured to occupy thus much of your time, gentlemen (and I thank you for so patiently bearing with me), by way of introduction to the more interesting occupation that awaits us. On quitting this room, Dr. Collet and other medical friends of Worthing will do us the honour of showing and explaining to us the system of water and drainage works that have been established in this place. The existence of such works here does great credit to those who have been instrumental in establishing them; and I trust that the beneficial results do not and will not fall short of their most sanguine expectation.

Dr. EDMUND YOUNG proposed—"That the thanks of the meeting be presented to Dr. Tyacke for presiding, and for giving so interesting an address." The few short concise rules which Dr. Tyacke had laid before the members were worthy of their most serious attention.

Mr. CORDY BURROWS (Brighton) seconded this resolution, and endorsed the remark as to the valuable nature of the address. In his opinion, the new Vaccination Bill was most imperfect. It appeared that any person could evade it by the payment of a fine of twenty shillings; and, having paid that fine once, he was no longer liable. It was quite clear that, in the interests of society, a much more stringent measure must be passed. He had written to certain members of Parliament on the subject, and he trusted that the objectionable clause would be removed. Mr. Burrows referred with much pleasure to the election of Dr. Tyacke, and referred to a meeting held by the Branch at Chichester twenty-five years ago, under the presidency of Dr.

M'Carogher, when the active interest taken in it by their present chairman added in no small degree to the enjoyment and gratification of all who then attended.

The resolution was unanimously carried.

The PRESIDENT thanked the meeting. He felt that his appointment would have been more suitably filled by a resident in the town where the meeting was held, and who would have given them some interesting and important local information.

Report of Council.—The following report of the Council was read by Mr. HODGSON, the Honorary Secretary.

The Executive Council of the South-Eastern Branch again have pleasure in reporting the continued increase and prosperity of the Branch. The number of its members at the time of our meeting last year was 304. That number has been reduced since by seventeen removals (four of them on account of death), and increased by twenty-six new members, making our present total 313. The deceased members were Dr. Hatton of Belvedere, Dr. Bacon Phillips of Brighton, Mr. Tippetts of Brompton, and Mr. Weekes of Hurstpierpoint. It is worthy of remark that the new members during the past year, as also during several preceding years, have come to us mainly from those parts of the Branch where the district meetings are most energetically carried out—namely, from East and West Kent, East Surrey, and East Sussex. Thus, of the twenty-six new members that have joined us during the past twelve months, only one is resident in West Surrey, and only two in West Sussex; of the thirty-four new members in the previous year, only one resided in West Surrey, and one in West Sussex; and of the forty-eight new members in the year before that, only one resided in West Sussex, and three in West Surrey. The members in West Sussex recently, with the approval of the Council, detached themselves from the West Surrey District, and formed a district by themselves, leaving West Surrey to do the same. With Mr. Harris of Worthing as Local Secretary, the West Sussex District held its first meeting in April last, which went off very cordially, though thinly attended; the latter circumstance being partly in consequence of the day being excessively wet. It is hoped that the fact of the present annual meeting being held at Worthing may lead to a further development of the West Sussex District.

Our renewed thanks are due to the District Honorary Secretaries, as it is certain that the district meetings contribute largely to the best interests of the Association in every way.

As the representative of the Branch in the Parliamentary Committee of the Association, the Council have again elected, with his consent, Dr. Holman of Reigate.

The Council, whilst congratulating their fellow-members of the Branch on the very small number of subscriptions remaining ultimately uncollected in this Branch for the year 1870, would yet urge upon them the great importance of paying them *much earlier in the year* than seems the custom with many of them. The more efficient and economical working of the Association would thereby be much promoted, and the duties of our Honorary Secretary (which, in so large a Branch, are necessarily arduous) would be somewhat lessened. The Council observe with much concern the large amount of arrears reported as due from members of the Association generally who are not members of Branches; and they trust that the measures about to be proposed at the general annual meeting at Plymouth by the Committee of Council will prove an efficient remedy for so serious an evil.

The Council regret that it has been found necessary to defer until the next session of Parliament the important subject of medical reform. Mr. Forster received the deputation of our Association with the assurance that it was impossible in this crowded session to pass any measure on this subject. The Association must press its claim to a favourable hearing next session, each of us then trying to help to the utmost of our power.

Dr. COLLET (Worthing) moved—"That the Report now read be approved and adopted." He expressed his hearty conviction of the importance of the district meetings. He had been present at two in that room, and one at Horsham; they were but thinly attended, although worthy of much larger congregations. Most excellent papers were delivered. The paper read by Dr. Martin was a very valuable one; and that delivered by Dr. A. Hall, he was sure, might have been given with benefit before a thousand people. They must look forward to larger meetings, and induce members to come, even though at a little personal inconvenience. The Honorary Secretaries were especially deserving of thanks. Judging by the manner in which his friend Mr. Harris, the District Secretary for West Sussex, performed his duties, he was sure they were fully entitled to the warmest acknowledgments of the meeting. Their labours in connexion with the Association might not have been really arduous; but, carried on all the year round, in the midst of daily work, they necessarily involved a large amount of self-denial and sacrifice of

time. With regard to the appointment of Dr. Holman, he (Dr. Collet) considered a most judicious selection had been made; for Dr. Holman was pre-eminently qualified for the duties of the office to which he had been appointed. Reference had been made to the Medical Reform Bill. He understood very little indeed of the subject of medical reform; but he was glad to see that the matter had been taken up, and he hoped they would see the fruits of it next year.

Mr. WORTHINGTON having seconded the motion, it was unanimously carried.

Financial Report.—The SECRETARY read the financial report, from which it appeared that the Branch was in a very flourishing condition. The balance in hand was £34:16:4; that of last year having been £32:7:4. The accounts had been duly audited.

Mr. CORDY BURROWS said that the step taken last year, in increasing the annual subscription from 2s. 6d. to 4s., in order to dispense with the district subscriptions and to reimburse the District Secretaries' travelling expenses out of the funds, had proved highly satisfactory. The usefulness of the Association had been materially advanced, and they left off with a very good balance. He moved that the accounts just read by the Secretary be approved.

Dr. HALL seconded the motion, which was unanimously carried.

Next Annual Meeting, Officers, etc.—Mr. BURTON said that the last annual meeting was held in Kent, the present was held in Sussex, and he thought that of next year should be held in Surrey. He moved that the meeting be held next year at the Crystal Palace, for Croydon. —Mr. NAPPER seconded.

Dr. HALL nominated Dr. Carpenter as President for the next annual meeting, and Drs. Hetley and A. Duke as Vice-Presidents.

Dr. SUTHERLAND seconded the resolution. He knew that Dr. Carpenter would make a most efficient and very worthy President; for whatever that gentleman took in hand he carried out to the fullest possible extent.

The resolution was unanimously carried.

The SECRETARY next reported the result of the scrutiny of the voting-papers. The votes were as follows.

Fifteen Representatives of the Branch in the General Council: John Armstrong, M.D.; R. L. Bowles, M.D.; J. Cordy Burrows, Esq.; John M. Burton, Esq.; Alfred Carpenter, M.D.; William Carr, M.D.; Frederick Fry, Esq.; Alfred Hall, M.D.; Constantine Holman, M.D.; Stephen Monckton, M.D.; Albert Napper, Esq.; T. Heckstall Smith, Esq.; James R. Stedman, M.D.; Nicholas Tyacke, M.D.; Edward Westall, M.D.

On the motion of Dr. WITHERS MOORE, the best thanks of the meeting were presented to the Executive Council for the efficient manner in which they had discharged their duties.

Fifteen other elected Members of the Executive Council: James H. Aveling, M.D.; Charles W. Chaldecott, Esq.; J. Cooper Forster, Esq.; Thomas Fuller, M.D.; Richard Gravely, Esq.; Horace Jeaffreson, M.D.; Thomas Joyce, M.D.; George Lowdell, Esq.; T. H. Martin, Esq.; James Reid, Esq.; George Tatham, Esq.; Charles Trustram, Esq.; John Underwood, M.D.; William Wallis, Esq.; John R. Wardell, M.D.

Mr. BURTON acknowledged briefly this vote of thanks, and, in an eulogistic speech, proposed the re-election of the Honorary Secretary, Mr. Hodgson. That gentleman had, he said, most admirably performed his duties—not going about them in a mere perfunctory way, but entering most thoroughly into the work; and the Association had derived the greatest benefit from his self-denying labours.

Dr. ARMSTRONG (Gravesend) seconded the proposal. He was quite sure that all men of business were fully aware of the vast importance of the office of Secretary, especially when filled by one who entered with heart and spirit into everything that came before him. That their present Secretary had discharged his duties in a most faithful manner, all the members had more or less an opportunity of judging. Dr. Armstrong took the present opportunity of making some remarks upon the importance of the district meetings. He could speak with considerable experience on this point, and was perfectly certain that they were not only beneficial to the profession generally—not only opportunities for social intercourse; but that they were most advantageous to the individual members themselves. He could not remember having attended any meeting where he did not learn something worth taking away. He was quite sure that no man could prepare a paper for those meetings without himself deriving an immense benefit therefrom, in the improvement of his own mental calibre.

The PRESIDENT put the resolution to the meeting, and it was carried.

The HONORARY SECRETARY said he should be happy to continue to do his best for the Association; and he thanked most heartily the

members for their kind appreciation of his services. The only difficulty was, that the more one's private affairs prospered, the more was work of this sort likely to clash; and, as the Branch had now grown to such proportions, it did happen at times that he experienced considerable difficulty in getting through the work that had to be done. He again thanked them for the cordial feeling which had ever been shown towards him.

Dinner, etc.—This terminated the business of the meeting; and, vehicles being in readiness, the party, escorted by Dr. Collet and Mr. Harris, proceeded to the waterworks and sewage-farm on the outskirts of the town. On returning to the hotel, a capital dinner was provided in the handsome assembly room of the establishment, and between thirty and forty gentlemen sat down. A quantity of magnificent fruit and flowers was most liberally presented by Dr. Morgan of Henfield. Dr. Tyacke was in the chair, and Dr. Collet in the vice-chair.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE Thirty-fifth Annual Meeting of this Branch was held in the Medical Institution, Liverpool, on Wednesday, June 28th. Seventy-seven members and visitors were present.

President's Address.—The President-Elect (Dr. DESMOND) took the chair, and delivered an able and interesting address. In the first place, he welcomed the members to Liverpool, after an interval of five years. He next paid a tribute to the services rendered to science by the medical press, and he especially congratulated the Association on having so excellent a JOURNAL. He then noticed the improvements that had recently been made in the several departments of practice, and referred at length to those relating to the treatment of diseases of women. Dr. Desmond concluded his remarks by drawing attention to the increase in the number of cases of hydrophobia which had taken place during the last year, no fewer than seven cases having occurred in Liverpool during the past six months; and he especially commended the study of this terrible disease to the profession generally.

Report of Council.—The following report was read. Your Council, in presenting their annual report, desire to express the satisfaction they feel in again meeting the members of the Lancashire and Cheshire Branch in Liverpool. Since the last anniversary meeting, in Preston, a subject which has occupied much of the attention of the profession has been the Medical Acts Amendment Bill, introduced by the present Government during the last Parliamentary session. This Bill was thoroughly discussed by your Branch, as well as by the Association generally; and though it presented certain advantages, yet it in no way provided for the direct representation of the general body of practitioners upon the Medical Council. The Association being pledged to the principle of direct representation, could not pursue any other course than that of strenuously opposing a measure which failed to recognise so important a feature in medical legislation. The result of the opposition on the part of the Association was the abandonment of the Bill. Your Council have to announce that your President (Dr. Desmond) has again consented to represent your Branch on the Parliamentary Committee of the parent Association. Your Council have much pleasure in congratulating the members on the increasing prosperity of the Branch. At the beginning of the year, a number of addresses were sent round to the members of the profession resident in Lancashire and Cheshire, in which the objects of the Association were stated. The result has been highly satisfactory, no fewer than seventy-two new members having joined the Branch since the last annual meeting. The number of members lost during the past year from various causes amount to twenty, thus leaving at the present 348 members—a number considerably greater than in any previous year.

Your Council have to regret the loss by death during the past year of several old and valued members of the Association; amongst these may be mentioned the names of Mr. Mallett, of Bolton, a former President of the Branch, and Mr. Daglish, of Wigan, who for many years took an active interest in all that related to the welfare of the Association. (The Report then alluded to the vacancies in the Council, and to the appointment of Representatives of the Branch.)

Dr. Simpson having retired from the local secretaryship at Manchester, your Council have appointed Mr. S. M. Bradley as his successor. The financial statement is in the hands of the meeting. Your Council have pleasure in stating that they have received an invitation to hold the next annual meeting in Manchester, and that a resolution to that effect will be proposed to the meeting.

Mr. GARTHSIDE moved that the Report of the Council be adopted. This was seconded by Dr. C. E. Lyster, and unanimously carried.

Vote of Thanks.—Mr. MATHER moved that a vote of thanks be given to the late President (Dr. Spencer), the Vice-Presidents, Honorary Secretaries, and other members of Council. This was seconded by Mr. C. B. WILSON, and unanimously carried.

In acknowledging the compliment on behalf of himself and the other office-bearers, Dr. SPENCER expressed regret that, by reason of the late arrival of his train, he was prevented from introducing his successor. He felt sure that the Branch had exercised a wise discretion in selecting Dr. Desmond as their President for the ensuing year.

Next Annual Meeting: Officers and Council.—It was proposed by Dr. WILKINSON that the next annual meeting be held in Manchester, and that T. Mellor, Esq., be appointed President-elect; and that Dr. John Cameron and Dr. Ransome be appointed Vice-President-elect. This was seconded by Dr. E. WATERS (Chester), and unanimously carried. Eight gentlemen, whose names are distinguished by asterisks in the following list, were then elected by ballot to fill up the vacancies in the Council, which is now composed of the following twenty members:—E. Bowen, M.D.; J. Cameron, M.D.; *S. Crompton, M.D.; *E. D. De Vitre, M.D.; T. Davies-Colley, M.D.; L. E. Desmond, M.D.; *W. H. Fitzpatrick, M.D.; *N. S. Glazebrook, Esq.; John Harrison, Esq.; Thomas Howitt, Esq.; *C. Johnson, Esq.; J. P. Langshaw, Esq.; *C. E. Lyster, M.D.; W. McEwen, M.D.; *W. McCheane, Esq.; *J. McNaught, M.D.; J. E. Morgan, M.D.; D. W. Parsons, L.R.C.P.; A. Ransome, M.D.; J. Thorburn, M.D.

Representatives in the General Council.—Mr. HIGGINSON moved the next resolution, which was seconded by Mr. BAILEY, and carried: "That the following gentlemen be elected representatives of the Branch in the General Council:—T. Davies-Colley, M.D.; L. E. Desmond, M.D.; W. Hall, L.R.C.P.; W. Howitt, Esq.; D. W. Parsons, L.R.C.P.; H. Simpson, M.D.; T. Mellor, Esq.; G. W. Mould, Esq.; Wm. Roberts, M.D.; T. L. Rogers, M.D.; L. Spencer, M.D.; G. Southam, Esq.; A. B. Steele, L.R.C.P.; J. Vose, M.D.; E. Waters, M.D.; A. T. H. Waters, M.D.; M. A. E. Wilkinson, M.D.; The Honorary Secretary *ex officio*."

New Member.—Dr. Howsin, of Newton, was elected a Member of this Branch.

Papers and Cases.—The following communications were then made.

1. Dr. NEVINS narrated a case where long continued Cerebral Pain had been removed by operating upon an External Squint.

2. Dr. HADDON read the notes of a case of Typhoid Fever with a Rare Form of Eruption; and also a case of Meningitis, with diagrams of the pulse-rate and temperature.

3. Dr. C. E. LYSTER exhibited the Pneumatic Aspirator, and referred to cases where he had used it with great advantage.

4. Mr. HIGGINSON exhibited his Transfusion Instrument, and pointed out the several advantages attending its use. He had recently had another successful case.

5. Dr. ROBINSON remarked on the great advantage which he had seen follow from the Diffusion of the Watery Vapour of Carbolic Acid through the air of an apartment in cases such as scarlatina maligna, putrid sore throat, and affections attended with foetid expectoration. He exhibited a kettle with a long spout, by which the diffusion was readily and most conveniently effected.

6. Mr. BICKERSTETH exhibited a very large Tumour, which he had recently removed from the Scrotum, and also a Tumour of considerable size which he had removed from the side of the Pharynx by enucleation. In both cases, the results were highly satisfactory; the patients were introduced in order that the members might have an opportunity of examining them. Both cases were well illustrated by photographs and sketches taken before and after operation.

7. Dr. BEALES showed a portion of the Stomach of a youth in which was a Perforating Ulcer. The patient died fourteen hours after the first symptom. Dr. Beales also showed a portion of the rectum, measuring four to five inches, which had sloughed away. The patient was sixty-two years age, and was still under treatment.

8. Dr. GLYNN exhibited and explained his form of Self-illuminating Ophthalmoscope. He demonstrated on a dog the great facility which it afforded for examining the eye in different positions.

9. Mr. T. SHADFORD WALKER made some remarks on the Treatment of Deafness.

Votes of Thanks were passed to the readers of papers and exhibitors; to the President and Council of the Liverpool Medical Institution, for the use of the building; and to the President (Dr. Desmond).

The Dinner was held, at half-past Four o'Clock, at the Adelphi Hotel, under the Presidency of Dr. Desmond. Sixty-eight members and visitors were present.

SPECIAL CORRESPONDENCE.

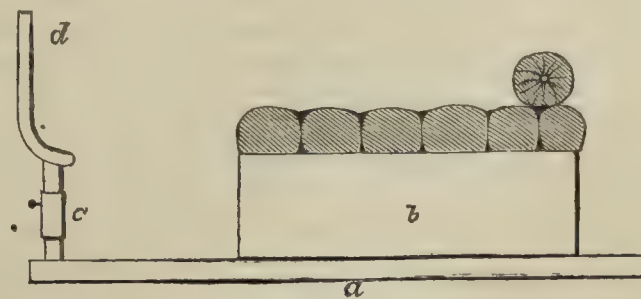
VIENNA.

[FROM A SPECIAL CORRESPONDENT.]

Case of Retained Menstrual Fluid.—The girl, to whom I referred in my letter of May 7th, lived fifteen days after the operation, which was supposed at the time to have been a puncture of the uterus, which, however, it was not. The first abnormality found was atresia vaginae at the vulva; this I did not mention before, as I was not then aware of it. On cutting through the imperforate vulva, Billroth found higher up in the vagina another obstruction, which he took for an imperforate uterine neck. At the *post mortem* examination, however, a dissection showed that a second vaginal atresia existed about the middle of the canal, and that the neck of the uterus was normal. In addition to dilatation of the uterus itself, there were dilatation, contortion, and great thinning of the right Fallopian tube, which, indeed, had burst after the operation, so that a quantity of the confined blood had escaped into the peritoneum. There was general peritonitis with adhesion of the intestines by means of inflammatory flakes; and, besides this, retro-peritoneal abscess.

Galvano-caustic Polypus-snare.—This is a very neat instrument, and consists of a combination of the ordinary polypus-snare with the galvanic cautery. A thick platinum wire is used for the snare, and is capable of being made red-hot by a galvanic current, the handle of the instrument receiving the poles of a battery, contact being made and broken at will by moving an appropriate slide. With this instrument Billroth has lately removed part of a sarcoma from the posterior nares, a melano-sarcoma from the rectum, and another tumour from the fauces. He first included the neck of each tumour in the loop of the snare, tightening the wire up by turning the screw-handle until the tumour was just grasped. Contact was now made, and a gentle turn of the handle once more drew the hot wire through, the tumours coming away painlessly, and in two cases quite bloodlessly. Amputation of the penis, in a case of epithelioma of the organ, was also done by means of the same instrument. In this case no preliminary arrest of the blood-flow into the penis was made, and no blood was lost in the operation (May 16th). On June 9th, a second operation was done—that of slitting the urethra and sewing its edges to the skin around.

Couch for Bandaging.—Those who are in the habit of putting on starched or gypsum bandages around the thigh and pelvis, and who know what a nuisance it is, when they come to the "spica" turns round the hip, to have to depend on assistants who, when the signal to lift is given, either do it at the wrong time, or at least have their hands and arms in the way—can fully appreciate the comfort of the couch I am about to describe. It consists simply of a board as wide as, and shorter than, an ordinary sofa, and on which slides a shallow box holding a mattress; this box and mattress are not quite as long as a man's body, and lie towards one end of the board; at the other end of the board is an upright rod of iron, with a flat horizontal ledge on one side, and covered with sheet India-rubber. When a patient is to have his hip put up in a gypsum bandage, his back and shoulders are laid on the mattress (the whole concern being previously put on the operating-table), and his sacrum on the iron ledge, the upright part of the iron lying against the perinaeum. The assistants have simply to hold the lower limbs in proper position, while the pelvis is quite free over and under for bandaging.



- a. Fundamental board, on which slides
- b. Box holding mattress and pillow; to be adjusted as near as required to
- c. Upright iron rod, sliding in a socket up and down, fixed at requisite height; its part, d, is covered with sheet India-rubber, or anything soft, and goes between the patient's thighs. The horizontal portion is flattened out.

Osseous Ankylosis of Hip following Coxitis.—Here the right thigh was flexed at about a right angle with the pelvis in a boy about fifteen

years old. Chloroform was given till the boy was completely narcotised, and then, after repeated attempts and with much difficulty, Billroth extended the limb by breaking the neck of the femur. The crack of the bone was distinctly heard over the theatre. The boy was then put upon the couch just described, and, while still under chloroform, the limb was put up in a gypsum bandage in the extended position. The method of applying gypsum bandages in Billroth's clinic is a very excellent one, and will be found fully described in a former volume of the JOURNAL (April 10th, 1869) by your correspondent of that time.

Medullary Lymphomata.—A man, aged 30 or 35, now lies in the hospital with two large tumours on the left side of the neck, each about the size of two fists. They are malignant lymphomata according to Billroth, who says that the structure of these growths is identical with that of the innocent lymphomata, the difference lying in the greater rapidity of growth, greater size, and as yet utter incurability of those in question, which recur if cut out, and hitherto have not yielded to drugs.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 26TH, 1871.

W. W. GULL, M.D., D.C.L., President, in the Chair.

DR. MEADOWS related a case of Acute Disease of the Hip-joint following the introduction of a Tangle-Tent into the Uterus. The patient, aged 31, had been married ten years, was sterile, and suffered from dysmenorrhœa. The cervix uteri was dilated with tangle-tents; and after several had been applied she was seized with severe pain in the left hip-joint, and she then came under Dr. Meadows's care for some supposed pelvic inflammation. It was, however, a case of acute inflammation of the hip-joint, which rapidly suppurred, and ended in the course of a few weeks in the destruction of the joint and the death of the patient. On *post mortem* examination, no cellulitis or inflammation of any kind was discoverable about the uterus or its appendages, but an enormous abscess had completely destroyed the hip-joint and parts adjacent. There was no indication whatever of any mischief having been done to the uterus itself.—Mr. COOPER FORSTER believed it was one of the many cases in which pyæmia occurred rapidly, consequent upon abrasion of mucous membrane, and that nothing else could account for so speedy a destruction of cartilage.—Dr. BUZZARD asked whether other joints were examined, as the presence of suppuration in more than one would be conclusive as to the pyæmic character of the affection.—Mr. LAWSON observed that a very considerable amount of difficulty sometimes occurred in the withdrawal of tangle-tents, because the tent was much confined by the neck of the uterus, and greatly dilated beyond.—Mr. WARRINGTON HAWARD, supporting the pyæmia hypothesis, mentioned that, of a hundred and thirty cases of joint-disease collected by him, evidences of tubercular disease existed in nine, and of scrofula in seventeen only, and that the temperature in Dr. Meadows's case negatived any idea that tubercle had influenced the disease.—Mr. BRUDENELL CARTER inquired if any abrasion were necessary, and said that he had been informed of three instances in which pyæmia had been consequent upon simple gonorrhœa.—Mr. LAWSON TAIT related brief particulars of a fatal case in which these tents had been used, and expressed a belief that they were dangerous.—The PRESIDENT thought that Mr. Carter's remarks as to gonorrhœa were important. He recollected a case of gonorrhœa in which suppuration of the veins of the spinal cord took place.—Dr. MEADOWS, in reply, said that a distinct double os uteri existed. No other joints were examined. He disagreed with the observations of Mr. Tait, as to the danger incurred by the use of tangle-tents, unless they went too far in.

Mr. HOLTHOUSE read a paper on the Treatment of Temporarily Irreducible Hernia. He entirely concurred in the doctrine that there was no remedy for an invincibly strangulated hernia but the surgeon's knife, and related several cases to show that many herniæ, though accompanied by symptoms of strangulation, were not invincibly strangulated, and might be reduced by opium; and this drug had the further merit of being a very delicate and safe test of the necessity or otherwise of an operation—a single dose was sufficient to determine the point. If it were rejected, the patient should be immediately put under the influence of chloroform, a gentle attempt made to reduce the hernia by the taxis, and, this failing, herniotomy performed; on the other hand, if the opium were retained the symptoms would abate, the rupture would go back, and no operation would be necessary.—Mr. COOPER FORSTER commented on the great range for discussion opened out by these notes.

He denounced energetically the opium and other temporising plans of treatment, and maintained that if a more speedy recourse than is usual were had to the knife, the mortality in these cases would be reduced at least 80 per cent.—Mr. TAIT urged the employment of hypodermic injections of morphia, in conjunction with chloroform and the taxis.

Dr. ANSTIE read a case of Neuralgia in all the three branches of the fifth nerve, reinduced in a person who had suffered from it before, by the intercurrent of constitutional syphilis. There were complete anæsthesia of the affected side of the face, exactly reaching the mesial line, complete paralysis of the third and sixth nerves, loss of taste in the neuralgic half of the tongue, loss of smell on both sides, and spasms of the masseter muscle. The neuralgia and the anæsthesia were rapidly cured by large doses of iodide of potassium; and not only the function of taste, but also that of smell, recovered *exactly pari passu with the recovery of the fifth nerve*. The ocular paralysis remained. The spasm of the masseter disappeared simultaneously with the neuralgia and anæsthesia. The woman, who was married and had three very healthy children, and had never aborted, was probably only syphilitised about one year ago, and many years after the first attack of neuralgia, which partook of the character of migraine.—Dr. HUGHLINGS JACKSON remarked on the great interest of Dr. Anstie's observation on the occasional coincidence of facial neuralgia with partial anæsthesia of the painful region. He (Dr. Jackson) supposed that persistent, although partial, loss of feeling must depend on destruction of nerve-fibres; and neuralgia especially, if it were paroxysmal, on discharges of ganglion-cells connected with intact fibres. An analogous fact was the not unfrequent occurrence of convulsions in muscles which were imperfectly paralysed. Dr. Jackson asked as to the condition of the masseter and temporal muscles. He suggested that the loss of smell might depend on an olfactory neuritis analogous to optic neuritis; and, as bearing on this, asked if an ophthalmoscopic examination had been made. It was certain that severe optic neuritis might exist when sight was unaffected. In some cases of cerebral disease, there was loss of smell with amaurosis from optic neuritis.—Mr. LAWSON said that it was rare to find paralysis of the ocular muscle occurring so soon after syphilis, several years usually intervening.—Dr. BUZZARD thought that, as there was evidence of lesion of the third, fifth, sixth, and probably the fourth, nerves of one side, it was easier to imagine that the syphilitic effusion (if such it were) involved also the first pair of nerves than that lesion of one only of the fifth pair caused loss of smell on both sides.—Mr. CARTER had seen Dr. Anstie's patient once; he found the ptosis complete; the superior oblique muscles were, however, intact.—Mr. TAIT asked if any affection of the pupil existed.—Mr. FORSTER hoped that Dr. Anstie would not add that disease to the long list of results already attributed to syphilis.—Dr. ANSTIE said that the case was most undoubtedly syphilitic. As regarded the loss of smell, he thought that, supposing it to depend on the lesion of the fifth, there was no impossibility that it should occur on both sides. Although the neuralgia was unilateral, many equally singular anomalies occurred among the complications of neuralgia. He had not examined the eye with the ophthalmoscope, as it seemed that the function of the retina was perfect: had he known the facts observed by Dr. Jackson, he would have made the examination.

Dr. HUGHLINGS JACKSON gave particulars of a case of Right Hemiplegia, with loss of speech (nearly complete aphasia), which had been investigated by himself and Mr. Stephen Mackenzie. The hemiplegia, with the affection of speech, pointed to some kind of disease of, and of the convolutions near to, the corpus striatum. From the manner of onset, and from other circumstances, he inferred that there was softening from thrombosis; and as the patient presented well-marked external signs of syphilis, he supposed the softening depended on thrombosis of of an artery which was diseased from syphilis. He did not speak of atheroma (endarteritis), which was believed by some to be an occasional result of syphilis, but of what may be called nodes of arteries (gummatous affections). He alluded to the observations of Bristowe (*Pathological Society's Transactions*, 1859) on thrombosis of cerebral arteries from syphilis, and those of Wilks (*Guy's Hospital Reports*, 1863) and Moxon (*ibid.*, 1867-8) on cases of syphilitic disease of cerebral arteries; and referred to several cases published by himself (*The Lancet*, 1866, and *London Hospital Reports*, vol. iv). He urged the great importance of recognising that many "syphilitic affections" of the nervous system are really dependent but very indirectly on syphilitic changes, and especially that in some cases of "syphilitic hemiplegia" the pathological condition of the nerve-centre on which the palsy directly depends is like that produced by embolism. We quickly cure recent palsies of cranial nerves from the direct action of syphilis on the nerve-bundles; but to cure certain cases of syphilitic hemiplegia we have to do more than to treat syphilis, and our treatment of these cases is often unsuccessful.—The PRESIDENT considered the case very important. Iodide of potassium would cure the syphilis, but not its effects on surrounding

tissues.—Mr. CARTER related an instance that had come under his own observation, in which the patient had been treated for syphilis with iodide of potassium with benefit; but hemiplegia supervened, and from that time the drug did no good.—Dr. ANSTIE had prescribed half-drachm doses of iodide of potassium for neuralgia with particularly good results.

Mr. CALLENDER then read a note on a plan of Reducing Old Dislocation at the Shoulder. The method, illustrated by the history of a case, consisted in raising the elbow of the dislocated limb across the chest nearly to the level of the interclavicular notch, forcing the raised arm outwards, rotating the arm in so doing, and lastly, whilst still rotating, somewhat depressing it. Practically, this plan of manipulation avoided all risk of injuring the great vessels in the axilla, as all pressure upon them was done away with.

CORRESPONDENCE.

THE ANNUAL MEETING.

SIR,—In the circular just issued to members of the medical profession who have not yet joined the Association, I have noticed an error in regard to the excursion into Cornwall connected with the approaching meeting at Plymouth, which should be corrected at once, as the arrangements of the busy practitioner for his too brief holiday must be made some time beforehand. The days appointed for the excursion of the Royal Institution of Cornwall are Monday and Tuesday, the 14th and 15th of August; not the preceding Thursday and Friday, as intimated in the circular, which is so far a reprint of the notice in the JOURNAL of January 7th. The time now fixed is that originally contemplated; it was altered at the desire of our Plymouth friends, so as to fall within the limits of the meeting there; but the Committee of Council having subsequently—very judiciously, as I think—requested that no distant excursion should be arranged for the Thursday on which the dinner of the Association is to take place, the days first named for a visit to the far west were recurred to. In fact, as Penzance, the *rendezvous* of the excursionist, is eighty miles from Plymouth, and as the leading objects of interest can barely be seen in two days, it is clear that an attempt to dovetail this expedition with the business of the Plymouth Meeting could only tend to interference with the success of both. It is to be hoped that many of our members may be able to indulge themselves with an extension of their holiday trip, from Plymouth into these remote parts of the country; and the excursion, of which full particulars will soon be issued, will enable them to visit the points of greatest interest in a very agreeable way. I am, etc., C. BARHAM.

Truro, July 11th, 1871.

MIDWIFERY AND THE MEDICAL COUNCIL.

SIR,—Will you pardon my intruding on your space in asking for information. Are we to understand that the Medical Council by their recent decision consider that midwifery proper requires no more instruction than botany, and that the diseases of women and children require none at all? I am, etc., J. BRAXTON HICKS.

9, St. Thomas's Street, S.E.

PROFESSOR HAUGHTON'S TELEOLOGY.

SIR,—It has been on my mind some time to write a short inquiry upon one point at least of Professor Haughton's brilliant discourses recently published. What Dr. Haughton says, is said so effectively that it seems as if it must be right—facts could not resist the charming of so eloquent an interpreter, and perhaps they follow his piping as less rigid things once followed Amphion. One very favourite burden of his song was this. Seeing, then, the marvellous adaptation of machinery to work done, and, what is more, the marvellous attainments of this on principles of least action, how can we suppose this machinery to have been gradually evolved? Here is nothing tentative, but here, rather, are works struck out neatly and perfectly at a blow, as watchworks are now struck from a die. And then follows much vigorous teleological argument of the same kind. Surely this is a triumph of sheer boldness; and for my poor part, conscious as I was that the eminent professor could not err, in logic at any rate, I read these passages over several times, in patient desire to arrive at their signification. But I have failed; and as others of your readers may be struggling with like doubts, may I venture to point out that in our humble judgment the argument seems to have precisely the opposite force. An evolutionist will say that realisation of least action may or may not be compatible with teleological schemes; but for his hypothesis it is not only favourable, but

absolutely essential. Any margin of machinery over and above that which is necessary would be destructive evidence against him, as it would be wholly uncaused—which is impossible. On the other hand, the teleologist should rejoice in any margin of power; for to it he would point as a provision which could not have been called forth by the average of circumstances, but must have been added as a safeguard by a prescient Creator. It is necessary for a Darwinian to prove that Nature "runs it fine"; but to a teleologist it ought to be not only unnecessary, but even rather disappointing. "But", it may be said by the professor, "there might have been a want of equation on the other side. I do not rely upon the absence of excessive provision for work, but upon the presence of that which is always sufficient; I assert that the exquisite balance which I have demonstrated in a few of the highest and perfect animals, and in the most effective parts of these, is also present in every organ of all animals." This is a hardy optimism, however, to which the lecturer will, I think, scarcely commit himself.

Leeds, July 12th, 1871. I am, etc., T. CLIFFORD ALLBUTT.

OBITUARY.

SAMUEL M. HEWITT, L.K.Q.C.P., OF DUBLIN.

ALTHOUGH Dr. Hewitt, whose death took place lately, had not reached the age of twenty-five, he had acquired a very leading position amongst the junior physicians of Dublin. Commencing as demonstrator of anatomy, and private teacher in the school of the College of Surgeons, he became so popular that his election to the physiciancy of the City of Dublin Hospital was unopposed. In the fever-wards of this institution his devotion to the sick poor was most exemplary, and in them he contracted the contagion of typhus, which quickly resulted fatally. The May number of the *Dublin Quarterly Journal of Medicine* contains a most able and suggestive paper on "The Present State of Therapeutics", by Dr. Hewitt. His interment was attended by all his colleagues, and several other eminent medical men; and over one hundred students walked in the procession.

ARTHUR WILLIAM DUMVILLE, F.R.C.S., MANCHESTER.

THE profession in Manchester has sustained a heavy loss in the death of Mr. A. W. Dumville, who died on Saturday, July 8th, 1871, at the age of 52, deeply mourned by a wide circle of friends and patients, and by his colleagues at the hospital. Both in his public career as surgeon to the Manchester Infirmary, and (for many years) as lecturer on surgery at the School of Medicine, and in private life, he succeeded in gaining the confidence and affection of all with whom he came in contact; indeed, it is the simple language of truth to say that he died as had lived, without a single foe. His care and ability as a clinical teacher made him deservedly popular among the students, who will for a long time to come sincerely deplore his loss.

Mr. Dumville was not only gifted as an instructor, but was possessed of rare tactical skill as a surgeon. Among many other proofs of his manual ability, may be cited how brilliantly he was wont to perform Syme's operation of external urethrotomy without a guide: it is not over-praise, indeed, to affirm that no living surgeon surpassed, few could equal, the dexterity with which he performed this operation.

Mr. Dumville wrote but little, and it is therefore possible that, beyond his own city, it may be little known how skilful and judicious a surgeon, how accomplished a man, how kind a friend, how true a gentleman, has left our ranks.

ROBERT DUNDAS, M.D.

ON the 25th of June the medical profession lost a distinguished member, and his numerous friends a respected and beloved companion, in the death of Dr. Robert Dundas. Born in Ireland towards the end of the last century, he entered the medical service of the army at an early age. He served in the Peninsula, and was present at the siege of New Orleans in 1815. He subsequently settled at Bahia, in Brazil, where he had the medical superintendence of the British Hospital for twenty-three years with great credit to himself and benefit to others. His health giving way, he resigned his hospital appointment and practice, and returned to Europe with ample means, the product of his skill and industry. He

was, however, much too active minded to accept the leisure so well earned by twenty-eight years' service in tropical climates; and as soon as his health began to recover he settled in practice in Liverpool. Here he was appointed physician to the Northern Hospital, and again did good work for several years. In 1852 he published, under the title of *Sketches of Brazil*, a work in which he advocated strenuously the doctrine that intermittent fever is not necessarily the result of so-called malaria, but may be generated in the human economy by the electrical, thermometric and morbid hygienic conditions, quite apart from the action of marsh miasmatic. He also brought forward a considerable mass of evidence to prove the possibility of arresting the course of continued fever by quinine. In 1854 Dr. Dundas gave up his Liverpool position, and settled in London at Gloucester Place, where he spent the last years of an eventful life. He died of exhaustion following a severe and continued attack of sciatica, in his eightieth year. He was an upright, conscientious, intellectual man, of firm will and unflinching resolve. He combined with a certain sternness of character so much warmth of affection and sympathy for those whom he esteemed and loved, that he exercised over them great influence.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received his certificate to practise, on Thursday, July 6th, 1871.

Bowes, John Ireland, Elham, Canterbury
Pope, Harry Campbell, Tring, Herts
Willcocks, Isaac, West Looe, Cornwall
Williams, Ralph Worthington, Hurst, near Ashton-under-Lyne

The following gentlemen also on the same day passed their first professional examination.

Mahomet, F. H. A. A., Guy's Hospital
Webb, William Edward, King's College

As an Assistant in compounding and dispensing medicines.

Nutt, William Anthony, Barnstaple, Devon

UNIVERSITY OF DUBLIN.—At the Summer Commencement, held on Wednesday, June 28th, in the Examination Hall of Trinity College, the following Licenses and Degrees in Medicine and Surgery were conferred by the Right Honourable Sir Joseph Napier, Bart., LL.D., Vice-Chancellor of the University.

Licentiat in Medicinâ:—Thomas Johannes Browne, and Ricardus Dancer Purefoy.

Licentiat in Chirurgiâ:—Ricardus Dancer Purefoy.

Baccalauræi in Medicinâ:—Jacobus Armstrong, Otway Petrus Browne, Edvardus Maziere Courtenay, Thomas Drapes, Andreas Franciscus Dobson, Christophorus Elliott, Thomas Sargent Floyd, Georgius Gibson, David Kennedy, Patricius Johannes Molony, Thomas Hamilton Moorhead, Johannes Morgan, Jacobus O'Connor, Ricardus Henricus Quill, Johannes Godfredus Rogers, Henricus Johannes Tweedy, Johannes Waugh, Gulielmus Marcus Whittaker, and Thomas Blair Worthington.

Magistri in Chirurgiâ:—Jacobus Armstrong, Otway Petrus Browne, Edvardus Maziere Courtenay, Franciscus Georgius Mayberry, Patricius Johannes Molony, Ricardus Henricus Quill, Johannes Godfredus Rogers, Johannes Waugh, and Thomas Blair Worthington.

Doctores in Medicinâ:—Edvardus Wolfenden Collins, Johannes Gulielmus Moore (stip. con.), Johannes Morgan, Johannes Todhunter, Arthurus Wellesley Tomkins, and Geraldus Franciscus Yeo.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ARDWICK and ANCOATS DISPENSARY, Manchester—Consulting Surgeon.
BLACKBURN and EAST LANCASHIRE INFIRMARY—House-Surgeon.
BRECKNOCK INFIRMARY—House-Surgeon.
BRISTOL GENERAL HOSPITAL—Consulting Surgeon.
BRIXTON DISPENSARY—Resident Dispenser.
BURY, LANCASHIRE, DISPENSARY—Resident Medical Officer.
CARMICHAEL SCHOOL OF MEDICINE, Dublin—Lecturer on Anatomy and Physiology.
CITY OF DUBLIN HOSPITAL—Physician.
DERBYSHIRE GENERAL INFIRMARY, Derby—Resident Assistant House-Surgeon; Two Dental Surgeons; Non-Resident Dispenser.
EVELINA HOSPITAL—House-Surgeon.
FARINGDON UNION, Berks—Medical Officer and Public Vaccinator for the Buckland District.
GENERAL HOSPITAL and DISPENSARY FOR SICK CHILDREN, Bridge Street, Manchester—Resident Medical Officer.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street—Assistant-Physician.
HUDDERSFIELD INFIRMARY—House-Surgeon.
HUDDERSFIELD and UPPER AGRIGG INFIRMARY—Physician.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
INFIRMARY for EPILEPSY and PARALYSIS, Charles Street, Portman Square—Physician.
KILKEEL UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Second Division of the Kilkeel Dispensary District.

LEEDS PUBLIC DISPENSARY—Junior Resident Medical Officer.
LEWES UNION, Sussex—Medical Officer for the Lower District and the Workhouse.
LOCHGORLHEAD AND KILMORICH, Argyleshire—Parochial Medical Officer.
LOUDOUN, Ayrshire—Medical Officer and Public Vaccinator.
LOYAL EARL OF LONSDALE LODGE OF ODD FELLOWS, Bampton, Cumberland—Medical Attendant.
MANCHESTER ROYAL INFIRMARY—Surgeon.
MATER MISERICORDIÆ HOSPITAL, Dublin—Physician.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Lecturer on Physiology, including Practical Physiology.
NORTH DUBLIN UNION—Medical Officer, North City Dispensary District.
NORTH-WEST LONDON FREE DISPENSARY FOR SICK CHILDREN, Bell Street, Edgware Road—Physician.
RATHDOWN UNION, co. Dublin—Medical Officer for First Division of the Kingstown Dispensary District.
ROYAL ORTHOPÆDIC HOSPITAL—Resident House-Surgeon & Apothecary.
ST. GEORGE'S HOSPITAL MEDICAL SCHOOL—Teacher of Physiological Chemistry.
ST. THOMAS'S HOSPITAL—Resident Assistant-Physician; Assistant-Surgeon.
SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Physician.
WARWICK COUNTY LUNATIC ASYLUM, Hatton—Assistant Medical Officer.
WEST LONDON HOSPITAL—Junior Physician; House-Surgeon.
WESTMINSTER HOSPITAL—Assistant-Surgeon.
WIRRAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, Birkhead—Honorary Medical Officer.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BLOXAM, J. A., Esq., appointed Junior Surgeon to the West London Hospital.
CAIRD, Thomas Wilson, Esq., elected Surgeon to the Devon and Exeter Hospital, in the room of *A. Kempe, Esq., resigned.
CONNOLLY, Andrew E., L.K.Q.C.P.Irel., appointed Medical Officer for the Cahir-conlish Dispensary District of the Limerick Union.
HARTIGAN, Jeremiah T., L.K.Q.C.P.Irel., appointed Medical Officer for the Croom Dispensary District and the Workhouse of the Croom Union, co. Limerick.
HAY, Robert, L.F.P.S.Glasg., appointed Medical Officer for the parish of North Bute, Buteshire.
*JONES, Talfourd, M.B.Lond., appointed Physician to the Brecon County and Borough General Infirmary, vice Prestwood Lucas, M.D., deceased.
*LANSDOWN, F. Poole, Esq., re-elected Surgeon to the Bristol General Hospital.
McFADYEN, C., M.B., elected Medical Officer for the parish of Strath, Isle of Skye.
PRESTON, Eyre Frederick, L.K.Q.C.P.Irel., appointed Medical Officer to the Workhouse and Fever Infirmary of the Kilkeel Union, co. Down.
VERNON, B. J., Esq., appointed Ophthalmic Surgeon to the West London Hospital.
WATSON, Albert, L.K.Q.C.P.Irel., appointed Medical Officer for the Lucan Dispensary District of the Celbridge Union, co. Kildare.
*WILTSHIRE, Alfred, M.D., appointed Physician for the Diseases of Women to the West London Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

GRIFFITH.—On July 3rd, at Portmadoc, Carnarvonshire, North Wales, the wife of *Samuel Griffith, M.D., of a daughter.
LONG.—On July 3rd, at Cromer, Norfolk, the wife of *Mark Long, M.D., of Canning Town, Essex, of a daughter.

DEATHS.

BENNETT, W. R. H., Esq., Surgeon, at Shaftesbury, aged 38, on June 28th.
*HESTER, James, M.D., son of J. T. Hester, Esq., late of Oxford, at Wangaratta, Australia, on May 1st.
LANSDOWN, Joseph G., Esq., late Surgeon to the Bristol General Hospital, at Bristol, aged 67, on July 6th.
MAY, Willoughby, Esq., Surgeon, at Teignmouth, aged 31, on July 5th.
*TANNER, Thomas H., M.D., of Henrietta Street, Cavendish Square, at Brighton, aged 46, on July 7th.

THE MEDICAL COUNCIL AT CAMBRIDGE.—On Saturday last, Dr. Paget, President of the Medical Council, invited the whole of the Council (twenty-four in number) to accompany him to Cambridge, on its rising at four o'clock. With few and unavoidable exceptions, the invitation was cordially accepted; and the Council, who always terminate their proceedings at 4 P.M. on Saturdays, proceeded by the 5 P.M. train to Cambridge, where a sumptuous dinner awaited them in the hall of Caius, and a distinguished party assembled to meet them. The next day, they met at Dr. Paget's house to breakfast, and thereafter dispersed themselves to various churches, as taste or inclination prompted. In Cambridge, there is an ample choice, for places of public worship are provided for nearly all religious bodies of any note. On that day, besides a number who reassembled to dinner at Dr. Paget's, several partook of the famed hospitality of the Colleges, Mr. Porter of Peterhouse and others having large parties. Leaving Cambridge with great regret, and deeply impressed with the magnificent hospitality of their President, and with pleasant recollections of the architectural and scenic beauties which commingle in that beautiful town, the various guests left by early trains, and resumed and concluded their duties in London on Monday.

LECTURE

ON

THE TREATMENT OF HIP-JOINT DISEASE.*

BY LEWIS A. SAYRE, M.D.

Surgeon to the Bellevue Hospital, New York; and Lecturer on Clinical Surgery.

I AM much obliged, gentlemen, for the privilege of being able to explain to so distinguished an audience any views I may have upon this particular disease. You have certainly one of the largest fields in this institution for its study that I have ever seen; and I am very happy to see Mr. Marsh carrying out the principle of extension which I consider the proper basis of treatment. The only suggestion I have to make is with regard to the application of this principle in such a manner as to afford the children the benefit of out-door exercise. You can hardly expect me, in half-an-hour's talk, to convey a full idea of my views in regard to the treatment of this disease, its anatomy, pathology, and so forth. I take it for granted that you are perfectly familiar with the anatomy of the joint; and I will spend the short time at my disposal in giving you in a condensed form the views which I hold in regard to treatment. Of course you understand that it is a ball- and socket-joint, having its ligaments, synovial membrane, the interarticular cartilage or cartilage of incrustation—which, by the way, has very little vitality, but is merely intended as a buffer or cushion to break the concussion; it lives, as it were, by imbibition, upon the little network or tufts of vessels between it and the bone. Cartilage is very much like the barnacles on a ship; it lives by attachment, and by absorption through these little tufts of vessels; and, like all organs vitalised in that way, it easily undergoes disintegration or death. The ligamentum teres, coming from the little fossa at the head of the bone, and being bifurcated and inserted into each side of the notch of the acetabulum, has also a small amount of vitality, one little blood-vessel and nerve running through it; and of course it is liable to be easily injured. I merely mention these things to show that the disease of the joint will occur either in the synovial membrane lining it, or in the ligaments that hold it together, or in the little network of blood-vessels that lie directly under the cartilage of incrustation, between it and the bone. I doubt much if ever the disease commences in the cartilage itself; this subsequently becomes involved in it. The diagnosis whether the disease has commenced in the bone, or rather in the blood-vessels at the extremity of the bone, or in the synovial membrane, or in the ligamentum teres, is sometimes difficult to make out, for the one soon runs into the other.

Taking it for granted that I am speaking, not to medical students, but to medical men who are perfectly familiar with the physiological condition of the joint, I will go at once to the pathological changes that take place.

There is, first, a synovial inflammation, which is always followed by effusion. Then there is a wrench or tear of the ligamentum teres, which is almost always followed by a destructive inflammation of the bones of the joint, particularly if a concussion have been at the same time associated with the wrench or tear. Synovial inflammation is almost always the result of exposure. Skating, racing, jumping, playing, football, and other movements that over-exercise the joint, followed by a sudden exposure and change of temperature, will produce synovial inflammation in the hip-joint as well as any other joint. When boys are wrestling, going through violent gymnastics, twisting their legs in various positions, putting the ligamentum teres upon the stretch will produce a tear—probably not tearing it entirely off, otherwise attention would be called to it, and they would be put under treatment; but generally the smaller the rip the greater the danger, because it is neglected; and it is sometimes months before the disease is seriously developed, and frequently by this time the origin of the difficulty has been forgotten.

A concussion, a blow, a jump from a great height, would cause a pressure upon this little network of blood-vessels which I described as existing between the intra-articular cartilage and the head of the bone; this would produce a "blood-blister," or extravasation of blood at that point, which would be the nidus or starting-point of the disease; and, if the injury were detected at the time of its infliction, *rest alone* for a sufficient length of time would probably result in a favourable termination of the difficulty in the great majority of instances. But, the injury not being detected, and in many instances not even suspected, the *rest* is not insisted upon at the proper time, and thus the disease is slowly developed, and frequently is not distinctly pronounced until so long a time after the accident that caused it, that the trifling injury which has been the origin of so much trouble has been entirely forgotten.

A pinch of the skin producing a "blood-blister", or slight extravasation in the cellular tissue, is of common occurrence, and of no great importance. If left alone it will soon be absorbed, or at most, if you let out the fluid and do not irritate the wound, it will soon get well; but, suppose even in this most trifling injury that, instead of giving it rest and time to heal, you constantly scratch it with a rusty nail, you will produce a sore, that will last as long as the irritation is continued. This is a parallel case to a joint being exercised after a concussion or wrench producing an extravasation in the tufts of blood-vessels already referred to.

The accidents to which I have referred are the three general causes of the disease which will of course be more or less modified in its symptoms according as it is developed in one or the other of the tissues referred to. If there be effusion within the joint, it is always accompanied by a peculiar distortion. That distortion necessarily arises from the fact that the capsular ligament can only hold a very small amount of fluid without being distorted. You will remember the ilio-femoral ligament that lies upon the front of the capsular ligament, running from the anterior inferior spinous process of the ilium to the trochanter minor; it is folded over the capsule, and causes it to lie close to the neck of the bone. There is a very small amount of fluid in the capsule normally, and you cannot increase that amount without increasing its capacity by *unfolding* it. As long as the limb is in the normal position, the capsule rings round the head of the bone so tightly that no additional fluid can be placed there; but if inflammation take place, and there be increased secretion, accommodation is made by the unfolding of the capsule, and the flexing of the limb when the capsule becomes loose, so as to enable it to hold this increased amount of fluid. That is the reason why the leg always becomes flexed, *abducted*, and rotated outwards. I am particular about these changes, because they materially aid you in making a diagnosis; and the thing is to be able to diagnosticate the disease in its early stages, when a great deal can be done towards its relief.

If the effusion have become very great, the limb is more flexed, more abducted, and more rotated outward, and at the same time more fixed, apparently ankylosed, as if it had been solidified by plaster of Paris; yet it is not a bony ankylosis, but simply arises from distension by effusion and from muscular rigidity.

One of the things that is sure to take place in any inflamed joint of long standing—the hip, knee, or any other joint—is atrophy of the muscles above and below it; and at the same time reflex irritation causes muscular tension or muscular contraction. The muscles that move the bone become irritated and contracted, so as to bring pressure against the diseased surfaces, which aggravates and complicates the disease from the beginning to the end. This is one of the great sources of pain and trouble which we have to overcome in these diseases. So in diseases of the hip-joint, the muscles contract and flex the limb, and would adduct it, but it cannot be adducted on account of the anatomical distension of the capsular ligament necessarily forcing the limb outward, rotating it outward and *abducting* it. Now, the adductor muscles (as all who have seen this disease must have observed) become, like catgut, intensely contracted, and feel like a strong cord. The desire to bring the limb in is on account of this reflex irritation of the adductor muscles, and the absolute impossibility of doing so is because of the capsular distension of which I have already spoken. If you take a dead body and flex the joints so as to break up the *rigor mortis*, and place it on the back so that both limbs are in their natural position; if you now bore a small hole through the ilium into the acetabulum, and forcibly inject a small amount of quicksilver, it will cause the limb to flex, abduct, and rotate outward at the hip-joint. By driving into the hole a small piece of wood to retain this increased fluid within the joint, you will find it impossible to extend, adduct, and rotate the foot inward, without rupturing the capsule; and the attempt to do so, if the capsule do not rupture, will force out your plug like a pellet from a pop-gun.

It is the struggle between the irritated muscles to adduct the limb,

* Delivered at the Children's Hospital, Great Ormond Street, on July 15th, by the invitation of the medical managers of that institution.

and the impossibility of the limb yielding to their traction on account of the over-distended capsule, that cause the pain to be so great in the *second* stage of the disease; and it is made manifest on the inner and lower portion of the thigh near the knee, on account of a little filament of the obturator nerve which runs off there to the ligamentum teres, and a sensitive branch from it running down to the adductor muscle. This over-distension can only be relieved by puncturing the joint and letting out the superfluous fluid, or by cutting the tendon, so as to accommodate the one to the other. The treatment will of course depend upon the condition in which you find the patient; you must exercise your own judgment as to which method is to be preferred, according to the condition in each case. In this stage of the disease the pain is agonising, torturing, with loss of sleep and loss of appetite. The least attempt at movement in any way causes the most agonising shrieks; and at this period ulceration takes place in the cartilage of incrustation. The patients begin to have what are called night-spasms—the peculiarly characteristic pains that occur in the night depending, I suppose, upon the fact that the child becomes completely worn out, loses its hold on the muscles, and drops off to sleep for a second; then there is a spasmodic contraction bringing this increased pressure and movement of the diseased joint, and the child wakes up with a shrill shriek. The mother runs upstairs, and finds, perhaps, that the child has dropped off to sleep again. You hardly ever ascertain this fact unless you live in a hospital, or stay for several nights in a house where there is a child with disease of the hip-joint, when you will appreciate this thing very accurately indeed. The tension of the muscles that the child is undergoing all the time keeps the joint from movement, and makes him comparatively comfortable; but that is done at the expense of vitality. The constant effort of the child to hold the muscle still to prevent movement wears him out, and by and bye he drops off to sleep from sheer exhaustion, and then, when there is the least movement, he screams as though he were pierced with a red-hot iron; instantly the muscles are on guard again, and the child is relieved. That goes on over and over again. After awhile, ulceration takes place, and the capsule ruptures; then this imprisoned fluid escapes from the expanded capsule into the cellular tissue, and the child is comparatively easy. But the disease has still further progressed. We often think we have gained a great deal because the child is so much more comfortable, whereas the disease has only gone on to the *third* stage, in which effusion takes place into the cellular tissue. Almost immediately there is a marked change of attitude, or character of the deformity. The leg is immediately adducted, drawn close to the other; the toes are turned inward, and the limb is apparently shortened. If this rupture that takes place through the capsule be very slight, so that the pus oozes out by slow degrees, the change takes place very slowly; but if (as is often the case) there be a big rent in the capsule, you may find the child distorted in one way to-night and to-morrow the very reverse. The fluid has suddenly escaped; and that has always been heretofore described as the luxation which occurs in the third stage of hip-disease. I looked through your museum the other day and saw a great many specimens, but none are luxated. The theory of luxation in the third stage was proved by Dr. Alden March of Albany, New York, to be a mistake. The head of the bone is absorbed; the acetabulum is absorbed and increased in size; and the capsular ligament which surrounds the acetabulum slips up, and up, and up, and so it remains—the periosteal development, giving an additional growth of bone, makes a new attachment above, so that the capsule is still attached, and the head of the bone embraced in it only slipped up. You may call it, then, a displacement of the acetabulum, not a luxation of the head of the bone. The absorption taking place in the acetabulum and in the head of the bone, causes the limb of course to be very much shortened; and it being adducted, and the neck having been nearly destroyed (in many instances entirely), the idea of luxation has arisen; but I draw a distinction between a destroyed and changed position of the acetabulum, and a luxation of the head of the bone. I call it a luxation when the head of the bone is outside the capsular ligament; but if the ligament have been displaced or moved in its position, still embracing the head, it is a displacement, not a luxation.

So much for the pathological changes that take place; next as to the causes of this disease. My impression is, that the great error we have always committed has arisen from looking at this disease as necessarily one of constitutional dyscrasia, a blood-disease, a constitutional poison; that this is simply a local manifestation of a general disease. Believing this, we treat the system, we give internal remedies, and apply our medicines for the purpose of changing the character of the blood, instead of paying attention to the local disease which is the great source of trouble. All authors, as far as I know, particularly the older ones, have looked upon this as a scrofulous or tuberculous disease of the bone, necessarily connected with some hereditary taint or some peculiar

scrofulous condition of the system, and therefore they believed that the disease must necessarily go on to destruction, and that there was no necessity for any local treatment except counter-irritation, blisters, setons, and so forth. Internal remedies were the principal things relied upon. The result was, with all that kind of treatment with which we are familiar, always the same—viz., shortening of the leg by absorption of bone, and, finally, the consolidation of it in more or less deformed positions; and then the patient frequently came into a condition of robust health. I do not suppose there is any person in this room that cannot call to mind some old fellow with a shortened hip perfectly ankylosed, yet with a ruddy face, a good healthy complexion—a vigorous robust old man. If he had had scrofula in his blood, if he had had tuberculosis in his system anywhere, it would have remained there; and when the hip recovered, the man would have been a miserable old fellow after all. The fact of his being a vigorous robust man after going through all this trouble, proves, in my judgment, that the disease is not of constitutional origin. The fact that in so many cases the joint has been excised when the patients have been apparently at the point of death, and that they have become, when the source of trouble has been removed, vigorous, strong persons, is another evidence that the disease is not constitutional. Then there is the still stronger fact that, by making application to the local disease, and treating it irrespectively of any constitutional taint, you produce perfect results, so that the patients recover without the slightest deformity, and with perfect motion; that is the best proof in the world of the disease being local. Follow up the history of these cases, and you will find that it is a local disease. Out of several hundred cases that I have accurately observed, and taken the trouble to trace their history, the immense majority, I may say 90 per cent., occur in the most vigorous, robust, wild, harum-scarum children—boys that take their chances of danger, that run races, that climb over fences, jump out of apple-trees, kick their playmates downstairs, ride down the banisters, are reckless and careless. The sickly, poor, scrofulous child, who clings to his mother's apron, does not run the chance of getting hurt. I do not say that scrofula is a preventive against disease of the hip-joint—by no means. All things considered, a smaller amount of injury would produce the disease in one of these miserable young ones sooner than in a healthy robust child. But such children take very little chance of being hurt, and consequently the majority of cases occur in the active and robust. The injury that starts the disease is sometimes very trifling, and not observed at the time. I might illustrate this by my own experience. In getting out of one of your cabs, I have nearly torn off my tendo Achillis. You have no kerb-stone as we have, and no steps to your Hansoms; and the result was that, expecting to step down only eight or ten inches to reach the stone, I found I had to go eighteen or twenty inches, and thus I strained the tendo Achillis. If I had torn it entirely off it would have done no damage, except loss of time, because I should have been compelled to lie by; but I hurt it so little that I paid but little attention to it; and I have been walking about for a week or ten days, until I can scarcely walk any more. It is now bad enough for me to begin to take care of it. If I had hurt it a little less, it would have been more dangerous, because it would have gone on by degrees producing those conditions, that terminate in a destruction of the part.

In the first stage of the disease it is necessary to examine the child by taking off every stitch of clothes. Then, going behind, you will observe the peculiar form of the nates. The diseased side will have the gluteo-femoral fold a little dropped down; the two buttocks are not exactly alike; and you will observe, if you watch carefully, that the toe has a tendency to turn out, and the child bends his knee and hip. The sound leg is made into a solid column to receive the concussion and bear the weight of the body; the child is careful not to concussion the other at all. By careful measurement you will find that, even in the first stage, the thigh is already smaller than the other. Of course you want to examine very carefully in this stage, and it will take time to detect it; but after examining some little time you will see the gluteo-femoral fold dropped lower, the nates flattened, the line from the centre of the sacrum to the trochanter major a trifle greater than on the other side, and the leg having a tendency to be slightly abducted, and flexed at the knee. You then lay the child perfectly flat on the table. The case before us is a very illustrative case. You see the perfectly cautious manner in which the child moves; she sees everything, and keeps herself constantly on guard. There is now no movement at all at the hip; she is locked up, and she keeps herself as quiet as possible. The case is one that has gone on for some time [the mother stated that the child had been suffering for four years; that she had a slight fall at first, and did not complain of it at the time], and it is so conspicuous that anybody could find it out across the street. It is in the incipient stage, such as this child was in three years ago, that you want accuracy of diagnosis. This case has gone on to the third stage of the disease.

It is essential to a proper diagnosis of these cases to have a normal stand-point to go from, and it is this. The body of a child in a healthy state can be laid upon a flat surface, the spine lying upon the floor or table; and a line drawn from the centre of the sternum over the umbilicus to the centre of the symphysis pubis, and another drawn from the anterior superior spinous process of the ilium of one side to that of the other, cross each other at a *right* angle, when the trunk and pelvis are in a normal state. In that state, if the hip-joints be perfect, the legs can be brought so that the popliteal spaces can be made to touch the floor or table. Now, whatever position the other leg has to be kept in, in order to get these two lines at a right angle with each other that is the characteristic deformity of the leg. A sofa, bed, or lounge, will not do for this examination—it must be done on a *solid* foundation. In this case, you see, in order to get these lines right, I am compelled to hold the leg flexed, but it is simply adducted. That is a very important point. It is an evidence that the capsule has become ruptured. If there were effusion in the capsule, the leg would be *abducted* and rotated outward. The fact that it is adducted, and inside the central line, as you see, is evidence that the disease has gone to the third stage, and that the capsule has become ruptured.

You see that the child, when held in the manner in which I am now holding her, has no pain. Putting my hand upon the pelvis, I make movements, and you see that the joint is not ankylosed. Seizing the pelvis with one hand, and passing the other under the knee, and making moderate extension in the direction at which the deformity has arrived, I make movements, and the child has no pain whatever. I let her go for a second, and then, on making the slightest movement, you see what pain she suffers. Now, I have ankylosed that joint; there is ankylosis perfect and complete to all appearance; it is muscular rigidity that has produced it. You see here the disease aggravated and continued by pressure. You could not have a better illustration of the practical working of the principle of extension.

You perceive that the child can be moved about without any difficulty if she be handled properly, and the limb slightly extended. A person accustomed to it can take up a child with apparently the greatest carelessness, and will *seem* to be acting with perfect brutality, without giving any pain whatever. He knows how to apply his force; and yet in a single instant he can produce the most agonising torture. See the way in which the child locks herself up, and makes herself perfectly rigid the instant I omit my extension.

Pressure causes absorption. By constant pressure of the head of the bone against the acetabulum, there is absorption of the head and absorption of the acetabulum; destruction takes place, and terminates in an abscess which finds an outlet somewhere; or else it goes on to ankylosis.

Many persons apply a plaster of Paris splint in these cases. This is good, so far as it keeps the part still; but, as it lacks the power of extension, it does not accomplish all that is desired. It is better to have the limb recover with motion than ankylosed.

If I take hold of the pelvis, and make moderate extension, the child is free from pain; if I put it down straight I hurt her, for I put the *psoas magnus* and the *iliacus internus* on the stretch. The straightening is to be done by slow degrees. You see the result in the case of the other child, whose leg was like this, but is now much better, from the fact that extension has been applied for some days. It is best to put these patients to bed and apply the night extension. You put the extending force on the diseased limb very nearly in the angle of deformity as you find it; lowering your extension by slow degrees, until, in the course of a week or ten days, or two or three weeks, you get the limb as straight as in the case of this other child.

This is really the proper time to apply the instrument which I propose to put on this child in order to enable it to take out-of-door exercise. If you take it in the early stage of the disease you do not want to do that; but, this child having undergone this deformity, we must take her as we find her.

Mode of applying Extension.—We take two strips of adhesive plaster two or three inches wide (according to the age of the child), and extend them from just above the ankle on each side, and long enough to reach two or three inches above the knee, first having had a web sewed fast to the lower extremity of the plaster for the purpose of putting on a buckle for night extension. These straps are secured by a roller, as you see. I always put on the plaster without heating it. When heated, plaster is very apt to slide from itself; it moves off from the web or cloth on which it is spread. If you heat it, it burns the skin, or glides away from itself; but if it be put on with gentle pressure, this does not occur. I am careful not to make the upper end of the plaster stick before reaching it. If you put on the plaster with a fold and get a pucker in it, the effect is the same as pulling your boot on with a pucker in your stocking: it does not hurt you much till after dinner;

before bed-time it is unbearable. The plaster has to be worn many months, and it should be applied carefully. I mention these little matters as the result of my own experience and observation. You will only learn by making blunders; and having made many myself, I try to teach others to avoid them. It is remarkable how easily the plaster may be worn for months if it is smoothly and comfortably adjusted. The skin should always be thoroughly washed, and carefully *wiped* before applying the plaster. Having gone above the knee for an inch and a half or so, I reverse the plaster over the roller. At first I make the roller hold the plaster until I get above the knee; that is, simply to catch a bite, as it were, on the condyles, so that extension shall be made upon the hip, and not upon the lateral ligaments of the knee-joint. I then reverse the plaster and bring the roller back over it; and now the plaster is made to hold the roller in place so that it will not slide. This can now be worn for three or four months. If the bandage become dirty you can take it off without removing the plasters; or you can put a long stocking over it.

This is now ready for night extension. We next put on the plaster to apply an instrument for day extension, so that the child can run out of doors. This is done by taking two fan-shaped pieces of plaster, and sewing on to the pointed end a piece of webbing just wide enough to fit the jaws of the instrument. The instrument (Fig. 1) is made of two

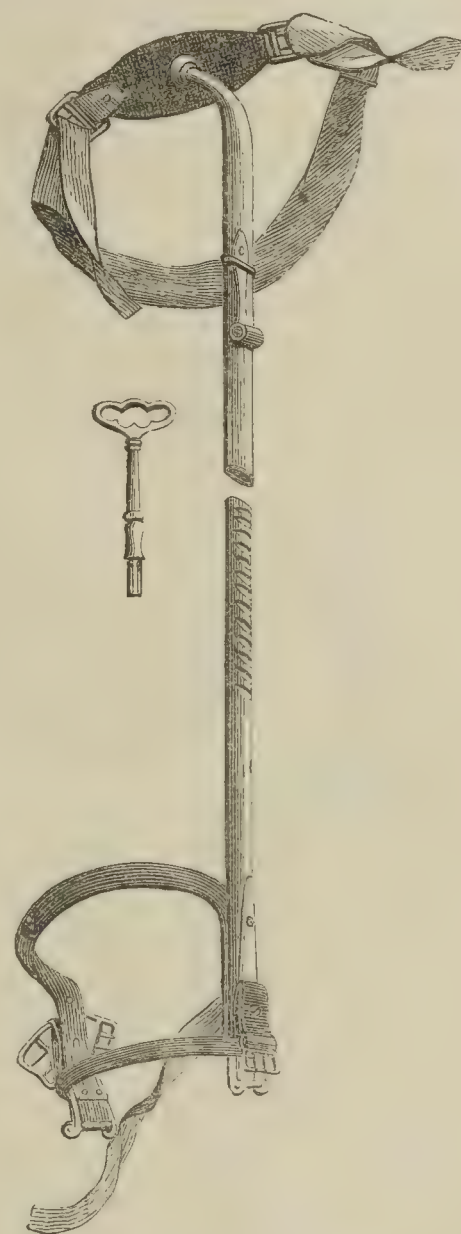


Fig. 1.—Instrument for extension.

pieces of steel, one sliding into the other, as you see, and made to lock by a key. This rod terminates in two branches that go over the thigh, and come on to the inner portion of it. I formerly made the instrument to go down the whole length of the leg; but finding that it only stiffened the knee-joint, I prefer now to make it go over only the thigh. By means of a cross branch, you take the extension from the inside of the thigh. The rod should be made to extend from an inch and a half to two inches above the condyles of the femur up to the crest of the ilium. It ends in a little roller, over which the webbing is to play, and it is capable of being elongated and shortened at will by the key. The

upper portion terminates in a ball-and-socket joint in a little steel band which runs round just under the crest of the ilium. At each end of this band is attached a perineal pad, which runs under the perinæum, and is buckled; and counter-extension is made on the perinæum, so that the child walks on the perinæal pad instead of on the hip-joint. This was a desideratum which I was always trying, for a great many years, to obtain, but did not succeed. A man named Davis was the first to make an instrument accomplishing this object. It was a piece of steel running down the whole length of the leg to the ankle. Extension was made by a joint and a buckle, but it could not be gauged, regulated, or controlled with ease or accuracy; still the principle of keeping up extension, and at the same time permitting motion, was made first by this man Davis. Had he remained an honourable man, true to his profession, he would have deserved to have his name passed down to posterity with respect; but having taken out a patent for his instrument, he has incurred the reprobation of every honest and honourable man. We will, however, give the devil his due, and admit that this man was the first who made an instrument accomplishing this object. But his instrument has been so modified and so immensely improved, that his patent is of no avail.

You lay the instrument over the thigh. If it do not fit exactly, you can bend it with the fingers; if it be a little too tight, you can spring it apart. You put your thumb and finger opposite where the two lower jaws come, and you will know the place to commence the application of your plaster for the extension of the thigh. Sometimes the pain is so intense that it is necessary to give chloroform. The plaster is put on and bandaged round, as you see, working in and out basket fashion, so as to cover any inequalities of the skin. After a few applications, you learn how to do it snugly and smoothly. By having the plaster cut in slits at the upper ends, it can fall in pieces or fall together more readily, and thus be applied more smoothly.

I used to put the bandage over the pelvis, in the form of the figure 8, but I prefer the plan of splitting it in strips and reversing it over the roller, as you now see. Remember that it is not requisite to pass above the trochanter major. It is hardly worth while to draw the anatomist's attention to that; but I have seen the best surgeons thoughtlessly apply the plaster clear above the joint, and of course it only pulled the pelvis instead of opening the joint.



Fig. 2.—Child before the application of the instrument.

If this instrument had been put on the child before she became so much distorted, you can well understand how much greater the advantage would have been; or had she been kept in bed two or three weeks, and the limb pulled down straight; but we will take the worst kind of case, and see whether it will do any good or not. As I am compelled to put on the instrument immediately, I press the plaster on, rather than apply it by heat; and by keeping the limb extended, I can press the plaster home without hurting the child. But it is better to

leave it for a few hours to get an attachment. [The accompanying sketches (Figs. 2 and 3) show the child before and after the instrument was applied. In a few minutes after its application, the child walked around the room in perfect comfort, sat down on a chair, and got up several times to show the perfect freedom of motion in the joint.]

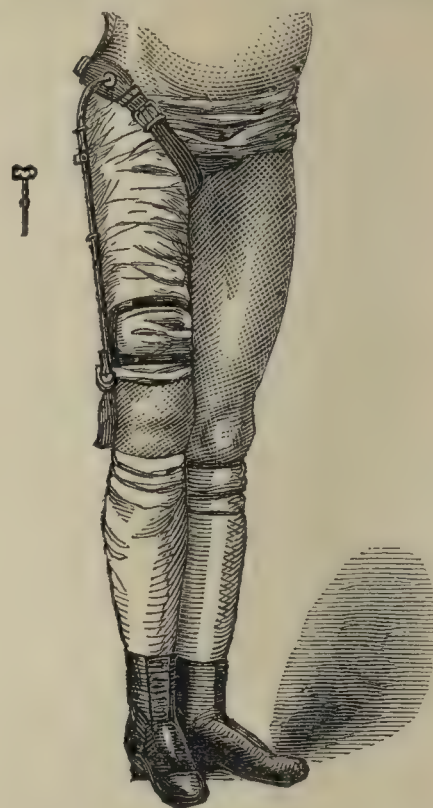


Fig. 3.—Child after the application of the instrument.

This treatment may be required for months and months; and when the patient is well, I make him wear the instrument for weeks or even months afterwards, as a means of protection or guard. If the child be small, no crutches are required; but, of course, if the weight of the body be too great to be sustained by the plaster, crutches must be added. The advantage is, that the ligaments are kept in movement. The objection to the *fixed* treatment is, that the ligaments which are not involved in the disease become diseased by rest. By giving them motion, they are kept in a normal state. A piece of old leather, if you do not handle it and keep it supple, is good for nothing.

When the disease has gone on to another stage where sinuses have occurred, and discharge pus, when a probe leads down to dead bone, there is nothing to be done but to exsect it by making a small incision above the trochanter major, midway between it and the crest of the ilium, over the top of the acetabulum—a semilunar incision, the belly of the D covering the posterior part of the trochanter major, going straight down to the bone, *through* the periosteum. You then pull the soft tissues on one side, and, taking a small but strong curved bistoury, go as far around the bone on each side as you can reach, at right angles to your first incision, so as to divide the periosteum completely; you then take a strong firm periosteal elevator, with a large handle, and the end slightly curved, and go into this little triangle; you *peel* off the periosteum, and, as a matter of course, all the muscles with it; by opening the joint thoroughly, and turning the head of the bone out, the periosteum is peeled off from the inner portion; you then saw off the bone above the trochanter minor. I believe that this is better than cutting through the neck. If you go through the neck, the trochanter major comes over the hole and prevents discharges; whereas, by cutting off the trochanter major along with the neck of the bone, you leave a perfectly free opening for the discharges from the diseased joint; and by peeling off the periosteum in the way which I have described, you carry with it all the muscles that move the joint; and if you then keep the leg pulled out to its proper length, by putting on a pair of wire breeches, you can send the patient out into the air the very next day (Fig. 4).

Here is a photograph showing the result of a case that has been exsected. Three inches and a half of bone have been taken away, and the head of the bone united. Here is another, in which four inches and a half were removed, and the man recovered with a movable joint. This which I now show you was the first case performed in America. I operated on the patient in 1852. I invited many surgeons of New York to come and see the operation; but no one attended, as at that time it was thought to be unjustifiable. The patient is, as you see, a handsome

woman, and no one would observe any defect in her. Here, however, is the most successful case, in which four inches of bone were removed. The whole acetabulum was destroyed; the head and neck nearly

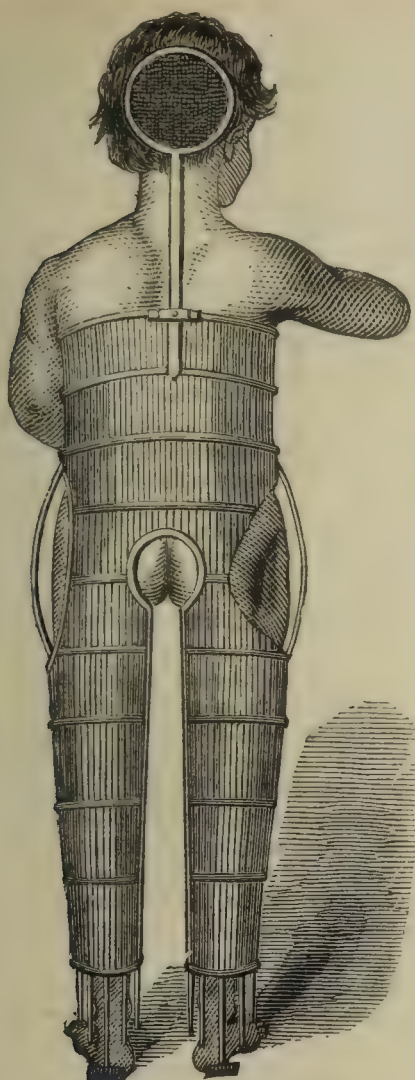


Fig. 4.—Wire-breeches.

absorbed. There were several sinuses leading down to dead bone. I removed the head and neck, cutting it off just above the trochanter minor; but, finding the disease extending further down, I pushed the femur up, and sawed it off again. By keeping the limb extended, if you will peel off the periosteum in the manner which I have described, the bone will be regenerated, and be as good as ever. By extending it sufficiently, you make the limb as long as before. When you have got the bone regenerated, and before consolidation takes place, you commence passive movements, and in that way obtain an artificial joint, as in the case of an ununited fracture. By constant movements you prevent ankylosis; and, as the muscles have all been carried off with their insertion at the periosteum, you have certainly got the normal position from them to be moved again. The proof of it is in this boy. He bends his leg at right angles; he can kick higher than his forehead; and he won a pair of silver skates two years ago in a contest with some very good skaters on the Central Park pond in New York. The leg is almost exactly of the same length as the other, and the motions are perfect; and yet here you see four and a half inches of his femur, and the acetabulum was perforated.

I have been rather surprised to receive a letter from Mr. Barwell, who said he was going to publish it in the *Lancet*. I hope, for his own sake, that he will not. He dislikes my plan of removing the periosteum. Of course every one has the right to select any plan that suits him best. I am extremely reluctant to be dragged into controversy; and, without answering anything of the kind, I will draw your attention to the answer which you can make yourself. If you take an orange and cut a slit down through the skin, I should like to see any of you with a sharp penknife peel the orange out of the skin without splitting the skin or sticking the knife into the orange; or if you take a straight broad knife like a scalpel, and take the orange out without damaging the skin or making an occasional hole in the orange, you are more dextrous than I am. But if you will take a knife and cut across the skin, you can take the handle of a silver spoon, slip it in, and peel round under

the skin, and separate the orange from its covering without tearing it. So it is in regard to the femur. In *dissecting* off, you tear the periosteum into shreds, destroy its vitality, and prevent its doing the good which you want it to do. By commencing *above* and “prying” it off, without first limiting its extent by the circular incision above referred to around the femur, you are in great danger of loosening its attachment to the bone below the point where it is to be sawed off—where you do not want to loosen it. You want the periosteum left attached to the femur. Therefore I prefer cutting down over the trochanter major, through the periosteum, down to the bone, as far as opposite a line a little above the trochanter minor. Taking a small bistoury, and going at right angles to this first incision, half-way round on each side, I thus limit the line of removal of the periosteum to the place where section of the bone is to be made; and below that point the periosteum remains attached to the bone. Since adopting this plan of operating, and always using the saw to divide the bone, instead of the pliers or bone-forceps, I have not had exfoliation follow my operations as in former instances. To prove that this is the better way, I may mention that I have operated forty times, and thirty of my patients are walking about with excellent movement of the joint; and you here see daguerreotypes of them. Eight or ten of them, I am confident, might be walked into this room, and not one gentleman here would be able to say which leg was operated on. These are cases in which I operated in the way I have described. I did not learn to do this the first time I tried; and some of the cases, therefore, did not get on so well. I have had some short legs; and I have had cases where there was a good deal of exfoliation because I did not peel the periosteum properly; and I have had exfoliations because I cut off the femur with a forceps, which in my judgment ought not to be done.

Let me, before I conclude, say a word on operative surgery and anatomical surgery. You sometimes see beautiful dissections. Men will hold the knife like a pen, lay out the various tissues, and give a very pretty dissecting-room demonstration. Every surgeon should go through this anatomical surgery in the dissecting-room, and do it thoroughly and frequently; but, when he comes to apply his knowledge to the living human being, let him be an *operating* surgeon, and go straight to the place which he wants to reach, without splitting hairs and dividing endless series of fasciæ.

CONTAGIOUS DISEASES ACT.—In reply to Mr. Baines on Monday last, Mr. Bruce said that the report of the Commission on the Contagious Diseases Act would be presented to the House at the very earliest possible moment. Although the report was unanimously signed by twenty-three out of the twenty-five members of the Commission, one of the two being absent from ill health and the other being on duty in India, yet as a matter of fact two-thirds of the members might be said to be in favour of a qualified compulsory application of the Act, and one-third—seven at least—of them were in favour rather of strengthening than of weakening the Act, and six of the number were practically in favour of repealing all compulsory legislation, but all were in favour of introducing some further legislation for the purpose of adapting the modified legislation to the acceptance of the whole country. No doubt the report of the Royal Commission on these acts was intended, not merely for the information of the Government, but of Parliament and the whole country, and it appeared to the Government that at this period of the session it would be impossible to give due time for the consideration of the report by the Government or the country, so as to introduce lasting legislation on the subject, and it was, therefore, not the intention of Government to bring forward a bill during the present session. Under one set of circumstances it would have been their duty to do so. Had the statements which had been so frequently made, and to which much of the deep and strong feeling which undoubtedly existed in the country was owing, been confirmed by the report of the Commission—had it been shown that those outrages which had been complained of had been committed, it would have been the duty of Government under almost any circumstances to have introduced a measure to repeal an act capable of such abuse. But he might be permitted to read the words of the report:—“We generally find that the result of our inquiries has been to satisfy us that the police are not chargeable with any abuse of their power, and that they have hitherto discharged their difficult duty with moderation and caution.” Now that feeling was unanimous, and examination of the evidence showed, as he was happy to state, that not only had the statements been grossly exaggerated, but that a great many of them were sheer inventions. The House would see that the substitution of any legislation which would require, both from Government and the House, deep and anxious consideration, was a subject which could not be undertaken at present.

THE HASTINGS PRIZE ESSAY,

1870.

ON DIGITALIS: ITS MODE OF ACTION AND ITS USE.*

By J. MILNER FOTHERGILL, M.D.,

Late Senior Resident Medical Officer to the Public Dispensary, Leeds.

Mitral Obstruction.—In mitral obstruction the same series of symptoms present themselves as in mitral regurgitation. The obstacle here is in the entry of the blood into the ventricle; the orifice being narrowed, it is necessary that the blood be poured in under greater pressure. The feeble but regular pulse tells how imperfectly the ventricle is distended in each diastole. There are the necessary changes in the right ventricle and pulmonic circulation, and a general thickening from the ventricular wall to the smallest vessels, which ensue from the natural conservation of the system; and as long as these compensatory changes are kept up fairly, the sufferer is scarcely conscious of his injury. But, sooner or later, the compensation either fails, or secondary diseases follow the lesion and its sequelæ. We can only take the natural indication of compensatory hypertrophy, and aid it, so far as in our power lies, by administering agents which assist the natural attempts made in the manner explained in a previous section. We must keep up the powers which are to drive the blood through the narrowed orifice, and that can only be attained through increasing the pressure by an increased *vis a tergo*. The changes in the lung when the pulmonic congestion has led to disease further obstruct the flow, and impede the action of the right ventricle. Death is approaching from failure of the right ventricle, and its action must be kept up at all hazards. Increased action in it leads to a freer circulation through the lungs, the asthenic congestion being the cause of the dyspnoea. We must obviate the tendency to death, and meet its approach by appropriate means; and in this valvular lesion it is failure of the right ventricle against which we have to guard.

Mitral Regurgitation.—In this valvular lesion, even more remarkably than in mitral constriction, we find changes due to overcharge of the pulmonic circulation. The blood is driven into the ventricle without obstruction, but part is forced back at each ventricular systole. This regurgitation overloads the blood-vessels behind, and the blood is forced into the ventricle on diastole under increased pressure; the consequence is, that the left ventricle is over-distended, and a certain enlargement of the ventricular cavity follows, usually accompanied by hypertrophy. This change in the left ventricle is always to be borne in mind, and not to be overlooked in the question of administering a drug which produces increased ventricular contraction. For it is obvious that, while we might increase the power of the right ventricle, if the left remained unaltered and the agent acted equally on it, as it does, all our increased power might be met by an unnatural contraction of the left, more than negating the good to be got from the increased activity of the right ventricle. If the left ventricle remained without change, the administration of the drug would certainly be decidedly contraindicated; the danger of over-contraction of the left ventricle would constitute a more serious danger than the one we wished, as in mitral obstruction, to relieve. But the increased pressure under which the blood is poured into the left ventricle from the distended auricle and veins behind it, more than counterbalances that risk. In fact, the action of the agent on the left ventricle, is equally beneficial to prevent its becoming over-distended and yielding before the increased centrifugal pressure of the blood driven into it under greater pressure from behind. In mitral regurgitation, the benefit to be derived from the administration of digitalis is as manifest as in any condition of cardiac disease. The mode of repair which we find to have been set up by the natural efforts of the system in persons in whom valvular lesion has been discovered by some chance, is a compensatory thickening of the muscular fibre of the right ventricle and the pulmonic vessels, and an increase of the capacity of the latter to withstand the stress upon them from the addition of the blood which regurgitates to that which is sent in from an enlarged and more powerful ventricle. The vessels, though consisting of tissue not readily taking on increased growth, change gradually to keep pace with the increase in the power of the right ventricle, and retain this hypertrophy even when the efforts of the right ventricle are waning. The failure of the right ventricle is again the avenue by which death is advancing; and

by increasing its efforts we increase the blood-pressure, and increase its opposition to the regurgitation, and thus more blood is thrown into the aorta at each ventricular systole, while increased arterial tension leads to better tissue-nutrition. Of course the condition of the vessels must be taken into consideration, as will be considered more at length under the head of contraindication. Even pulmonary congestion does not militate against the exhibition of digitalis in mitral insufficiency; in fact, usually it is much relieved by the increased action of the right ventricle. The effect of compensatory change, and, of course, of artificial aids to it, is much more obvious in mitral than in tricuspid insufficiency. The increased action of the right ventricle is not lost over the length of the pulmonic circulation, as in the increased action of the left ventricle in tricuspid regurgitation. In fact, in mitral regurgitation, we see most constantly the effect of conservative compensatory changes behind the lesion; and thus, of course, agents aiding in effecting that compensatory change are of the greatest value. It is clear, too, from the tendency of the left ventricle to yield to the increased centrifugal pressure of the blood driven in by the distended auricle and veins behind, that the stimulated contraction in it from the action of the drug does not constitute an objection to its use. It is only by observing what changes have gone on spontaneously in individuals suffering from mitral insufficiency, and yet capable of sustained exertions, and further observing how that compensation commences, that we can get a clear idea of what to attempt to achieve, and of the mode by which relief can be afforded. These indications we must carefully follow if we expect to give any therapeutic aid to the sufferer, either during the disturbance which follows the first appearance of the lesion, or when the compensatory change is failing.

Aortic Obstruction.—In aortic obstruction, a totally different change takes place from what goes on in mitral disease; and as long as the mitral valve remains perfect, the change is confined to the muscular walls of the left ventricle. It is a simple question of increased power; and as the contracting action of interstitial inflammation of the valves and orifice is very gradual, the muscular change can keep pace with the changes. Thus we see in aortic obstruction usually a simply hypertrophied left ventricle. There is not dilatation, because there is no increase in the centrifugal pressure of the blood poured into the ventricular chamber. A natural increase in the muscular power allows an equal quantity of blood to be driven through the orifice, now narrowed, in an equal time; there is no disturbance of balance; the hypertrophy here is most commonly perfectly compensatory, and the compensation lasts longest. The existence of aortic obstruction is most frequently discovered casually, and not by any heart-symptoms on the part of the patient. In conditions of failure of the ventricle, from general debility or atheroma of the aorta interfering with the propulsion of the blood into the coronary vessels, and consequent imperfect nutrition, increased ventricular contraction at once relieves the patient, and tends to produce a comparatively permanent improvement. My reasons for regarding the improvement following the use of digitalis in this affection to consist in increase in the driving power, rather than in slowness of the ventricular contraction, as stated by Sir Dominic Corrigan, have been given above, and need not be repeated. It may not be out of place to add here that hypertrophy is the mode of repair adopted by the efforts of nature, and not any reduction of the number or the rapidity of the contractions. Relief, too, follows the use of digitalis when there is no appreciable retardation of the pulse. As to the question, it is merely one of time or power, and the latter is evidently the correct explanation. The effect of digitalis would depend largely on the condition of the muscular fibre. If there were only a passing disturbance, and the muscular fibre were fairly structurally sound, small doses alone would be required; if the hypertrophy were passing into degeneration, much larger doses would be called for. In aortic obstruction, the therapeutic aid to be given is a very simple question; and increased ventricular contraction, however produced or attained, at once restores the disturbed equilibrium and gives relief.

Aortic Regurgitation.—In aortic regurgitation, however, it may be made a matter of great question how far any interference can be beneficially available. In this affection, we meet with the true *cor bovinum*, an excessive enlargement of the left ventricle, both in thickness and cubic space and cavity. The regurgitation through the aortic valves produces increased and sustained contraction of the ventricle. The backward flow on the arterial recoil is no longer caught and arrested by the semilunar valves, but falls on the fundus of the ventricle, and thus normal contraction is prolonged into sustained contraction. On the diastole, however, the blood flows through the insufficient semilunar valves, as well as through the mitral valve; the quantity regurgitating being added to the normal amount from the auricle, and then the centrifugal pressure is increased and dilatation follows. At the same time, a great increase of the muscular walls follows the increased necessity

* Continued from page 59 of last number.

for contraction. There is not here simple dilatation, for the ventricle can empty itself without impediment, and the sustained contraction calls out more muscular effort. Between the two forces of increased distension and increased and sustained contraction, the ventricle becomes both enlarged and thickened. But the increased volume of blood thrown at each ventricular systole into the aorta, and over-distending it, leads sooner or later to endo-arteritis; the aorta is not only enlarged, but its walls become diseased and lose their elasticity; thus goes one element in the propulsion of blood in the coronary arteries. At the same time, the regurgitation takes off from the arterial recoil, as is well seen in a sphygmograph tracing, and the recoil no longer fills the coronary arteries, but is lost in the regurgitation; this adds further to the diminished flow through the coronary arteries. Sooner or later, the hypertrophy passes into degeneration, and the muscular walls lose their structural integrity, and with it their compensatory usefulness. The more diseased and less elastic the aorta, the more defective becomes the coronary circulation, and the tissue-nutrition connected with it. It would be difficult, then, to move in this complicated condition without finding the risks increased in strict proportion to any benefit that might accrue. Increased ventricular action might produce increased tension, and consequent better heart-nutrition; but then there is the increased danger of rupturing the diseased arterial coats. The benefit is not without alloy; and it may be made a matter of question how far we can safely interfere at all. Each case must stand on its own peculiarities, and the treatment be adapted to the patient's special requirements; but digitalis can rarely be indicated. In the earlier stages it is contra-indicated by the hypertrophy and sustained contraction. Its administration is hazardous; and the risk of driving the ventricle into a contraction which may never be relaxed, and of bringing the heart to a standstill in systole, is greater than any risk accruing from inefficient contraction; in fact, in this lesion the hypertrophy is usually so extreme as to need no abetting.

Disease of the Right Side.—The effect of disease of the right side, as regards the muscular walls, has been considered above. In valvular disease of the right side, we do not know any peculiarities connected with the pulmonary orifice: disease here is rare, and the same indications and contra-indications would not exist as in aortic disease. It is widely different in the affections of the right auriculo-ventricular valves.

Tricuspid Regurgitation.—In tricuspid regurgitation, repair is almost forbidden by the anatomical arrangement of the parts. There is no possibility of compensatory change, at a little distance behind, coming to the rescue and backing up the insufficiency, as in mitral disease. The tricuspid is far removed from any force which could in any way make up for its deficiencies. As to the theory of the tricuspid being naturally and normally imperfect, and admitting regurgitation on any distension of the right ventricle or obstruction before it, or what was called "safety valve" action, it is now generally abandoned. It would, if it existed, militate strongly against any compensatory change in the right ventricle, which never takes place without some enlargement of the cavity of the ventricle. It would be a most common thing to find jugular pulsation, cyanosis, dropsy, etc., on any stress falling on the right ventricle, which we know only to occur when the tricuspid has become incompetent. These evidences of tricuspid incompetence are of portentous moment, and are the ordinary harbingers of serious danger to the organism, and only too commonly of approaching dissolution. If the "safety valve" theory were a correct one, they should follow inevitably in any pulmonary affection which might try the right ventricle. Instead of that, their appearance during a chronic cardiac affection is usually the precursor of death: showing that the last anchor, the tricuspid valve, has given way. It occasionally happens that a lesion in the tricuspid occurs as a primary affection. The progress of the case is rapid and downward; the venous engorgement and its concomitants are present at the first, and not at the last of the case. Dropsy sets in while there may be a fair amount of vigour, and the patient going about. There is a rapidly accumulating coma from the venous congestion of the encephalon; there is asthenic congestion of the lung; there is engorgement of the liver and kidney, and from it, again, uræmia. The patient's troubles come upon him in quick succession, and the last change is not long delayed. All art seems useless; there is no ventricle at a little distance behind, to back up the lesion, and no compensatory change can be organised. The administration of digitalis is apparently of no benefit whatever; the increased action of the left ventricle is too far distant to be of any avail. The action seems lost over the length of the systemic circulation, and in the dilatibility of the veins. This is the only action available. Purgation may relieve the venous engorgement; but

nothing can compensate the lesion. The prospect is hopeless; and though we may try to be of service to the patient, it is with a painful consciousness of the futility of our efforts. The free use of digitalis was of no apparent use in a case where it was given unsparingly enough, in order to ascertain if any good could accrue from its empirical use; though reason could advance nothing in its favour. When the tricuspid fails in chronic cardiac disease, the patient's prognosis is hopeless, and relief of some of the most urgent symptoms is all that we can hope for.

Tricuspid Obstruction.—The existence of this affection is questioned, so rare is it; but that is no proof of the impossibility of its occurrence. When it does occur, digitalis and all other cardiac neurotics would be useless, for the same reasons as in tricuspid insufficiency.

In all valvular affections, digitalis is useful or useless entirely as it is possible to produce conservative compensatory changes in the muscular walls. In disease of the left side, by following the indications thrown out by spontaneous accessory growth, we may be of the greatest service in either aiding the production of the compensatory change, or assisting in its continuation when beginning to fail.

Degeneration of the Walls.—This was once considered to negative any recourse to digitalis, when it was regarded as a cardiac sedative; and this was quite consistent. Our modern acquaintance with its action tells us, that in degeneration we may resort to it without alarm, and not only that, but with confidence. In degeneration of muscular fibre, no action can affect those fibrillæ which are converted into fat-globules; any action must affect the sound fibrillæ only. It is obvious, then, that digitalis may, by stimulating the sound fibres, produce not only relief to the general symptoms, but may even aid in somewhat improving the structural condition. Of course this will depend to a great extent on the causation of the degeneration. If it be connected with atheroma of the aorta, and thus a preservative lesion consequent on that atheroma—if the degeneration arise from impeded circulation through the coronary arteries from loss of arterial recoil, due to the loss of arterial elasticity, then the administration of digitalis will, while obviating one risk, increase another. But, if it be due to other causes, as pericardial adhesion along the track of the coronaries, then digitalis will assist us in our efforts to bring about improved tissue-nutrition, by improved ventricular action. The degenerate walls yield to centrifugal pressure, and do not contract completely, and dilatation follows. Then digitalis will be useful, as described in an early section; and the condition of the muscular fibres will not affect the treatment, except in so far as it diminishes the prospect of success. The possibility of effect on the capillaries, and of their contraction offering an opposition to the flow of blood, is put forth by Brunton as an objection to its use. But this is practically no objection to the use of digitalis, as clinical observation has convinced me. The increased action of the heart more than counterbalances the capillary contraction. Thus in a frog, when a watery infusion of digitalis was applied to the web of the foot, the contraction following almost completely arrested the circulation through the part. The administration of digitalis by the mouth restored the circulation. If, then, the increased action of the heart was visibly efficacious where the infusion, applied locally, produced contraction of the vessels, and the increased ventricular action was apparent in so small a section of the circulation, the fear of any stress thrown on the heart by capillary contraction, affecting its power to contract, must be a hypothetical one only. The frequent administration of the drug in liberal quantities has never yet in my experience been followed by any untoward result.

Angina Pectoris.—In angina pectoris, the use of digitalis is novel. Fuller, from his conviction of the tonic action of digitalis, proposes its employment in angina, but gives no experience of his own, merely suggesting its use. Many views exist as to the nature of angina pectoris, as to whether it occurs in healthy hearts and is merely neural, a hyperæsthesia of the cardiac plexus (according to Romberg), or one of the most important symptoms of muscular degeneration, being in fact pathognomonic of it; hence this is a very difficult subject to approach in the direction of therapeutics. In true angina pectoris, certainly not mere cardiac asthma, occurring in a patient where there was strong reason to regard it as in its nature neural, and where the attack was usually produced by passion, lasting two or three hours, and little if anything relieved by diffusible stimulants, as ammonia, chloric ether, etc., the addition of thirty minims of tincture of digitalis, repeated at the end of half an hour, gave great relief; and so different was the result of the treatment when the digitalis was added, that there could be little or no doubt of the connexion being consequential. Further use of it in these attacks in the same person corroborated that belief. The next case which occurred was in a patient where there was strong reason to suspect the existence of fatty degeneration. In a paroxysm of angina, encouraged by the success in the other case, I gave

* For an able investigation of this subject, see T. W. King's article in *Guy's Hospital Reports* for 1837.

digitalis with very satisfactory results. Of course, the question of a rational conception of its action is difficult in the presence of so many various views as to its pathology; the old idea of spasm is now giving way to an idea that it is arrested, or nearly arrested, ventricular contraction, which is the real state of the matter. There are those who believe that angina pectoris is connected with spasm of the coronary vessels, or with bony plates in the sinuses of Valsalva getting across the mouths of the coronary arteries and obstructing them, or, rather, the circulation through them. Certain, however, it is, that whatever the exact neural condition may be found to be, or even if angina may arise from temporary action not neural, it is commonly associated with hearts that give at other times evidences of impaired tissue-integrity. Whatever it may consist in, my experience in these two cases shows, firstly, that the administration of digitalis is not harmful, and, secondly, that there appears to be such benefit following its administration as to lead me to the conclusion that it exercises a remedial action over this condition.

Cardiac Asthma.—In cardiac asthma or false angina pectoris, where there is evident distension of the right ventricle accompanied by palpitation, dyspnoea, and lividity of the face, frequent use of digitalis has led me to a conviction that it is certainly our mainstay. I have learned in this condition to give it freely and fearlessly, with confidence, the result of experience; and I have not yet been disappointed. The stimulating action on the sympathetic cardiac ganglia, and the effect on the muscular fibres under their control, is just the exact action which it is imperatively necessary to rouse in order to overcome the train of accumulating evils, as pulmonary congestion, cyanosis, and carbonic acid poisoning, which wear out the patient's existence, if he do not die of the more rapidly acting blood-stasis. Theoretically, this is the action of digitalis as learnt from physiological experiment; clinical observation demonstrates the soundness of the view, and further indicates it as a valuable addition to our means of controlling a condition which always is one of imminent danger in itself, tending to cut off the organism suddenly, and which, when repeated or long continued, certainly produces secondary derangements and complications, as emphysema, dilatation of the right side of the heart, with further pulmonary congestion, more frequent and prolonged dyspnoea, oedema of the lung, and, in fact, a constantly widening vicious circle of troubles, which render the patient's last days an intolerable misery to him. The relief of this terrible, and by no means uncommon condition, lies in rousing the action of the distended right ventricle; and that this may be done without bringing the left ventricle to a standstill in systole, is certain. For an explanation of this apparent anomaly, see the section on mitral regurgitation.

Temporary Cardiac Conditions.—From cardiac asthma we may pass on to the consideration of passing or temporary cardiac conditions, and to the means of treating them. For instance, in failure of the right ventricle in fevers, and in pulmonary affections, in shock, in palpitation, we must first satisfy ourselves as to the condition before proceeding to treat it; it is on our knowledge of the exact pathological condition that the efficiency of our remedies must depend. The whole question is a comparatively new one, and is most important; no more important addition could be made to our stock of therapeutic knowledge than a proper insight into these conditions, and the means of acting on them. We will first take failure of the right ventricle in acute asthenic conditions, commonly called cardiac asthenia.

Cardiac Asthenia.—In this condition we find the pulse furnishing us with the precursory evidences of approaching death. We find the pulse mounting in number, and its strength in inverse proportion; after a while there is an occasional intermission or irregular beat; then the intermissions come more frequently, and in time in clusters; the breathing is hastened and rapid, even out of proportion to the pulse; and we all know that the patient is in imminent danger, and usually dying. Now, of what are these symptoms indications? For, on the diagnosis must rest our only rational expectation of being of real service to the patient. Well! what does the *post mortem* table say? Usually in these conditions the left ventricle and the arterial system are empty and contracted, the right ventricle and venous system turgid and distended with blood. This throws some light on the symptoms. The right ventricle has become distended and contracts inefficiently; the blood is not circulating freely through the lungs, they are asthenically congested, partly from vaso-motor paralysis, partly from an altered condition of the blood itself. The quantity of blood pouring into the left ventricle is only equal to imperfect distension. The ventricles ordinarily act synchronously, in consequence of a large number of fibres being common to both ventricles, describing a figure of 8; and the left must keep time with the right ventricle. Thus, as the distended right ventricle always full is acting inordinately fast, expelling a small quantity of the top of the ventricular contents, the left is contracting on its diminished contents; consequently, we have a small

arterial distension as felt at the radial pulse. It is clear that the more distended the right ventricle, and the more imperfect its contractions, the less blood flows into the left ventricle, and thus the rapidity and feebleness increase hand in hand. The symptoms are plain enough, and the fuller the venous system the emptier the arterial; the more distended the right ventricle, the more imperfectly filled is the left. The intermission is connected with the state of the right ventricle, not so much with any difficulty in the left. And long before the intermission in the radial pulse is apparent, an intermission can be felt on applying the ear over the heart; the intermission can be heard before the condition of the right ventricle so affects the left as to be felt in the radial pulse. This condition is common in acute asthenic disease as well as in diseases of the respiratory organs. In disease of the respiratory organs the engorgement on the right side is most readily apparent, but not so in acute asthenic disease. In bronchitis, for instance, the original obstruction is almost mechanical in its operation, but it soon leads to chemical alterations. These chemical alterations and their consequences are of the highest importance; and more especially in their bearing on the right ventricle. Both in disease of the respiratory organs and in acute asthenic conditions, we have an accumulation of carbonic acid in the blood. In respiratory affections the injured organs do not admit perfect oxygenation; in acute asthenic disease we have not only a well known tendency to acute asthenic congestion, hypostatic or other, but also an increase in the products of waste. We have thus the venous blood more than ordinarily laden with carbonic acid, an agent which has a direct effect in paralysing the heart when brought into contact with the endocardium. Thus Cyon so arranged a stream of serum made to flow through a heart, as to be able to add a quantity of carbonic acid or to withdraw it from the serum. When the carbonic acid was added, cardiac paralysis came on; when withdrawn, the cardiac contractions were resumed. For a short account of this most interesting and instructive experiment, the reader can consult the Sydenham Society's *Year-Book*, 1867-1868.

Here we see experiment corroborating what clinical experience had taught. The right ventricle, as being connected with the venous system, is also more distensible, and is commonly distended, as a matter of habit; every severe exertion or shortness of wind congests or distends the right ventricle. There is thus a readiness of distension about the right ventricle which allows the chemical agent to act effectively. Thus the blood, more and more laden with carbonic acid, acts on a ventricle becoming more and more distended, and tends still further to paralyse any power of contraction remaining; while increasing inability to contract leads to further and more imperfect oxygenation. Under this action and reaction, the condition is commonly followed by cessation of the ventricle and death. The frequency of this condition is such as to prompt our most active interest in it, and to strive earnestly after some means of acting upon it. The failure of the right ventricle is the door by which death enters; and it is our duty to obviate the tendency to death, by all means in our power. Even bleeding, on account of its temporary agency in relieving the distended ventricle has been advocated by no less an authority than Dr. B. W. Richardson. Stimulants have been largely resorted to; and in the treatment of typhoid pneumonia, where the condition is well-marked, Dr. Hughes Bennett has advocated them most warmly and perseveringly. The fact of the great and extreme danger of this condition has always been recognised; but it is only now, when the effect of agents on the heart is being investigated, that a ray of real light is illuminating the question. This use of agents affecting the heart is of the greatest importance, and is one of the great questions of the future. The effect of digitalis on the right ventricle in acute distension of the right side in cardiac asthma has inspired me with hope in the treatment of this condition when arising in the course of acute affections. It is, however, a question of fact, not of theory. But a man slings no worse for having a target to aim at, and a rational comprehension of what we stand in need of, and of the exact action of the agents we employ, will assist us in our efforts. The practical success of these efforts can alone tell us unmistakeably what is their real value. As in the treatment of chronic cardiac affections, no attempt is being made here to extol digitalis as possessing powers either unique or peculiar to itself. It is merely the most active and best known agent of this class as yet. In time we may find agents more powerful and rapid in their action, but at present we can get results from it that we cannot get from other agents.

[To be continued.]

ERRATA.—In the portion of the Essay which appeared in the JOURNAL of July 8, the following errors require correction. Page 27, column 2, twenty lines from bottom, for "sufficient", read "insufficient". Page 28, column 1, line 22 from bottom, for "palpitation", read "palpation". Page 28, column 2, line 36, read "inhibitory action of pneumogastric plus the vis inertia of the blood". Page 29, column 1, line 10, for "junction", read "function".

ON THE ELEMENT THAT KILLS IN CHLOROFORM,
AND OTHER ALLIED CHEMICALS.*

By J. D. BROWN, F.R.C.S.Eng., Haverfordwest.

OF all deaths, the quickest are those which follow the total arrest of circulation, where the action of the heart is first stopped. Next in rapidity are those that follow the total arrest of respiration. Death from prussic acid is a fearful example of the first; from drowning and strangling of the second. By prussic acid, death is instantaneously produced; in drowning and strangling, life is never prolonged beyond three minutes. Death from heart-affection is apparently easily explained; but why die from the exclusion of air? Let us imagine a person in full vigour and life, brought up dead from the water. Not a finger has touched him; not a drop of his blood has been shed; no poison has polluted his blood; yet he is dead, and three minutes ago he was full of lusty life. Why has he died? His organisation is still perfect. The reply, I expect, is, that he died because there was no arterial blood to circulate, oxygen having been excluded long enough to kill. In heart-disease the answer will be, that there was no heart-power to circulate the blood, although it was still arterial and pure. All this is plain enough.

We will now take up chloroform, ether, olefiant gas, and alcohol, with their varieties, in which I shall include all the compounds of carbon, whatever name may represent them, such as chloral, etc. Those chemicals are introduced into blood either as liquids or as gases; it matters but little now. In considering their chemistry, we find them richly charged with carbon in subtle solution. The little oxygen, hydrogen, or chlorine, that they contain, simply play the part of solvents to the carbon, and, as far as killing goes, can play no part.

There are two elements brought into play in their application; viz., the introduction of carbon, and the gradual exclusion of oxygen and nitrogen, carbon being retained on the one hand whilst it is being introduced on the other.

By excluding air, we can arrive at death without the aid of any other agent. By introducing carbon, we can reach the same point without calling upon strangling to help us. This is precisely what we accomplish in giving any of those subtle solutions of carbon, either as liquids or as gases. We gradually exclude the air and as gradually introduce the compound till we reach a given point, at which the blood is fully saturated with it, the agency of those two powers being put into force. It matters but little how we effect our aim; all that is wanted to complete our object is carbon, in sufficient quantity to overpower the brain and its functions. Drowning and strangling would answer our purpose quite as well as any of the chemicals in use, only we cannot as yet manage such dangerous agents with as much safety as we could wish. Moreover, they are painful modes, and never likely to be employed.

Of all our agents the pleasantest is chloroform, which, whilst killing, indulges the victim with the pleasant delusions of a happier life, and engages the respiratory organs at the same time in their usual work; thus throwing the whole living system off its guard, which, although apparently rejoicing in life, is in reality slowly dying. This is truly a happy death. The introduction of any of these compounds through the stomach produces the same effects.

Alcohol and chloral are well-known agents, capable of intoxicating and even killing by introducing carbon too suddenly and in excess. To remove their effect, oxygen must be called to our aid, which, gradually combining with the elements of the intoxicating substance, at last expels the overcharge in the form of carbonic acid, water, etc.

Having exhausted the compounds of carbon, and proved their terrible powers of stupifying and killing, we shall take up those possessed of the same power, and which yet contain no carbon. This is a paradox. Here, you will say, a difficulty arises, a barrier rears its head, over which one will not very easily pass. I can see none. We have looked on the fearful rapidity with which drowning and strangling kill. In what does their power consist? Simply in excluding air. We give a gas, such as nitrous oxide, nitrogen, or any other respirable gas—even hydrogen, and we will not even despise carbonic acid—the results are precisely the same; they kill with a rapidity that might be measured by the quantity of air allowed to mix with the gas used—in fact, we amuse the lungs and throw them off their guard whilst preventing the oxidation of the circulating carbon. This is much more pleasant than drowning, but equally fatal.

In nitrous oxide and carbonic acid we have compounds satisfied with their chemical conditions; therefore, neither the carbon nor oxygen are brought into play. They simply exclude atmospheric oxygen, thus

leaving the "killing" to the accumulating carbon. Flame, in ceasing to live in carbonic acid, simply dies for want of oxygen, not because carbonic acid is present, which, if it were to decompose, would yield sufficient oxygen to maintain combustion. An animal perishes in carbonic acid for the same reason. Chloroform has no advantage over carbonic acid except that its carbon is probably not free: I say probably, as there is no certainty.

Cause of Death.—It is not the detention of carbonic acid that kills, but the presence of carbon in some peculiar state, and unoxidised. The small quantity of carbonic acid which the last inspiration creates, even if taken up by the blood and not imprisoned in the air-cells, would be too little to kill, granting it had the power. Death is really caused by paralysis of the heart. In every instance of death in rabbits, the circulation first failed, beginning in the ears; danger was always plainly visible there; and when chloroform was further given to the complete arrest of circulation, death always ensued. On *post mortem* examination, the heart was found to beat, but not with sufficient vigour to empty its chambers. No blood seemed to pass through the lungs to the left chambers. There was an idle action, simply from the fact that the blood went home to die—viz., to the venous system, whose head-quarters is the right side of the heart and lungs. The last inspiration, shallow and superficial as it is, may be taken as a measure of the last stream poured out from the left ventricle to complete the circle for the last time, and then to stop for ever. The heart fails, because highly carbonised blood cannot maintain the vigour of the nervous system. The moment circulation ceases, respiration comes to a dead stand; to recommence the old work, circulation must take the initiative; respiration follows. This is the ordained order. With stagnant blood there can be no breathing. A newly born child breathes because his blood circulates: no human power could command a single breath had that function entirely ceased.

We now can understand why artificial respiration so often fails: in truth, we begin where we ought to end. Blood can only be oxidised in circulation; no amount of oxygen could tell upon the small quantity stagnant in the lungs—a proportion infinitely too small to rouse the nervous system even were it to move forwards. The first step towards life the heart must make; the second the lungs will take.

Indications of death are pallor and white lips; circulation has failed or is failing; a flushed or dark countenance is safe. Breathing you need not notice; it cannot go wrong. As long as the circulation is right, the first step to death is made by the circulation, the second by the respiration.

How to avert the impending death is the next question. There may still be a little arterial blood in the lungs and left side of the heart. There is just one chance: pour it into the brain by hanging the head down. If the brain respond, all is safe; the heart resumes its labours and the lungs answer to the call; and, unless we succeed in rousing the brain by the little arterial blood which the vessels may still hold, the case is hopeless.

It is impossible to manufacture arterial blood without oxygen; and it is not possible to get air to tell upon the whole volume of blood unless we can insure its circulation; and it cannot circulate without the heart's permission, and the heart will not act till the nervous system is able to command it, and until the blood gets rid of its overcharge of carbon. Artificial respiration is useless, and is a loss of time till the circulation resumes its labours.

Dragging out the tongue is an idle occupation; the mouth is not the passage for air. The glottis cannot be closed by a dead tongue and retracted epiglottis. The only instances of its closure are attended by congestion of face and brain, and not by pallor and empty vessels. Observe the face in epilepsy, in drowning and strangling, convulsions, stammering and choking from spasms, or by intruding morsels or liquids. The glottis is never closed, only whilst swallowing; no amount of stupor shuts it, and even in death it is always open; in fact, that is its normal condition, excepting in those diseases just named.

To me it is a question yet to be decided whether we could not shorten convulsions by keeping open the glottis if means could be devised. Stammering is always relieved by preventing its spasmodic closure, by keeping a marble in the mouth, by drawling, or by intonation of speech, as singing or reading poetry.

SUMMARY.—No time should be lost in artificial respiration, dragging out the tongue, etc.; but the brain should be roused by hanging down the head. There can be no harm in artificial respiration; it may be carried on at the same time. The cases appended all prove the value of this plan. It is also applicable to drowning, and to all the other causes of death just enumerated.

I append a few cases illustrative of the treatment recommended.

CASE I.—A stout woman, aged 50, had her breast removed for cancer. Whilst we were securing the arteries, the circulation suddenly

* Read before the South Wales and Monmouthshire Branch, July 5th.

stopped. She was to all appearance dead—no pulse, no breathing, no colour, but a ghastly white. At this critical moment I struck away all the pillows, and, with aid, laid her on the floor, her head lower than her body. Her lips became red, and in time she breathed, and by degrees recovered. There was no attempt at artificial respiration, nor was the tongue drawn out.

CASE II.—A young and healthy peasant girl had her leg amputated, to improve a bad stump left by mortification of her foot and lower third of leg, caused by typhus fever. We were dressing it, when suddenly bleeding ceased. She had been neglected by the chloroformist, who left the handkerchief too near to her nostrils. She was breathless, pulseless, and pallid. Her head was raised on a block and pillow for the operation, which I struck boldly away; her head fell with an audible noise on the table; at that moment the lips reddened, the face flushed, she breathed, and was safe.

CASE III.—A lady, young and healthy, took chloroform to have a tooth extracted. Pallor at last followed, accompanied with the usual signs of death from chloroform. This was early in my experience of chloroform, and I was much frightened. She was laid down, her head lowered, and by and by her lips showed signs of life, breathing returned, and she was saved.

CASE IV.—A man aged about 56, delicate, and worn by long suffering, had his thigh amputated. Whilst the wound was being dressed circulation ceased, and he was apparently dead. His head was hung down over the table, and he soon recovered like all the others.

CASE V.—An infant, whilst under chloroform for the removal of a nævus, became alarmingly pale, and apparently died. So much had been said about artificial respiration and dragging the tongue out, that we tried it, and thereby lost time; it failed entirely; we then resorted to our old plan. The child was literally hung upside down, till the lips grew red, and all was safe.

CLINICAL MEMORANDA.

SUDDEN DECREASE IN THE FREQUENCY OF THE PULSE DURING DISEASE AS A SIGN OF APPROACHING CEREBRAL COMPLICATION.

DISEASES of the brain, from the insidious manner in which they often approach, and from the great difficulty which exists of recognising them in their earliest stages, together with that of making an accurate diagnosis, even when we know them to be present, demand very close and careful observation on the part of the physician. I wish, therefore, to draw attention to a point which I observed in the three cases related below, viz., that during the course of diseases in which the pulse usually ranges high, a sudden diminution in its frequency took place some time before brain-complication could be recognised by any other signs. I have no doubt this may be known to many members of the profession; but, from the fact that it is not mentioned in any of the text-books on the subject with which I am acquainted, I think it has not been taken as much notice of as it deserves, for I consider that it will in many cases serve as a very material aid towards a prognosis.

In January, 1868, I was asked to prescribe for D. M., a letter-carrier, aged 45, who had for some time been labouring under an attack of pulmonary phthisis. The disease ran its usual course for some time, cavities having formed in both lungs, until suddenly on the 20th of June the pulse, which up to this had ranged from 100 to 108, fell to 74, and continued between 74 and 80 until the 16th of November, when headache followed by squinting set in. Coma and death closed the scene.

The second case was one of strumous diarrhoea in a child, aged 8, in which the pulse was constantly above 100 until two days before the manifestation of the symptoms of meningitis, when it fell to 76.

But the case which made most impression on me was the following. On the 29th of last month I received a note from a medical man requesting me to visit his child, aged 7, whom he had sent to Newcastle for change of air, and of whom he gave the following history. In January last he had measles; when recovering from this disease, he was attacked by gastric fever, which confined him to bed for five or six weeks; on partially recovering from this he had an attack of bronchitis, and now his chief disease was gastric irritability. On my visit next day I met his father, who told me that a sudden change had taken place in the little patient's pulse: during his other illnesses it had always been above 100, but on the previous day he found it reduced to 82. Having the two previous cases in mind, I told him that we must examine the patient carefully for head-symptoms. We found him lying quietly, breathing naturally, and not showing any sign of brain-disease except the vomiting, which appeared to be gastric. Next day, under the use of fluid magnesia and milk, the vomiting had disappeared. The pulse was 82,

regular and full; the tongue still coated. On the following day the same state of matters existed, except that the patient appeared more listless and complained slightly of the light, but his pupils acted naturally. On the following morning at two o'clock delirium set in, followed by coma, and death on June 12th.

I do not mean to convey that we can always connect the slowness of the pulse and the cerebral disease as clearly as in these cases, but I am convinced that in many cases the symptom will prove to be all that I claim for it, *an aid to prognosis*.

GEORGE GRAY, M.D., Castlewellan, Co. Down.

HERPES FRONTALIS, GIVING RISE TO CONTAGIOUS ERYSIPELAS.

A MAN aged 51 was admitted into St. Mary's Hospital on June 28th. A week previously he had begun to have a feeling of fulness in the head, and four days before an eruption had appeared on the right side of the forehead and head, attended with severe pain. The affected part then began to swell and become red; and, on admission, the head and face presented a marked erysipelatous appearance, especially on the right side; both eyes were swollen up; there was still much pain in the head; no high fever; temperature, 98.2 deg. The case was one of herpes frontalis, but complicated with so much erysipelatous inflammation of the affected region and surrounding parts as to obscure the real character of the attack. The redness and swelling gradually subsided, leaving scattered scabs over the right side of the forehead and scalp, as far back as the parieto-occipital suture, which, on falling, exposed small deep clean cut, irregular cicatrices, perfectly characteristic of herpes. Fortunately, the nasal branch of the ophthalmic nerve had not been affected, and thus the eye was spared; a single minute vesicle only making its appearance at the lower edge of the cornea.

The interest of the case, however, consists in the fact that erysipelas spread from the patient in the ward. This conclusion, at any rate, seems to be warranted by the fact that, whereas there was no erysipelas in any part of the hospital, nor had been for some time, three cases appeared in the wards within a few days of this man's admission. Apparently, therefore, herpes frontalis (an eruption consequent upon nerve-disturbance) gave rise to inflammation of an erysipelatous character, which was communicated by contagion to others—that is, there was generation of a communicable or contagious disease. It is worthy of remark that the time in which the herpes ran its course was not prolonged. The treatment consisted of good feeding and large doses of muriated tincture of iron.

I remember to have seen the skin supplied by the supraorbital branch of the fifth nerve, on one side remarkably atrophied; it was thin, shining, and almost devoid of sensibility, the change being attributed by the medical attendant to erysipelas. Cicatrices, such as those described above, however, showed it to have been consequent upon herpes frontalis; and it is not improbable that a similar result may follow in this case.

W. H. BROADBENT, M.D., Physician to St. Mary's Hospital.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

NOTES ON THE TREATMENT OF GANGLION IN THE SCOTCH HOSPITALS.

EDINBURGH ROYAL INFIRMARY.

MR. SPENCE long since abandoned the old plan of bursting or breaking up the swelling by force; it almost uniformly failed to effect a cure. The cyst gave way at its weakest point, and the contents were diffused, and the tumour disappeared at the time; but the irritation produced seldom sufficed to obliterate the secreting cyst, and the swelling soon reappeared. Mr. Spence's general procedure in the smaller swellings (as at the wrist) is to use a strong double-edged needle (an old-fashioned cornea-needle), introduce it subcutaneously into the cyst, and move it freely about in all directions, so as to tear up the cyst as completely as possible; he next applies a firm compress over the part for a day or two, and then a fly-blister is applied. This method Mr. Spence finds sufficient in ordinary cases. In larger cysts, or where the contents are fluid (as in those connected with the hamstring tendons in the popliteal space), he draws off the contents with a trocar and cannula, and injects tincture of iodine. This method rarely, if ever, fails in such cases; but it is not generally applicable, or rather very rarely

applicable, to the ganglia at the wrist, the contents of which are too viscid to pass out by any cannula of such a size as can be used in these smaller swellings. He has, however, used it successfully in a few cases. When the cyst is very dense, and its form and connexions are tolerably well defined, Mr. Spence dissects the swelling out as a whole; or, if he find that its deeper attachments would involve much dissection, he removes as much as possible of the projecting portion of the cyst, and applies iodine or nitrate of silver on the remaining cystic surface. If the superficial incision be free, and undue manipulation be avoided, it is wonderful, Mr. Spence has observed, how little irritation follows, even in cases where we are obliged to leave a part of the cyst. In many cases, the cyst is easily removed entire. He lately removed a large ganglion connected with the inner hamstring muscles from the popliteal space. It was of the size of a very large orange or small melon. He has not yet had time to examine its interior, but it was the largest he had yet seen.

Dr. GILLESPIE, in the smaller tumours, first tries to burst them by pressure with the thumb; and, if that succeed, he applies a well graduated compress, which rarely fails to effect a radical cure. If the thumbs fail, he uses an exploring needle and cannula, squeezes all the fluid out, and then applies a blister and compress, which almost invariably succeeds in obliterating the sac; but, if the fluid should reaccumulate (a very rare occurrence), he either injects tincture of iodine, or lays the sac freely open. He has tried wire and thread setons with success, but prefers the methods of treatment indicated above. In the larger ganglia, such as those affecting the wrist and palm, if of long standing, Dr. Gillespie has found nothing so effectual as laying them freely open, using antiseptic precautions and dressings. In some large, very fluid ganglia, he has tried evacuation of the contents by a hydrocele trocar and cannula, and then applying a blister or injecting iodine; and has succeeded in some cases in obliterating the sac, but just as often he believes he has had to follow up that treatment by fully laying open the anterior wall.

Dr. PATRICK HERON WATSON, in cases of ganglion, prefers forcible disruption of the sac by pressure with the thumbs, and firm friction of the skin against the parts beneath once each day for a week thereafter. If the sac be too tough to yield in this way, he employs puncture of the sac with a broad-bladed needle beneath the skin, followed by similar dispersive friction from day to day. In these cases, where there is an after-tendency shown to obstinate reaccumulation, he employs blistering with cantharides. In the special form of bursal tumour occurring beneath the annular ligament of the wrist, Dr. Watson prefers opening the sac freely above the annular ligament, squeezing out the melon-seed-like bodies, and closing the cutaneous wound with sutures. He places the hand and forearm in semiflexion upon a splint, and treats the wound with muslin soaked in alcoholic solution of pitch which has been allowed to dry before its application. Dr. Watson never now finds it necessary to divide the annular ligament, as used to be done by Mr. Syme. The success of this plan of treatment depends on completely emptying the sac and obtaining primary union.

Mr. ANNANDALE treats the simple ganglia met with over the dorsal aspect of the hand and foot by endeavouring to rupture them with the thumb; and, if this succeed, he applies a firm pad over the part for some days. If they will not rupture by external pressure, he opens the cyst subcutaneously with a fine tenotomy-knife, presses out the contents, and then applies a blister, followed by pressure with a pad. The ganglia containing seed-like bodies, usually occurring on the palmar surface of the wrist, Mr. Annandale treats by making a free incision into the sac, squeezing out all the contents, and dressing the wound carefully according to the antiseptic method. The chronic enlargement, with effusion of the bursal cysts over the patella, olecranon, and other bony prominences, he treats by a limited incision into the sac, and the introduction into the wound of a small piece of lint or other cloth soaked in carbolic oil, one part of the acid to ten of oil, which is removed at the end of twenty-four hours, the wound being then dressed with water or other simple dressing.

Dr. JOSEPH BELL's treatment is the following. For simple ganglion on the extensor surface of the hand and wrist, he first tries bursting by pressure (not by blow), followed by a blister. If pressure fail to rupture the sac, he punctures it freely subcutaneously, and squeezes out its contents into the cellular tissue; and then blisters, with firm compression by pad and bandage for a week or two. If this fail to cure, from the thickness and age of the cyst-wall, he excises the whole by free incision, and has had no bad effects from this. He never uses the seton, which is, he thinks, apt to cause suppuration in the sheath of the tendons. For compound ganglion in connexion with the flexor tendons, Dr. Bell has once or twice succeeded in effecting a cure by repeated blistering, but generally finds it necessary to make a free incision, which must include the annular ligament; he then squeezes out all the

melon-seed bodies which the cyst contains, and dresses the cavity with lint, so as to obtain healing of the cyst by granulation. If the incision be managed with antiseptic precautions, so as to prevent putrefaction, the cure is rapid and almost painless.

GLASGOW ROYAL INFIRMARY.

Dr. EBEN WATSON, when the ganglion is small and cystic, as it is usually on the back of the wrist, practises subcutaneous section of the cyst, allowing the fluid to pass into the areolar tissue. Moderate pressure is then applied to facilitate absorption; and, if this be slow, a blister may be used. In the more extensive cases, in which the sheaths of tendons are greatly dilated, as in the palm of the hand, he would pursue a similar treatment, and believes it would be successful. He once performed the free incision of the sheath and annular ligament, as recommended by Mr. Syme; but the patient nearly lost her life by reason of the violent inflammation of the areolar tissue of the whole arm which followed. If such a case presented itself to him now, and if subcutaneous section, in which he has great confidence, had failed, he would make one free incision above or below the annular ligament, and dress the wound carefully with spirituous solution of carbolic acid—of course, after emptying the sac. Dr. Watson's experience leads him to fear too much inflammation in the dilated sheath after operative interference, rather than too little; therefore he has not had occasion to use setons or iodine injections. He would rather not advise either of them.

Dr. GEORGE BUCHANAN, when practicable, bursts small circumscribed ganglia on the back of the wrist forcibly with a book. Few resist that form of force; and when they do give way, as a rule they do not recur. Those only have resisted the blow which had been previously treated by puncture. A case which he had lately yielded to bursting, and disappeared, which had previously been treated by subcutaneous incision, and had returned immediately. Large bursæ, especially those containing cartilaginous seed-like bodies, he has treated by free incision antiseptically and subsequent bandaging.

ABERDEEN ROYAL INFIRMARY.

The treatment which Dr. FIDDES adopts with regard to ganglion on the wrist and hand is puncture with a grooved needle, pressing the fluid out of the sac, and afterwards applying constant pressure. Dr. Fiddes never saw any outward application, such as iodine paint, etc., do good.

Dr. ALEXANDER OGSTON always punctures with a very fine exploratory trocar, to make sure of the nature of the swelling. On two occasions, he found a minute chronic abscess on one of them, connected with a minute scale of necrosed bone, simulating ganglion at the ankle-joint. Having made sure of diagnosis, and allowed the puncture time to heal, an attempt is made to rupture the cyst and extrude its contents subcutaneously by pressure with the thumbs. If the cyst be thin-walled, this succeeds, and pressure usually completes the cure. If manipulation with the thumb fail, a puncture of small size, about an eighth of an inch long, is made through the skin and cyst-wall with a narrow-bladed knife, and the contents of the ganglion are emptied through it by squeezing. If, after this, the subsequent pressure and bandaging fail to prevent its return, at the repetition of the puncture a thread is introduced as a seton into the cyst. Ganglia in the popliteal region about the hamstring tendons are never to be rashly meddled with. In a patient shown Dr. Ogston by Dr. Manson of Banff, he found a ganglion beside the biceps tendon, evidently communicating with the knee-joint. This occurrence has been already noticed by German authors.

ST. BARTHOLOMEW'S HOSPITAL.

SINUOUS SINUSES OF THE THIGH CONNECTED WITH NECROSIS OF FEMUR OF OLD STANDING, DIAGNOSED BY THE "VERTEBRATED PROBE": REMOVAL OF SEQUESTERUM.

(Under the care of Mr. CALLENDER.)

THE following notes have been taken by Mr. Young, house-surgeon.

About six years ago, A. R., aged 45, by occupation an omnibus-driver, first noticed some tenderness about the left gluteal region, which was followed by swelling, and ultimately by the formation of abscesses in the ischio-rectal fossa and middle of the back of the thigh, which broke about twenty months ago, and have been discharging ever since, despite treatment at various institutions. Several sinuses, with pouting granular orifices, occupied the left ischio-rectal region; and one sinus had its opening on the middle of the back of the left thigh. Into any of these a probe could be passed for some distance in the direction of the tuberosity of the ischium, but, owing to the tortuosity of the passages, failed to reach any dead bone. Dr. Sayre, who saw the case at a consultation on the 13th instant, remarked on the coincidence that it was in a precisely similar case that he first used his flexible probe in

America; and in the present instance this instrument traversed with great ease the winding course of the sinus until its point was distinctly arrested by bare bone.

On the following Saturday, Dr. Sayre being present at the operation, a free incision was made over the left tuber ischii; and a considerable portion of dead bone was removed from a cavity in the tuberosity, in which it was loosely contained. The sinus which traversed the thigh had followed the course of the muscles arising from the tuberosity.

LEEDS GENERAL INFIRMARY.

RHEUMATIC PERICARDITIS, WITH EFFUSION: RECOVERY.

(With Clinical Remarks by J. D. HEATON, M.D., F.R.C.P.)

PATRICK MCHALE, aged 21, a delicate looking, slightly built young man, who had worked in a flax-mill, was admitted with the ordinary symptoms of acute rheumatism. During the last six years he had had five attacks of the same complaint; the last, prior to the present attack, was about a year ago, from which, so far as he knew, he made a complete recovery. He had had no cardiac pain nor palpitation; had never spat blood nor had any habitual cough.

The present attack began about a fortnight before admission, the large joints, elbows, and knees, having become swollen and painful, this being accompanied with a considerable amount of indisposition. On examination, on the day after admission, besides the local affection of the joints, he had a good deal of inflammatory fever, and complained of pain in the cardiac region; there was a loud double murmur at the base of the heart; also, a double murmur at the apex, less pronounced, both these sounds being less audible at a point intermediate between base and apex; there was considerable excitement of the heart's action; pulse frequent and jerking. A purgative pill, and the alkaline saline mixture which I ordinarily prescribe in cases of acute rheumatism, with a proportion of tincture of digitalis, were prescribed, and a sinapism applied over the heart. In two days he was propped up in bed, and had an anxious countenance and moaning voice, but made no complaint of breathlessness. There was much pain at the heart, whose action was excited; pulse 120. The pain in the joints was no longer noticed. The double murmur heard over the apex of the heart was now obscure, being only audible when the patient sat up. Percussion over a space of three inches in perpendicular measurement, from an inch above the nipple to two inches below it, and of two inches wide, measured from the median line under the sternum to the left, gave a dull stroke-sound; above this was the ordinary pulmonary resonance; below it, the tympanic sound of flatus in the stomach. Change of posture had little effect upon the limits of the non-resonant area. In addition to the mixture already prescribed, a powder containing six grains of compound ipecacuanha powder, three grains of antimonial powder, and a grain of calomel, was now ordered to be taken every six hours; and a blister was applied over the heart.

Three days afterwards, the unfavourable symptoms were still progressing. The double aortic murmur was loud and sonorous, and altered in quality; the sound at the apex was obscure. The dullness over the left front chest had extended upwards to the third rib, and laterally to the right, beyond the median line; there was, also, an appreciable deficient resonance over the corresponding surface posteriorly. The patient seemed ill and distressed, but made no complaint of oppression to the breathing. Decubitus was entirely on the back; respiration diaphragmatic. The same treatment was continued. From this time, the symptoms began to improve. In two days, the patient looked and felt better; he had no constant pain; the upper limit of dullness on the front chest had fallen an inch and a half; the cardiac sounds at the apex were more audible; the aortic murmur at the base was less loud, and was altered in character. The left back was more resonant. Four days afterwards, gradual improvement was recorded; both the voice and countenance are better. The pulse was below 90. The area of complete dullness on the front of the left chest was still contracting. There had been no change in treatment; neither the gums nor the breath showed any evidence of mercurialisation. A second blister was applied, to promote absorption.

Without going into farther details, the patient gradually recovered; he was able to lie on either side, and soon began to leave his bed. Iodide of potassium was substituted for the previous treatment, and his diet was improved. The extent of cardiac dullness contracted to its normal measurement; the heart's action became quiet, but the aortic murmurs at the base of the heart were permanent. The rheumatic pains left him, and he was discharged convalescent.

REMARKS.—Some time ago, I drew the attention of my class to a case of hydro-pericardium, without inflammatory symptoms, which proved suddenly fatal (see BRITISH MEDICAL JOURNAL, July 2nd, 1870, p. 8). We have here a case of pericarditis with effusion, having a more favourable

result, and presenting several points of interest for our consideration. When the patient was admitted for the rheumatic complaint, there were no signs of pericardial effusion; and the fluid was again absorbed prior to his discharge; so the whole course of the rise, progress, and decline of the affection has taken place under our observation. We will consider briefly the principal points of diagnosis involved in this case, the treatment, and its results.

On the first examination of the heart, a double aortic murmur was heard at the base of the heart, of a blowing character, and distinctly valvular. A double murmur was also heard at the apex, synchronous with the former, and not very clearly distinguishable from it. Some of my class thought that the sounds heard at base and apex had the same origin, any variation in their character being due to the different auscultatory sites. But as the sounds faded away at a point intermediate between base and apex, we came to the conclusion that each sound originated at the point where it was most audible.

I have said that the sounds heard at the base of the heart were distinctly aortic and valvular; the character of the pulse corresponded with this conclusion. But a valvular murmur may either be a chronic condition, the result of some permanent lesion, or it may be the result of recent and existing inflammatory action. In a rheumatic patient who has had several previous attacks of the complaint, it is by no means always easy to decide between these possibilities, from the *auscultatory signs* merely; we must take into account the *general symptoms*—pain, fever, excited action of the heart, sense of oppression. It is safer to suspect endocarditis erroneously, and treat accordingly, than to run the risk of casting an undeserved slight on an inflammatory murmur, as though resulting only from an old valvular lesion. In the present instance, the cardiac pain, the excited action of the heart, and the general symptoms evidenced an inflammatory affection of the heart; and the variable quality of the aortic murmur left little room to doubt that the inflammation was partly endocardial, involving the aortic orifice and its valves, though not improbably complicated with pre-existing lesion of the aortic valves.

The double murmur heard at the apex was a gentle superficial-seeming sound, synchronous with the ventricular systole and diastole. When first heard, it was supposed to have its origin in the mitral aperture; the subsequent history of the case clearly shows that it was a pericardial friction-sound. It is not always possible to pronounce with certainty whether a given murmur is endocardial, or the result of pericardial friction; either sound may be double or single, its quality may be described as blowing or rubbing, and either may have the apparent character of superficiality. Pericardial murmurs, like endocardial, may be heard either at the base or at the apex; as to which of these is the more common seat of pericardial friction-sounds, there is some difference of opinion. Trousseau says that "in pericarditis the friction-sounds are usually heard around the base of the heart." The result of my own observation is that the apex of the heart is the more common seat of friction-sounds. Such was the fact in our case. The apex performs more extensively those movements by which the sound of friction is developed; it impinges with some force against the wall of the chest, gliding over the pericardial sac with each ventricular systole, and receding during the diastole. On the other hand, the base of the heart remains more permanently in apposition with the pericardial walls; whereas when effusion commences, the apex is speedily immersed in fluid, through which it moves without friction. Friction-sound must therefore first cease at the apex; but, at whichever place developed, it is a sound which is generally heard rather extensively, being conducted along the solid walls of the chest. As the effusion increased, the friction-sound diminished, and could only be developed by making the patient sit upright, by which the heart was brought into proximity with the front of the chest; and, corresponding with this, was the other result of the effusion, viz., the gradual extension of the area of dull stroke-sound, as described in the report.

Sometimes the diagnosis is doubtful between pericardial and pleural effusion; but the circumscription of the effusion within the known limits of the pericardium, and its fixed position, though the patient's posture was changed, as well as the markedly cardiac character of the other symptoms, established an unhesitating diagnosis of pericardial effusion in this case. During the progress of recovery, the amelioration of the general symptoms and the gradual subsidence of the physical signs accompanied each other *pari passu* with remarkable exactness.

In the treatment, we had to encounter the rheumatic diathesis, as well as the serious local complication of the heart. For the first, our ordinary plan of treatment was adopted, viz., a brisk purgative in the first place, and an alkaline saline, containing in each dose fifteen grains of bicarbonate of potash. For the second, tincture of digitalis was added to the mixture; a combination of small doses of calomel, antimony, and opium, was given every six hours for nearly a fortnight, no salivation

being produced thereby, which is remarkable; and two blisters were applied in succession over the heart. When all active symptoms had disappeared, and absorption of the effusion was in progress, iodide of potassium in some bitter infusion was substituted for the previous medicine, to expedite the process and restore strength. Not much comment is needed upon this plan of treatment. The alkaline treatment of acute rheumatism is that which is most generally approved, and which I always adopt, preceded by an active purgative to clear the *primæ viæ*, and promote the elimination of impurities from the blood. You are well aware that the free use of mercurials is no part of my ordinary practice; but I have not altogether renounced the belief (which was almost universal in my younger days) in the antiphlogistic value of calomel, especially to restrain the formation of inflammatory products, or promote their removal where their presence constitutes the essential danger. The advantages and disadvantages of irritation of the surface by blisters, to counteract inflammatory action in internal organs, has been of late much debated; our time will not allow a discussion of the *rationale* of this treatment, which has been brought before you on other occasions. I shall only say that, empirically, I have constant evidence of their utility. The treatment of the local articular inflammations of acute rheumatism by blisters is a recent practice strongly recommended; and analogy suggests, as experience confirms, that equally beneficial results may follow the same treatment of the serious inflammation of the membranes of the heart of a rheumatic origin. The treatment of the stage of convalescence by iodide of potassium and vegetable tonics, is my customary practice in this stage of acute rheumatism, which I believe to be attended with much benefit in such, as it is also in chronic rheumatism.

There was a period of one or two days when our patient's distress was great and the symptoms of immediate danger were sufficiently serious; and I then began to discuss the expediency of seeking to give relief by tapping the pericardium. But the next visit witnessed the commencement of a favourable change and I was relieved from the anxiety with which I should have advised this operation; for, although I recognise its importance and success in occasionally saving a life otherwise seriously endangered, I cannot overlook the possible risk of puncturing the heart, or of arousing fresh inflammation in so vital a part. In the criticisms which my colleague Dr. Allbutt published on my remarks on my previous case of hydropericardium, he considers the operation of tapping the pericardium, if properly performed, as wholly devoid of serious risk, and he adduces a conversation with Trousseau in support of his views. Having never been in the society of that eminent physician, I can only quote his published and perhaps more carefully considered judgment, that "one never without trembling decides upon performing" the operation; and, again, that "paracentesis of the pericardium is only indicated in cases in which life is threatened by the extent of the effusion. The occasions in which it ought to be resorted to must always be of rare occurrence." (See Trousseau's *Clinical Medicine*, vol. iii, pp. 365 and 395.) I consider this to be a satisfactory case in its progress and immediate results. In rather less than three weeks we have witnessed the formation and the reabsorption of a considerable inflammatory effusion in the pericardium. Nevertheless, though we have heard nothing of our patient since he left the Infirmary, my fear is that, although he has thus escaped the immediate danger with which he was threatened, and has hitherto made a good recovery, he will not altogether emerge from the encounter finally unscathed.

Besides the probability of pre-existing injury to the aortic valves previously noticed, there is the likelihood that the collapsing pericardium will contract adhesions with the heart, by which the freedom of its action will be impeded; and that secondary changes will result, varying according to the extent of the adhesion and the more or less organisable character of the fibrinous material by which the attachment is effected.

Thus, hypertrophy may be occasioned by the exaggerated efforts of the heart, the freedom of whose movements is restrained by the embraces of an adherent pericardium; and, although such hypertrophy may be regarded as a compensatory effort of nature, yet no such perfect equilibrium of force and resistance will be obtained as that which enables a sound heart to work without perceptible effort throughout a lifetime.

In other cases, a compression of the heart has been produced by the contractile force of a layer of cacoplastic lymph, which, like the cicatrix of a burn, gradually contracts with a slow but irresistible force. But in a case like ours, of speedy subsidence of the primary inflammation, this effect is not likely to be the result.

In any case, it is to be feared that embarrassment, more or less, to the action of the heart, will make itself felt in future years, as a consequence of what has now occurred.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 22ND, 1871

SPIRITUALISM TESTED.

II.

WE have already pointed out that sleight of hand is a very important factor in the production of spiritualistic manifestations. In the present article, we propose to show that a particular nervous temperament and certain forms of disease, as hysteria, catalepsy, and ecstasy, serve to explain many of the phenomena which credulous believers in the new faith ascribe to non-natural agencies.

Before taking up this subject, we may, however, briefly notice certain known physical forces to which some persons, who hardly go the length of adopting the spirit-hypothesis, refer the peculiar manifestations that are occasionally exhibited at the *séances* presided over by professed mediums—namely, animal electricity and magnetism. All our knowledge of animal electricity tends to show that it does not essentially differ from the galvanism developed in the laboratory by chemical action; and hence the idea that tables can be moved, rappings produced, or visionary hands made to appear, by this agency, is simply absurd. It has been held by some, especially the Baron von Reichenbach and his followers, that magnetism—a force which is now proved to be correlative with electricity—resides in the body; and that some persons are specially sensitive to the influence of the magnet and to the magnetism evolved by other persons. There is undoubtedly a certain amount of fact in the Baron's curious investigations,* although most of his experiments have no other foundation than that property of the human mind which causes it to be subjectively affected by suggestion—a point to which we shall immediately recur. Dr. Hammond, to whom we have already expressed our obligation for the materials on which these articles are based, while fully admitting that "certain very obvious symptoms are induced by the application of a magnet to the body, and that the lower animals and even plants are indubitably affected by its influence," adds that, "with all this, there is no proof that magnetism or the odic force is capable under any circumstances of producing the clairvoyant state, of moving tables, and of causing raps; or that any of the other more striking phenomena that are claimed for spiritualism can be accounted for through its agency."

Physical causes, calculated to increase the amount of blood in the brain, or to alter its quality, may give rise to hallucinations, which believers in the current delusion might naturally regard as spirit-visitations. Various narcotics, which induce these conditions in many persons, and pressure upon the jugular veins, sometimes produce a similar effect. A case is recorded in which a gentleman can always cause the appearance of images by tying his handkerchief moderately tight round his neck; and one figure, resembling Sir Walter Raleigh in features and costume, is always the first to come and the last to go. This figure imposes on the hearing as well as on the sight, and not only promptly answers questions addressed to it, but the replies are far more rational than those given by the evoked spirits of various eminent philosophers. How easily might a credulous person thus affected believe that he was actually conversing with the spirit of the real Sir Walter!

It is, however, to the operation of suggestion, which readily influ-

* A full account of the experiments referred to may be found in his *Physico-physiological Researches on the Dynamics of Magnetism*, translated by Dr. Ashburner, and published in 1851. The first English notice of them was given in one of the earliest volumes of Ranking's *Half-yearly Abstract of the Medical Sciences*.

ences a large number of patients with diseases of the nervous system, that many, if not most, of the miracles and impostures of the spiritualists owe the success with which they have been received. The persons in whom this ability to be impressed by suggestions is present in the highest degree, are precisely of the same class as those who are most readily thrown into the hypnotic state (by Mr. Braid's method or otherwise) and those who are influenced by Von Reichenbach's odic force; and natural somnambulists (if we may use the term, in contradistinction to those in whom a similar condition is artificially induced) also seem to belong to the same category. In a very remarkable case recorded by Dr. Hammond—that of a young lady who, after suffering for some years from sleep-walking, could hypnotise herself at will by taking a philosophical book, reading and thinking of an abstruse passage, and then fixing her eyes steadily, but not directing them to any particular object—images suggested to her when in that condition could be immediately called up. For example, in reply to a question, “Where are you now?” she replied, “In New York”—which was the fact; but when she was told, “No, you are in a vessel at sea, and there is a terrible storm; are you not afraid?” she at once grasped as it were at the suggestion, and not only answered, “Yes, I am very much frightened; what shall I do? Oh save me, save me!” but wrung her hands, screamed with terror, and showed every sign of intense fear. On another occasion, her powers of vision when in the hypnotic state were tested by asking her to read a particular line from a closed book, to tell the time marked by a watch held to the back of her head, etc.; but, although she always made some answer, she was never right. The senses of touch and hearing were the only ones she appeared capable of exercising. If this young lady had been inclined to deceive, or had been under the control of designing persons, she would here unquestionably have been received by a large class as a medium of the first order.

Hysteria, in some one or other of its Protean forms, is doubtless the disease which more than any other furnishes the most abundant crop of fruit to the spiritualists. We will illustrate the close connexion between the disorder and the delusion by a brief record of two cases.

A married lady, before seeking professional advice, had for some months suffered from hallucinations of sight and hearing. She had merely to think of some particular person, living or dead, when she immediately saw his image; and he spoke to her, wept, walked about the room, or did whatever other thing she imagined. At first she fully believed that she really saw the spirits of the persons of whom she happened to think; but in the course of time she learnt to ascribe her visions to their true cause—disease. On examination, it was found that she had other symptoms of hysteria besides the hallucinations. There was hysterical paralysis of motion and sensation in the right leg, so that she could neither move it nor feel a pin thrust through the skin. There were tonic contractions of various muscles, and other symptoms indicating the true nature of her case. Under suitable treatment, she entirely recovered.

A servant-girl, residing in the family of Dr. Larkin (a weak-minded man in the opinion of his friends, although an experienced surgeon), declared that she was by turns under the influence of a good spirit called “Katy”, and of a bad one whom she called the “sailor boy”, who took great delight in swearing through her, and in uttering such profane language as he had formerly used on earth. After a time, a most singular and distressing phase of the affection supervened. Under the influence of the bad young sailor, the girl's limbs would be thrown out of joint in a moment, with apparent ease and no pain whatever. To reduce these dislocations was beyond the power, or at all events against the will, of her evil spirit; and her master was often obliged (it being just before the introduction of chloroform) to call in the aid of some of his professional brethren and two or three strong assistants. On one occasion, the knees and wrists were dislocated twice in a single day. She exhibited almost incredible feats of strength and agility; and there was such frightful contortion of the limbs, that “she became tied up with knots and coils which baffle all attempts at description.”

Those who are familiar with hysteria will recognise it as fully in this second case as in the first; and yet this girl was not a patient, but a “medium”! The case is taken from Mrs. Hardinge's *Modern American Spiritualism* (1870)—an undoubted spiritualistic authority. Without referring to the hysterical epidemics of the seventeenth and eighteenth centuries—the Jansenist *convulsionnaires*, the nuns of Loudon, the victims of the witches of Salem, etc.—we find in all modern works on hysteria and in many on insanity (pre-eminently Calmeil's well known treatise) cases more or less closely resembling that of this unfortunate girl, especially in their immunity from pain, under circumstances that would occasion excruciating agony in persons of a normal constitution.

It may astonish many of the unhappy believers in this wide-spread delusion, to be told that a physician conversant with mental and nervous diseases can predict from their personal appearance with perfect accuracy the individuals at a spiritualistic meeting who, in the course of the sitting, will exhibit special phenomena. Nor are his powers limited to mere prediction. When the phenomena are of an hysterical class, and are not due to legerdemain, he can generally remove them by a judicious course of tonics.

Such are the principal arguments that may be adduced in evidence of the view that there is nothing in the so-called manifestations of spiritualism that may not be accounted for by the ordinary laws of Nature; and any experienced practitioner, who may be called upon to expose the fallacies of this comparatively new delusion, can modify them by illustrations taken from his own practice, so as to meet the special weaknesses of such of his patients as may be halting between two opinions. As we stated in the commencement of our former article, it is as useless and as hopeless to argue with a confirmed spiritualist as with a confirmed maniac.

Since the preceding article was written, Mr. Crookes, a distinguished Fellow of the Royal Society, the discoverer of the metal *Thallium*, and the editor of the *Quarterly Journal of Science*, has published a paper entitled “Experimental Investigations of a New Force”, which in a slight degree bears upon the subject of spiritualism, in so far as it contains a history of certain experiments made on Mr. Home, who is, as our readers doubtless know, regarded as a powerful medium. According to Mr. Crookes, these experiments “appear conclusively to establish the existence of a new force in some unknown manner connected with the human organisation, which, for convenience, may be called the Psychic Force.” This force seems to be powerfully developed in comparatively few persons, and it is more clearly manifested in Mr. Home than in any one else on whom experiments were made. Even in this gentleman it varies greatly, so that results obtained at one sitting might or might not be confirmed at the next. At the third trial, the first two sittings having been comparatively failures, the following remarkable phenomena occurred. A new accordion, purchased for the occasion, was grasped between the thumb and middle finger of Mr. Home's left hand, and inserted, with the keys *downwards*, into a wire cage, which was of such a height that, when pushed under the dining-room table, the intervening space was so small that the hand remained visible to those sitting on each side of him. The accordion was very soon seen to move about the cage, and to emit sounds, although the hand that held it remained perfectly still. The instrument was, in a subsequent experiment, “taken without any visible touch from Mr. Home's hand, which he removed entirely,” and “floated about with no visible support inside the cage.” He shortly afterwards re-inserted his hand, and took hold of the instrument, when it played a well known sweet melody—possibly “Home, sweet Home.” Mr. Crookes convinced himself that Mr. Home was not moving a muscle while this tune was being played. The next experiment was more decisive and striking than those on the accordion. By gently placing his fingers on one end of a mahogany board a yard in length, which rested on a firm support, Mr. Home caused the other end, which was suspended horizontally by a spring balance attached to a tripod stand, to have an increased downward pressure varying from three and a half to six pounds. As

the slight pressure exerted by his fingers acted in a direction that would have caused the distant end of the board to rise rather than to descend, the effects that were produced could not be due to that cause. Regarding the nature of the force that is exhibited in these phenomena, Mr. Crookes thinks "it would be wrong to hazard the most vague hypothesis"; and Dr. Huggins, who witnessed the experiments, "is equally cautious. "They appear," he observes, "to shew the importance of further investigation; but I wish it to be distinctly understood that I express no opinion as to the cause of the phenomena." We need scarcely add, that neither of these distinguished physicists has apparently the slightest leaning towards spiritualism.

REPORT OF THE CONTAGIOUS DISEASES COMMISSION.

THE Report of the Contagious Diseases Commission establishes some important facts. The charges of outrage and insult of modest women, of cruelty and tyranny, with which every platform in England has been made to ring, have completely broken down. Those who made them have either shrunk from repeating them where they could be sifted, or have brought them forward only to have them proved to be groundless. The sanitary effect of the Acts has been proved to be not less than we have alleged it to be on good medical evidence. The Commissioners relate that, taking the aggregate of twenty-eight stations of troops in the United Kingdom, at which the average strength amounted to 500 and upwards, the ratio per 1,000 of the diseased in 1865 was 120; in 1867, before the fortnightly inspections had commenced, except for a few months at Chatham, the disease had fallen to 86; it continued to decrease from 86 to 72 and 60, until it fell to 54 in 1870, when these inspections were generally established throughout the subjected districts. They have equally satisfied themselves that the Acts, so far from increasing, have diminished the amount of clandestine prostitution, and have conferred a public benefit in aiding public decency by the better conduct of the women in the streets. The "Curragh wrens" are no more; and these much abused Acts "have purged the towns and encampments to which they have been applied of miserable creatures who were mere masses of rottenness and vehicles of disease, providing them with asylums where their sufferings could be temporarily relieved, even if their malady was beyond cure, and where their better nature was probably for the first time touched by human sympathy."

As to the reclamation of fallen women under the Acts, it appears that, out of 9,688 women who have been registered under the Acts, 7,038 have been removed from the list, the largest proportion of them having left the district, and many having been restored to their friends. The inspector in the Devonport district states that his inquiries have quite satisfied him that no less than 90 per cent. of the women removed from the register have ceased to be prostitutes; and there have been removed from the streets and the houses of ill-fame some two or three hundred children between the ages of thirteen and fifteen.

Our readers will recognise in these conclusions of the Royal Commission a minute confirmation of every statement which we have ever made concerning these Acts. The particular point on which we have already several times expressed doubt is that which arrests the Commission. What is the urgency of the "antecedent moral objections" to a system of periodical inspections of dissolute women? It seems that many of them are accustomed to describe themselves as "Queen's women"; that a species of State recognition is held to be implied in these examinations—a grim and repressive proceeding enough, one would have supposed; and, on the whole, the Commissioners recommend that they be not enforced. It is to be observed that they do not face the argument that persons capable and likely to disseminate a pernicious disease ought to be subject to all possible restrictions. We should have liked to see them argue this question; but evidently they have on this point arrived at a compromise. We are not disposed to

say that it is an unwise one, although the conclusion is clearly not supported by adequate argument. Their recommendations are:

1. That the periodical examination of the public women be discontinued.
2. That every common prostitute found to be diseased after an examination by a medical officer, upon a voluntary submission or upon a magistrate's order, shall be detained in a certified hospital until she is discharged by a magistrate's order, or by the authorities of such hospital, provided that such detention shall in no case exceed the period of three months.
3. That in order to obtain a conviction under 29 Vict., c. 35, sec. 36, the Act of 1866, it shall not be necessary to prove that the owner or occupier of the house therein named had reasonable cause to believe that the prostitute was affected with a contagious disease.
4. That 32 and 33 Vict., c. 95 (the Act of 1869), secs. 4 and 5, be repealed.
5. That the Secretary of State for the Home Department be substituted for the Commissioners of the Admiralty and the Secretary of State for the War Department in the Act of 1866, and that the police employed in carrying the Acts into force perform their duty in uniform.
6. That the provisions contained in sections 11 to 21, inclusive of the repealed Act of 1864 (with an amendment of section 18 corresponding to the amendment proposed in section 36 of the Act of 1866), be extended to any place in the United Kingdom (except the cities of London and Westminster), from which a request for such extension shall be made, and in which proper hospital accommodation shall be provided.
7. That every keeper of a public-house harbouring prostitutes be deprived of his licence.
8. That every keeper of a common lodging-house harbouring prostitutes be subject to the penal clauses of the Common Lodging Houses Acts.
9. That the certificate of the Secretary of State under the 19th and 20th Vict., c. 69, sec. 6 (the Police, Counties, and Boroughs Acts), do certify that the third section of the Vagrant Act, 5 Geo. IV, c. 83, and the section of the Towns Police Clauses Act, 10 and 11 Vict., c. 89, relating to common prostitutes and night walkers, have been duly observed.
10. That 24 and 25 Vict., c. 100 (the Act to consolidate and amend the statute law relating to offences against the person), secs. 51 and 52, be amended by extending the age from twelve to fourteen years.
11. That girls under the age of 16 acting as common prostitutes be sent to a home or industrial school for a period not exceeding two years, if they cannot be otherwise provided for to the satisfaction of a magistrate.
12. That the Acts be partially extended to the metropolis.—This is the general report of the Commissioners, and represents a kind of compromise, from which those who desire to keep the law as it is, and those who wish to get rid of it altogether, dissent in separate memoranda.

FOUNDER'S day was celebrated at Epsom College on Thursday, July 20th.

THE out-patients' department of the Bristol General Hospital is to be enlarged, at an estimated cost of between £5000 and £6000.

THE ceremony of placing the memorial stone, on the occasion of the opening of the east wing and central building of the West London Hospital, was performed on Saturday last by the Duke of Devonshire, in the presence of a large assemblage. The hospital now contains one hundred beds.

THE colleagues of Dr. Sibson and Mr. Lane at St. Mary's Hospital have entertained them at a dinner on the occasion of their retiring by lapse of time from the active staff of the hospital and school, in which they served long, ably, and faithfully, and in founding which they took an active part.

THE English Ambulance in the Rue d'Aguesseau, Paris, which has been in full operation during both sieges of Paris, and has afforded much valuable aid to the wounded in Paris, under Dr. Cormack, especially during the second siege, is to be closed in a few days, and the patients who may remain are to be transferred to a house in the suburbs to which ample grounds are attached.

THE blue ribbon of Wimbledon, and indeed of rifle-shooting—the Queen's Prize—has this year been carried off by a son of Professor Humphry of Cambridge. He is an undergraduate of Trinity College.

THE HEALTH OF THE WIMBLEDON CAMP.

THE health of the camp has been unusually satisfactory during the week. There has been scarcely any diarrhoea, notwithstanding the great heat and consequent "refreshments". Only one slight case of sunstroke has occurred. A trifling wound from the splash of a bullet, a few cut hands, and a sprain or two, have also been attended to at the hospital.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

AT a quarterly Court of Directors held July 12th—Dr. Burrows, President, in the chair—grants to the amount of £1,278 : 10 were made to fifty-five widows and forty-five children. Two widows and three children were added to the list; and the death of one recipient of grants was announced. Two members were elected; and five were proposed for election at the next court, to be held in October.

THE OBSTETRICAL SOCIETY OF LONDON.

AN excellent step has lately been taken by this Society in the appointment of a Committee, with Dr. William Squire as President, and Dr. Edis, 23, Sackville Street, W., as Secretary, to obtain systematic investigations into the temperature during pregnancy, parturition, and the puerperal state. The Committee has prepared a form for recording observations during these periods, which appear to include most if not all the points of importance to be attended to by the observer. Space is left for a short history of each case to be appended. These forms will be issued to all members of the Obstetrical Society, and to members of the profession who are willing to afford assistance to the Committee.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

THROUGH the just and liberal action of the Governors of St. Mary's Hospital, who have agreed to devote to school purposes the share of school fees formerly paid to the charity, as stated in the JOURNAL a short time ago, the School Committee have been able not only to appoint a Medical Tutor, but also to establish three Scholarships in Natural Science, each of the annual value of £40, and tenable for three years. The first of these Scholarships will be awarded by open competitive examination in September next. The influence of these newly founded Scholarships will be in the right direction; they will be an inducement to students to endeavour to acquire some knowledge of natural science previous to entering at a medical school, and thus enable them to give more time to clinical work afterwards.

ST. THOMAS'S HOSPITAL.

ON Wednesday evening there was a dinner festival to commemorate the opening of the new hospital by the Queen, and to assist in raising the sum of £20,000 for the cost of fittings, furniture, and other items of expenditure connected with the adaptation of the buildings to the purposes for which they have been erected. Sir Francis Hicks, Treasurer, presided. The Chairman, in proposing the toast of the evening, "Prosperity to St. Thomas's Hospital," spoke of the institution in the words of Miss Nightingale as "the noblest building yet erected for the good of our kind". His hearers, he said, when they thought of all that was implied in wishing prosperity to the hospital with its six hundred beds, of the prolonged life and restored health to the many thousands who every year thronged its walls, and of the benefits to mankind at large which must arise from its contributions to medical science, would all rejoice at the conclusion of the great work, and feel that it would have been a timid policy to have delayed its completion. It had been suggested that the governors might have put a smaller limit upon the intended accommodation of the hospital; but every block of buildings not utilised implied that eleven hundred less of our fellow-creatures would have been annually received within the walls, and six or seven

hundred less lives would have been preserved by the medical staff. The subscriptions amounted to £11,000. With a very slight effort, it will, we apprehend, be easy to obtain the further sum needed for the important end in view.

JOHN HUNTER.

IN the *Times*, of October 1866, appeared an interesting account of Old Kensington Church and the historical personages connected with it and the parish; conspicuous amongst these is John Hunter, who for nearly thirty years laboured diligently on his own freehold at Kensington; here, in fact, he worked out those great principles which have immortalised him. The house, grounds, dens, etc., at Earl's Court, remain but little changed since his day, but the lease of the property is well-nigh expired, and in a short time these interesting acres will be built over, and then will be lost all trace of the home of the sagacious founder of scientific surgery. Under these circumstances, it has been proposed to commemorate John Hunter's long and useful residence in Kensington by placing a window in the magnificent new Church, now nearly completed, by Gilbert Scott, R.A., and thus associate this great benefactor of the human race with Newton, Addison, and others, whose memory will be there represented. We heartily commend the project to our profession and to the public. Mr. John Merriman, of Kensington Square, acts as honorary secretary to the fund.

ENTERTAINMENTS IN HOSPITALS.

AT the Royal Free Hospital, an entertainment was given this week to the patients by the North London Glee Club. We are always glad to chronicle such kindly and pleasant reunions. The chronicler of the establishment has, however, gone a little further than the facts in the ecstatic paragraph circulated, declaring this "to be the first time such a thing has been thought of in a hospital". It has been thought of, and carried out, scores of times in dozens of hospitals—but the more often the better.

THE HOSPITAL VISITING SOCIETY.

ARCHBISHOP MANNING preached last week at the Pro-Cathedral, Kensington, to a very large congregation, on behalf of a society consisting of several ladies who visit hospitals in London, and do all they can to add to the comfort of the patients. The Archbishop said that he wished to take that opportunity to thank publicly the managers and the medical officers of the hospitals for the facilities courteously afforded to the visitors. One branch of the society consists of those who, on being informed that patients have been discharged convalescent, visit them at their residences, or place them in a convalescent home.

OUR ASYLUM SYSTEMS.

WE publish in another column a reply by an able alienist to our recent article on this subject. "S. W. D. W." is evidently a "*physician superintendent*", and of the class, therefore, that we desire to see increase. We are satisfied with his admission that "there is much that is true" in the views we have expressed, inasmuch as they are largely opposed to existing arrangements, and are hardly likely to be at once or unanimously adopted. The five names he cites precisely illustrate our views; they are the names of men who have all great experience either in the army or in general or hospital practice. We have, of course, never intimated that drugs are not tried in asylum practice. But what, if any, have thus far been the precise results attained? Is S. W. D. W. able to maintain the statement that the use of bromide of potassium in epilepsy is due to an alienist? We were disposed to attribute it elsewhere. The advocacy of a lay superintendent is a windmill erected by our correspondent for the sake of battering it down. The argument in the article to which he replies was that, apart from the medical element, there is nothing more complicated in the management of a lunatic asylum than of a workhouse or prison. A real physician is the only person fit to be the superintendent of a lunatic asylum—and one who, as a physician, thoroughly subordinates lay duties of administration.

ABORTION-MONGERS.

CHARLES DE BADDELEY, herbalist, and Sarah de Baddeley, his wife, were indicted on the 14th instant for unlawfully supplying a certain noxious drug; namely, ergot of rye, knowing that it was intended to procure abortion. The prisoners lived at Kennington, and an advertisement was inserted in a certain spiritualist journal inviting people to consult at that house "Madame de Baddeley, the celebrated *clairvoyante*." From what was alleged to be transacted there the police were induced to send a woman named Hansard to consult the prisoners, and to concoct a story which might elicit their mode of procedure. After being put into a state of so-called "clairvoyance", the female prisoner advised her what to do in the case of a young woman whom she had mentioned, and gave her a quantity of ergot of rye to procure abortion. In all, £6 was paid to the prisoners. The drug was at once handed over to the police. It was urged on behalf of the prisoners that no offence had been committed; and some strong observations were made as to the conduct of the police in laying the trap by which they had been caught. The jury found the prisoners guilty, and they were each sentenced to twelve months' hard labour.

MEDICAL EXPERTS IN COURTS OF LAW.

COMMENTING upon the evidence of Messrs. Gay, Carr Jackson, and Haynes Walton in the recent stabbing case at Bayswater, the *Standard* says (and we cannot gainsay it):—

"The least satisfactory feature in the trial was the medical evidence, on which the prisoner was compelled to rely. Her defence consisted in an assertion that the wound had been inflicted in a struggle with the deceased, in the course of which he pulled down her uplifted arm, and thus accidentally drove the knife into his own body. But this theory was too manifestly and palpably absurd to hold water. The blade had passed between the ribs, cutting through coat, waistcoat, and body linen, and piercing the flesh for several inches. The course of the wound was directly 'downwards, forwards, and inwards,'—appearances which were consistent with the proposition that a blow had been struck, but utterly irreconcilable with the theory that it had been accidentally and involuntarily given by the deceased when struggling with his companion. Moreover, as one of the doctors called for the defence admitted, the wound was cleanly cut, as it would be if the recipient were struck suddenly and unawares, while any change of position, such as would inevitably occur during a struggle, would jag the edges of the wound and alter the course of the lethal weapon. Mr. Serjeant Parry, in an eloquent address, which was deservedly commended by the Bench, endeavoured to conquer the difficulties with which he had to contend, and to reconcile the ascertained facts with the theory which his witnesses had set up. But the task was too hard, even for the most ingenious and eloquent of advocates. The necessities of the defence did but furnish another proof of the worthlessness of what is known as the testimony of experts. Mrs. Newington's medical witnesses were open to the remark that they were speaking less with reference to the ascertained circumstances of the case than to frame a theory of their own which might justify a verdict of acquittal. We can understand the embarrassments of their position, but we cannot approve their way of extricating themselves from them. We are willing to accord all due weight to scientific opinion, but we consider it a misfortune, alike for the public and for the savans, when it becomes evident that such opinions may be obtained by any one who is willing to pay the market price for them. In actions for damages this is quite bad enough, but it is infinitely worse when the same means are employed at inquiries consequent upon the deaths of those who have gone to their last account, and which intimately concern the lives and limbs of all whose evil hap it may be to suffer from excesses of ungovernable passion and the outbreaks of lawless violence."

TECHNICAL PLEAS.

WE view with unmitigated disgust the defence put forward by the St. Pancras guardians in the recent action brought against them by Mr. D. H. Dyte for the breach of contract involved in his removal from the post of medical officer of the Highgate Infirmary—an office which he had filled with credit and ability for six months, and which he was engaged to fill until the Infirmary was transferred to the Central London Sick Asylum District Board. In lieu of assigning any reason for an act of injustice which is stated to have been nothing more than the gratification of party feeling, the guardians set up a defence which can only

excite contempt and disapproval. From a report of the trial which occupies several columns of the *St. Pancras and Holborn Journal* of last week, we find that the guardians, without attempting to meet the merits of the case, avail themselves of the technical pleas—first, that the engagement under which Mr. Dyte had been acting had not received the corporate seal, and therefore was not valid; and secondly, that a statement formally and deliberately made by a committee acting on behalf of the Board was not binding on the Board. The defendants not disputing any of the plaintiff's statements, but resting their defence solely on the technical points, the judge ruled that, there being nothing for the jury, the plaintiff must be nonsuited, but with leave to move the Court to set it aside and enter a verdict for himself, subject to these and other points of law raised. The case, therefore, will be argued before the higher tribunals. We are glad to hear that the legal expenses which Mr. Dyte will incur in carrying his case elsewhere are being met by a subscription; and we trust he will receive such liberal support as will enable him to defeat the counsels of the St. Pancras Board of Guardians.

ARSENIC IN WALL-PAPERS.

THE following communication comes to us from a writer not belonging to our profession, but whose intelligence and trustworthiness is vouched by an eminent sanitary authority.

In the present condition of the public health, it is universally admitted that sanitary improvements are of vital importance. I beg, therefore, to draw the special attention of the Medical Profession and of the public generally to the very serious amount of atmospheric poisoning which has been going on unnoticed and unchecked for many years, and is on the increase all over the kingdom in the houses of the upper and middle classes, and also of the artisan and working classes, in the form of arsenical wall-papers.

Hitherto it has been generally supposed that only papers *entirely* green, and of a very bright shade of green, were arsenical; but the fact is, as proved by the analysis of eminent chemists, that *every paper which contains any green in the pattern, no matter how little, or of what shade, as a general rule contains arsenic, and is, therefore, injurious to health.* One shade of green is no safer than another, for the very palest greens frequently contain large quantities of arsenite of copper, the brilliant colour of which is toned down to any degree of paleness by the addition of chalk, and sometimes of white lead; the result being that pale green papers often contain just as much arsenic as those of brighter colour. The quantities of arsenic used in green papers appear almost unlimited, varying from the fractional part of a grain up to the frightful amounts of *six, nine, fourteen grains and upwards, to the square foot.* I have beside me some pale green papers, the analysis of which give those amounts, and the illnesses produced by those papers proved in some cases all but fatal. I have also by me a paper with green leaves on a white ground, containing no less than *eight grains to the square foot*, which caused most serious illness. Papers of a very similar description are to be seen in the majority of dwelling-houses, from the palace down to the navvy's hut. It is rare to meet with a house where arsenic is not visible on the walls of at least some of the rooms. When obliged to leave home for a time last summer, I rejected *upwards of seventy lodging-houses*, because in none of them could there be found six rooms where the papers were free from green colouring.

When the atmosphere of dwellings all over the kingdom, in town and country, is thus more or less poisoned with arsenic, the most volatile and the most subtle of all poisons, need we be surprised at the increasing prevalence of various forms of disease? Investigation of this subject is urgently called for. I cannot but regard it as a question of great national importance, affecting masses of our population physically, mentally, and morally, to an extent little conceived at present. There appears good reason for believing that a very large amount of sickness and mortality among all classes is attributable to this cause, and that it may probably account for many of the mysterious diseases of the present day which so continually baffle all medical skill.

Arsenic being exceedingly volatile, its effects by inhalation, both of gaseous emanations from the papers, and of the fine impalpable dust thrown off at all temperatures, are highly dangerous, producing symptoms both chronic and acute, which *simulate* various forms of disease. I say *simulate*, because I have seen cases where the symptoms of various diseases were produced by the irritation of the entire mucous membrane, and consequently of the whole system, resulting from the occupation of rooms with arsenical wall-papers; and on the removal of those

papers the symptoms gradually subsided, thus proving that they were the result of irritation, and not of organic disease. But it would seem not improbable that prolonged exposure to the same poisonous influence may in time produce those diseases which are at first only simulated.

Having witnessed the effects of slow-poisoning by arsenical papers in my own family and household during a number of years, and having suffered severely myself from the same cause, I speak from personal experience. During a period of twelve years we were rarely free from illness in some form or other. No fewer than twelve physicians, several of eminence, were consulted in London and elsewhere. They all agreed as to the diseased conditions which existed, but not one succeeded in affording more than a measure of temporary relief. Children and adults of both sexes, including several servants, and numbering altogether fourteen persons, all suffered. The peculiar nature and obstinacy of the symptoms were such that I could not but think sometimes that some hidden cause was at work; which analysis of the papers of rooms occupied during those twelve years has since proved to be indisputably the case. The idea that arsenic papers were the cause of illness was suggested by the perusal of a little book not long since published, entitled *The Green of the Period* (Routledge, 1869), which gives much valuable information on the subject, and was put into my hands by a physician who was attending us. The proof that such was really the case lies in the fact, that on removing all the papers containing green the symptoms were soon greatly relieved. To detail them in full would soon occupy much space, but I will give a brief outline.

First appeared irritation of the mucous membrane, causing diarrhoea and vomiting, with various other symptoms of severe gastric derangement, resulting in permanent indigestion; also incessant severe cold in the head, which in one instance lasted for several years without being touched by any remedy; ulcerated throats, with acute inflammation, resembling diphtheria and quinsey; severe spasmodic cough, spasmodic asthma, bronchitis, and congestion of the lungs; soreness of the mouth, lips, and tongue, which appeared as if scalded in patches; inflammation of the eyes and eyelids (the conjunctivæ being invariably bright red), in one case threatening absolute loss of sight; congestion and torpidity of the liver, with the various symptoms resulting therefrom; and severe bilious and feverish attacks. There was, in short, irritation of every organ. In many cases, if not in all, the action of the heart was weakened, and in some palpitation frequently occurred. There were pains in various parts of the body, especially across the shoulders, down the spine and limbs, also in the joints, which were often stiff and swollen; scaling of the skin, and irritating eruptions, which no remedy ever relieved except Turkish baths. The effects upon the nervous system were most remarkable, producing a thoroughly shattered condition; great irritability, depression, and tendency to tears; with unusual prostration of strength. These latter symptoms were especially marked in the children, and also in servants who had come to the house in ordinarily good health, and who each became affected by degrees as described. The list also includes giddiness, headache, acute earache, and neuralgia; bleeding at the nose; frightful dreams; hysterical attacks; faintness; cramps, rigor, and numbness of the limbs; rigid spasms, and convulsions. The last symptoms developed in the worst cases were loss of memory, and threatenings of paralysis; also spasms with twitching of the body and limbs. At this stage, the cause was found out and the green papers were removed. A most simple but effective Turkish bath was temporarily arranged in the house, and by using it daily the worst symptoms were speedily relieved; the brain-congestion yielding all the more readily to this remedy when the temperature was above 140 deg. F.; the heat being obtained by direct radiation from red hot iron, on the principles laid down in Sir John Fife's *Manual of the Turkish Bath* (Churchill).

All the above symptoms, and many others not mentioned, were gradually relieved by this treatment after the papers were removed. The inveterate nasal catarrh alluded to ceased at once when the papers were taken down, and before using the bath. It had been called hay-fever at one time, and the discovery of the real cause of the affection may, perhaps, throw light upon many similar cases.

Inasmuch as all the symptoms enumerated had previously refused year after year to yield to any mode of treatment, these facts may be considered to prove pretty clearly the serious injury to health and danger to life that result from arsenical wall-papers, and may, perhaps, also serve to indicate one of the best means of eliminating the poison from the system.

There remains, however, a sequel to these cases, proving the existence of arsenic in papers altogether free from green, which fact has not yet been brought before the public.

It is well-known that arsenic produces eruptions, while it is also a valuable means of cure for them in some cases. If records were to be made of the various forms of eruptive disease occurring in patients

who occupy, either by night or by day, rooms containing any green in the paper, valuable information on this point might be obtained.

DR. LEWIS A. SAYRE'S TREATMENT OF HIP-JOINT DISEASE.

THE demonstrations and clinical remarks of Dr. Lewis Sayre, of New York, which we recently reported at University College Hospital, have excited a good deal of professional interest. The rapid and excellent results obtained by his light and effective extension-splint, the remarkable series of photographs which he has shown of patients having perfect motion at a newly-formed hip-joint after the subperiosteal exsection of the head of the femur and parts of the acetabulum, and the extremely ingenious application of his vertebrated probe for the discovery of dead bone at the bottom of sinuous sinuses, have arrested attention; and he has been afforded the opportunity of demonstrations at St. Bartholomew's, St. Thomas's, the Middlesex, and other hospitals. We furnish in another column a full report of one of these demonstrations, with illustrations which will make the text clear. While losing the warmth and earnestness of manner of the lecturer, and something of the peculiar raciness of diction, this lecture will still be found highly instructive and valuable. This is the second time that an American surgeon visiting this country has brought to the cognisance of the profession here what claims to be a distinct improvement in surgical practice. We are happy to afford the hospitality of our columns to such contributions; and we hope that in the future they may be more frequent. Everything which tends to give to scientific work a truly cosmopolitan character, must be hailed with satisfaction. The excellent work which is being done by our American brethren in medical and surgical practice is too little known in this country. The short visit of Dr. Sayre has, we believe, been gratifying to himself and welcome to the profession here. He has been warmly received by the most eminent surgeons, and his vivid enthusiasm and natural force of character have produced a very favourable impression.

THE BANQUET TO MM. RICORD AND DEMARQUAY.

OUR French colleagues have warmly appreciated the honour done to them and to those whom they represented by the brilliant gathering of professional men who so promptly responded to our suggestion that their visit offered a fitting occasion for expressing to our French brethren, who have passed through a period of extraordinary trial, our hearty sympathy and affectionate regard. The medical profession in France rose to the height of its duty, and MM. Ricord and Demarquay offered conspicuous examples of men who preferred self-sacrifice and labour to ease in inglorious retirement. It was this feeling which brought together at a banquet, without any other than the most informal notices, nearly eighty of the busiest hospital physicians and surgeons of London in about forty-eight hours—a feat of which the possibility might otherwise have been doubted. MM. Ricord and Demarquay, who were on the point of leaving London when this idea arose, stayed expressly to receive the honour; and it proved to be equally worthy of them and of those who offered it. Sir William Fergusson expressed very happily the sentiments of the English profession towards our French brethren, and the idea of fraternity which underlay the banquet. M. Ricord replied with the spirit, the grace, and the *esprit*, which through a long life have never failed him, and which have now more ripeness but not less vigour than of yore. M. Demarquay has made many personal friends here by his vigorous, manly, and patriotic attitude, among those to whom before he was only known as a surgeon of scientific repute. Such occasions of ripening mutual acquaintance and cultivating reciprocal friendships amongst men of the same profession, though of different nationalities, are too rare. It is a source, we believe, of just satisfaction that this one has not been lost. Not only did Dr. Paget of Cambridge, President of the General Medical Council, honour our foreign guests by coming expressly to London for the occasion, but all the heads of the leading metropolitan corporations and societies, and many men who rarely encumber themselves with public festivities, attended. Dr. Bulkley, the President of the Academy of Medicine of New York; Dr. Fordyce Barker and Dr. Lewis Sayre of New York; and some other emi-

nent foreign physicians who happen to be in London at this time, were also present. Our foreign guests expressed a wish to frame the *menu* with its list of stewards as a permanent memento, and copies have been since printed on satin and sent to them for the purpose.

THE BRITISH INTERNATIONAL AID-SOCIETY.

COLONEL LOYD LINDSAY entertained the whole of the ladies and gentlemen who had been actively employed on behalf of the Society at Greenwich, at the Ship Hotel. MM. Ricord and Demarquay, and Counts Flavigny and Serrurier, were present as a deputation from Paris. The German Societies were represented by Count Andreas Bernstorff. Among the medical men present were Dr. Acland, Dr. Sieveking, Mr. Prescott Hewett, Professor Longmore, Surgeon-Major Wyatt, Mr. Holmes Coote, Dr. Pollock, Mr. Mac Cormac, Dr. Frank, Dr. T. T. Pratt, Mr. Ernest Hart, Mr. Berkeley Hill, Mr. Arthur Norton, Mr. Beck, Dr. John Murray, Dr. Markheim, Mr. R. W. Parker, Dr. Manley, Mr. Chater, Mr. Sewill, Mr. Attwood, Mr. Dorin, Dr. Junker, etc. Mr. Mac Cormac replied for the ambulance medical officers, and Dr. Frank for the ladies.

BABY-FARMING.

THE Infant Life Protection Committee are now considering their draft report. They have satisfied themselves that a great and criminal destruction of life goes on in great cities; and they have evidence of it on a large scale in London, Edinburgh, Glasgow, and Greenock. It has been shown them that the mortality of illegitimate children in some districts amounts to 60 to 90 per cent.; that in the best managed foundling homes it is 70 to 80 per cent.; while by farming out under inspection—as is now done by the Foundling Hospital, for example—it is brought down to the normal rate of 16 per cent. These facts were established by the evidence of Mr. Ernest Hart, Mr. Curgenven, Mr. Gregory, M. P., Serjeant Relf, and Dr. Cameron. They will, we believe, thereupon recommend—1. The compulsory registration of births and deaths by a medical person; 2. The establishment of permissive registers for all nurses wishing to take children, who will then be subject to inspection; 3. The compulsory registration of all nurses taking more than two alien infants into their house for gain; 4. The registration of lying-in houses.

SCOTLAND.

THE consideration of Miss Jex Blake's letter has again been postponed by the Senatus of the University of Edinburgh, counsel not having been yet consulted.

MISS JEX BLAKE has received £200 from a lady to form the nucleus of a fund towards the establishment in Edinburgh of a women's hospital for the clinical instruction of female medical students: the staff to be composed also of ladies.

THE LADY STUDENTS AND SURGEONS' HALL.

THE Lecturers at Surgeons' Hall have by a majority rescinded the permission given last year to admit ladies to their classes, and they have now determined to prohibit the attendance of lady medical students either separately or in mixed classes. It was, however, resolved that instruction by Dr. Keiller to nurses in midwifery, or by the rest of the lecturers to women in other subjects, would be permitted provided that the women were not "registered students of medicine."

THE SANITARY CONDITION OF GLASGOW.

THERE has been for some time a steady decrease in the cases of fever and small-pox in the city, only forty-three of the latter being in hospital at the beginning of the present week. There turns up in Glasgow a periodical outcry from some members of the Police Board against the ever-increasing expenditure of the Sanitary Department. Some years ago, the Fever Hospital at Parliamentary Road was in considerable risk of being abolished; and now it is the recently arranged staff of sanitary inspectors which is the subject of attack. The history of all the epi-

demics since the magistrates have set themselves to encounter this class of diseases seems to us to afford the strongest argument for such measures, and the greatest encouragement to those who advocate them. There was first the cholera epidemic, against which Dr. Gairdner organised such a thorough army of sanitary visitors, and the City erected several hospitals. This epidemic touched Glasgow; there were several cases in various parts of the city, but these were at once conveyed to hospital and the localities disinfected, and the disease went no further. Then we have recently passed through two epidemics—the one of relapsing fever and the other of small-pox, and both have been quite limited in extent, as compared with former epidemics of the same disease here, and especially with simultaneous epidemics elsewhere. There seems to us to be the greatest encouragement, therefore, to go on in this work, and we have no doubt that a sensible difference in the death-rate will be the not distant result.

IRELAND.

SMALL-POX IN IRELAND.

IN an official communication dated July 13th, the Commissioners for administering the laws for relief of the Poor in Ireland state that, since their last circular upon small-pox in Ireland, dated February 7th, 1871, they have had reports from medical officers of 480 cases, distributed through fifty-three unions. Among these, Drogheda shows 127 cases; Belfast, 68; Wexford, 57; North Dublin, 23; and South Dublin, 24. Many cases from centres of contagion, like Belfast, have doubtless escaped being reported. It is not often that the source of contagion, when it is within the country, can be ascertained, on account of the ordinary frequent intercourse between any centre of contagion and the places in its vicinity; but the centres to which the contagion, arising internally, has in a few cases been traced, have been Belfast, Drogheda, Dublin, and Wexford, in the two former of which the disease had assumed the nearest approach to an epidemic. The cases, however, in which contagion has been imported from abroad are more easily ascertainable, and during the five months which have elapsed since the last circular, thirty-five cases have been reported as imported into various parts of Ireland from Liverpool; ten cases from Glasgow; five cases from Wales; and eight cases from other parts of Great Britain. Thus the number of cases known to have been imported from Great Britain into Ireland during the five months was fifty-eight; which added to thirty-four like cases specified in previous circulars make a total of ninety-two cases imported during the year 1870, and that part which is passed in 1871. The promptitude with which the Guardians and their officers have met these imported cases, by efficient treatment, isolation, and disinfecting processes of every description, reflects much credit on the several unions which have been invaded by small-pox, and accounts, at the same time, for the very few instances in which the disease has spread after its introduction. Of cases which have terminated fatally during the five months very few have been reported in the correspondence, and it is not possible to say what the small-pox mortality during the period in question may have been until the Registrar-General's returns have been published. The last quarterly return published was that for the quarter ended December 31st, 1870, and at that time the present invasion of small-pox had scarcely commenced.* The weekly tables, however, for the Dublin registration district (population 314,000) exhibit eleven deaths, as registered in that district, from the 7th February last, to the present date. It will probably be found ultimately, from the Registrar-General's returns, that the number of deaths compared even with the imperfect number of cases reported to the Commissioners exhibits a very small rate of mortality, inasmuch as a large proportion of the cases so reported have been described as of a very mild type in consequence of previous vaccination. The principal inferences to be drawn from the figures above presented are the following. 1. The ordinary intercourse prevailing between Great Britain and Ireland has been the cause of introducing small-pox

once more into the latter, the earlier cases having been almost all traceable to importation. 2. Considering the number of different localities in Ireland into which small-pox has been so imported, it is surprising that there are so few in which it has taken such hold as to establish a new centre of infection, such having apparently been the case only in Belfast, Dublin, Drogheda, and Wexford. 3. Those incidents are due in all probability to the comparatively good state of vaccination in the country, combined with other favourable sanitary conditions, the latter being partly due to the absence of any decided epidemic influences, and partly to the progressive operation of the sanitary laws. The Commissioners think that the Guardians will no doubt concur with them in believing that the greatest public benefit has been derived from the law of compulsory vaccination, as administered in Ireland, and from such exertions as have hitherto been made in carrying into effect the Sanitary Act, and will be disposed, under existing circumstances, to continue their exertions for the preservation of the public health.

A COMPLIMENT TO THE PROFESSION IN FRANCE.

DINNER TO DRs. RICORD AND DEMARQUAY, CHIEFS OF THE AMBULANCES OF THE PRESS OF PARIS.

A COMPLIMENTARY banquet was given to MM. Ricord and Demarquay, with Count Serrurier and Dr. Markheim, Secretary of the delegation from Paris, on Monday evening at Willis's Rooms. Sir William Fergusson, Bart., F.R.S., occupied the Chair. There were also present, Sir A. Armstrong, K.C.B., Director-General of the Medical Department of the Navy; Dr. Paget, President of the General Medical Council; Dr. Burrows, F.R.S., President of the Royal College of Physicians; Mr. Busk, F.R.S., President of the Royal College of Surgeons; Mr. Curling, F.R.S., President of the Royal Medical and Chirurgical Society; Mr. Hilton, F.R.S., President of the Pathological Society; Dr. Gull, D.C.L., F.R.S., President of the Clinical Society; Dr. Braxton Hicks, F.R.S., President of the Obstetrical Society; Dr. A. Clark, President of the Medical Society of London; Capt. Brackenbury; Dr. W. Russell; Dr. R. Barnes; Mr. T. Bryant; Dr. Henry Bennet; Mr. Bowman, F.R.S.; Surgeon-Major Bostock, C.B.; Mr. Brodhurst; Mr. Callender, F.R.S.; Mr. Critchett; Mr. Couper; Mr. Durham; Dr. D'Ormillas; Mr. de Méric; Dr. Gueneau de Mussy; Mr. Erichsen; Staff-Surgeon Fitz Gerald; Mr. Gascoyen; Mr. Hancock; Mr. Luther Holden; Mr. Prescott Hewett; Mr. Ernest Hart; Mr. Berkeley Hill; Dr. Gordon, C.B.; Dr. John Ogle; Mr. Sydney Jones; Mr. Campbell De Morgan, F.R.S.; Mr. Francis Mason; Mr. Maunder; Mr. W. Mac Cormac; Mr. A. Norton; Mr. Paget, F.R.S.; Mr. Partridge, F.R.S.; Mr. John Gay; Dr. Pavy, F.R.S.; Dr. T. T. Pratt; Dr. Priestley; Mr. Quain, F.R.S.; Dr. Owen Rees, F.R.S.; Mr. Savory, F.R.S.; Sir H. Thompson; Dr. Vintras; Mr. Erasmus Wilson, F.R.S.; Dr. Bulkeley (New York); Mr. John Wood, F.R.S.; Dr. Wiltshire; Mr. Startin; Mr. Bell; Mr. Holmes Coote; Dr. de Vignola; Dr. Tilt; Dr. Lewis Sayre (New York); Dr. Le Grand; Dr. Fordyce Barker (New York); Dr. Percy (New York); Mr. Acton; Dr. Maclaren; Mr. Adams; Dr. Tanner (Cork); Mr. White Cooper; Mr. A. Goldsmid; Mr. T. M. Stone; Hon. L. Wingfield, etc.

The CHAIRMAN gave "the Queen."

Dr. BURROWS proposed "the Army and Navy Medical Services"; to which Sir A. Armstrong and Deputy Inspector-General Dr. Gordon, C.B., British Commissioner to the French hospitals, replied.

The CHAIRMAN said that time was specially important to most men in the room, and it had been arranged by those who had conducted the ceremonies of the day that some of the toasts incidental to large social gatherings in this country should be omitted; and he now rose to proceed with the business which was uppermost in the minds of all present. They had with them as guests two distinguished members of the medical profession belonging to a neighbouring country, and it was to do honour to them that they were now assembled. Doctors Ricord and Demarquay were as well known to the profession in England as by their brethren at home; their fame had extended over the world, and each had achieved for himself great reputation. But it was not entirely on this account that the present greeting had been offered. Hundreds of men of eminence in the medical profession came to these shores from all parts of the world, and they were kindly received in our hospitals and on other occasions, but it was not always deemed needful to entertain them at public festivals. He believed that those gentlemen usually left our shores well contented with such attentions and hospitalities as had fallen to their lots. But there was something peculiar in the visit of the guests of this evening. They had come to England selected by their own countrymen to perform an unprecedented act of courtesy from our immediate neighbours on the continent—from the French nation;

bearing a message of thanks to the people of England for warm-hearted kindness and sympathy, as well as material assistance, rendered at a time when France was suffering severely under the calamities of war. They had come to offer gratitude and friendship for valuable assistance offered in the time of their greatest need, and to express to us their earnest hope and desire that the friendship which had so long obtained between the two countries might never be broken. These gentlemen had been specially engaged in administering much of those comforts that the people of England had dealt out with such unsparing liberality. They had been at the head of the Ambulance Corps of the Press, which had rendered such invaluable service to the sick and wounded during the calamities of the siege of Paris. It was on this account chiefly that these gentlemen assembled were desirous of offering the present homage, for all felt that Drs. Ricord and Demarquay, with those of the profession who had ably assisted them, had thus put themselves at the head of those movements which the medical profession provided for the public weal wherever danger from the scourges of war threatened. This was a feature connected with the profession which all cherished as its glorious privilege. Despite of disease and danger from bullets, they were ever to be found in the front on such occasions. There had been reason to boast of it since the earliest records of the profession. Nearly three thousand years ago the Greek army, as it lay before Troy, were encouraged in their works by the circumstance that two eminent men were with them—Podalirius and Machaon. It was in those days that our profession had acquired the character of Godlike, because it could afford assistance under circumstances when no other could. In other sieges similar traditions had been referred to, and it was one worth special notice on this occasion that a predecessor of those present guests, a great surgeon of France who flourished three hundred years ago, and had been body-surgeon to several sovereigns of France, had on one occasion been the means of raising a siege of Metz, the very city about which so much had recently been said and done. Paré was smuggled within the walls; and when this was known, the garrison seemed as it were to be doubled in numbers, each man felt himself so much inspirited with the idea that the great surgeon was among them. This revived confidence speedily led to the raising of the siege.

It was for the honour that the guests had recently reflected on our profession, that we desired specially to testify to them our admiration for their conduct and our sympathy for their sufferings during the period of trial and danger. Each of them had already done such good to their fellow-creatures, that they might well have stood aside and let younger men take the posts of danger, but they preferred duty to all other considerations, and all hail to them for their devotion!

These guests in some degree were representatives of that great school of medicine and surgery for which Paris had long been famous, and it was the wish of all Englishmen present to assure these gentlemen of their continued high consideration for that famous school. We must still look forward to aid from it in furthering the progress of the profession at large. He thought it would be appropriate on this occasion to refer to two remarkable improvements of modern times which had emanated from that school. In former days in this country the eminent physician prided himself in carrying a sort of badge of his status, a tall stout, gold-headed cane. They all knew that such a rod had disappeared. It would be a curious sight for them to see Dr. Burrows (President of the Royal College of Physicians) walking down Regent Street with such an emblem in his hand; but he had no doubt that, if the doctor were met under ordinary circumstances, a small bit of wood might be found in his pocket or the crown of his hat—a mysterious looking thing smaller than a field-marshal's baton—he used that word as their friends had lately been military in some respects, yet with a power and quality little less significant than that famous rod. This was the stethoscope, which in its own way did marvels. It had added a new sense, as it were, to the physician; it has added a new eye to his mind, and has given the power to see into the very centre of the body.

The other instance he would take from the side of surgery. Men in England prided themselves upon the famous Cheselden, who had done so much for lithotomy. He was so famous in his time, that surgeons came from France to take lessons from him. But in modern days, the horrors and dangers of that terrible operation had been largely set aside by lithotritry, and it was to the French school that we owed the commencement of that beneficial proceeding which had conferred health and happiness on many—from the sovereign on the throne to the lowly peasant or humble artisan. Of this the surgeons of France might well be proud.

Messieurs Ricord and Demarquay—these gentlemen have deputed me to address you as I might. I wish, for their sake and yours, that the task had fallen to some one more able to fulfil it. In the name of every one present, I have to offer you good and kind wishes. I request that you will convey to your brethren in Paris our continued profound respect

and esteem ; and we cordially hope that this visit of yours may be the means of drawing together more firmly those bonds of friendship which we desire to see permanently uniting these two great nations. [*Applause.*]

M. RICORD (who was received with loud applause) said : It is with most pleasurable emotions that I rise to thank you all, and your eminent chairman, for the kind manner in which he has proposed, and you have received, your health. My pleasure is great and my emotion is heightened, when I look round this banquet-room and recognise so many faces of friends—some of them dear ones ; many, I am proud to say, former pupils of mine. In fact, it almost seems to me that I am once again under the shade of the old lime-trees in the “Hôpital du Midi”, encouraged (as usual in my lectures) by your presence and approbation. It is no small satisfaction to me, after so many years, to find myself again amongst you, and to feel myself supported by such a distinguished gathering of English *confrères* met together with such kind intentions, such good feelings towards the profession in France—feelings which, I am sure, are most heartily reciprocated. Since the happy time to which I have alluded, we in France have had to pass through much affliction, sorrow, and suffering. At times, so great was the danger, and so depressed were we, that I often gave up all thought or hope of seeing my friends again ; and little did I dream of meeting you here and enjoying the cordial greeting which you extend to me and to our friend Dr. Demarquay.

The siege of Paris has been more or less to us, to our society of the French ambulances, to the medical profession both in Paris and England—in fact, both far and wide—the siege of Paris has been, I say, the source of anxiety and some very arduous work. Those of us who were more immediately, more actively, engaged in the work, had to fulfil our professional duties under various and most trying conditions of danger and difficulty. In the ambulances of the French press-fund, we had but very scant notice and a very short time to call together and organise a numerous staff of workers and assistants of all sorts. One thing was most satisfactory, and that was the alacrity with which, at my call, there came together one hundred and fifty doctors, surgeons, and dressers, belonging to our civil hospitals—amongst them some of the most eminent hospital surgeons, some members of the Société de Chirurgie or of the Académie de Médecine ; others professors of the Faculté. We also had the good fortune to be joined and most ably seconded by our distinguished *confrères* Drs. Gordon and Wyatt ; and later on, during the civil war, by my young friend Dr. Markheim, who most courageously came forward in the time of need, and generously gave us the benefit of his talent and energy. Besides this numerous medical staff we had with us nearly fifty *pharmaciens*, many of them most eminent men, who also responded to the call of our Society. With such a staff at our disposal, we were able to establish fourteen sedentary ambulances (if I may so term our various hospitals scattered all over Paris), and five *real* ambulances (for they were *perambulating*, or *ambulances volantes*, as we called them). Most ably seconded by a very efficient commissariat and transport service of our own, we made it our duty to attend on all the battle-fields round Paris, dressing the wounds of the sufferers on the spot, or bringing them away with all speed to our fixed ambulances in town. Our labours were of necessity confined to the capital, whilst the operations of the French branch of the International Red Cross Society were happily extended over the provinces at large. My worthy friend and brother President, Count Flavigny, has, I am sorry to say, been obliged to return to Paris yesterday ; but I have no doubt that Count Serrurier, Vice-President of that Society, could give some most interesting facts as to the work of the French Red Cross Society.

The *Ambulances de la Presse Française* were the offspring of a subscription set on foot by the French Press Committee (presided over by M. Edmond Tarbé), and most liberally responded to by the public. Thanks to their generosity, and to the efficient management of our very able general secretary, M. de la Grangerie (who narrowly escaped the unhappy fate of the poor Archbishop, whose prison he had shared), we were enabled to care for the 25,000 sick, as well as wounded, who passed through our hands. But it would be the blackest ingratitude in me as a Frenchman, were I to pass over in silence the great sympathy and material help so kindly and generously extended to us by our English *confrères*, several of whom devoted their time, their talents, and their energy, to a labour of love and brotherly sympathy, thus setting an example which has been most nobly followed by the generous British public. It might be considered invidious to quote single instances among so many examples ; but I seize this opportunity of expressing my satisfaction at having made the acquaintance of Drs. Frank and Mac Cormac of the Anglo-American Ambulance, to which Dr. Markheim was attached ; of Mr. Ernest Hart and Mr. Berkeley Hill, who served greatly our French ambulances at Sedan and Remilly ; also of Dr. Pratt, who comes from that noble country America, the home of my

earlier years. May you in happy old England never have to learn by experience the bitter lessons that have been taught us within the last twelvemonth ; nevertheless, should fate order otherwise, we shall know what we ought to do, thanks to your noble example. Need I say that we should strain every nerve to imitate you ? This is all very well and very praiseworthy ; but France and humanity at large are under far deeper obligations to England, which has given us such men as Sydenham, whose name is always most reverently pronounced in France ; Charles Bell, to whose laws, one might say, our movements, our very feelings, must obey ; the other Bell, whom I call “mon Benjamin” ; Hunter—let me say *my* Hunter, for if he does not belong to me I belong to him ; Lawrence ; Sir Astley Cooper ; Sir B. Brodie, who was kind enough to receive me for the sake of my father, when to his surprise I was obliged to inform him that I was my own father ! my old friend Guthrie ; and many others whose names will readily occur to you, and who have been so brilliantly succeeded in the present time by what we call in France *une brillante pléiade*, whose names crowd into my memory. The list is long ; many are here present ; some are away ; but they are all inscribed in my heart.

Unhappily, our troubles were not ended with the siege. We had to drain the cup to the dregs. A civil war broke out, unparalleled in history, both ancient and modern—unequalled either for the ferocity of the wretched leaders of a misguided and half-starved populace, or for the anguish it caused all honest people. What were the vicissitudes of the *Ambulances de la Presse*—what happened, in fact, during the gloomy reign of Communal terror, will be more forcibly, more vividly, described by one of the principal actors, my courageous friend, my *alter ego*, Dr. Demarquay, who took the command on my being called away to Versailles.

Now let me again thank you in my own name, in the name of the French profession whom you wish to honour in our persons, and to whom I will, on my return, relate your kindness, and show the honourable roll of your names. Let this banquet be the bond of sympathy and friendship for ever, not only between English and French doctors, but between the English and French nations. [*Applause.*]

M. DEMARQUAY (who was loudly cheered) said : My first duty, gentlemen, is to thank you for having associated my name with that of M. Ricord. I cannot, however, form such a mistaken opinion of my own merits, as not to perceive that I owe this honour to your great kindness, and especially to your friendship for our master, for whose sake you have organised this splendid assemblage. In associating me with that great and illustrious man M. Ricord, you have desired to render homage to the surgical body of Paris, to the Society of Surgery, and to the Academy of Medicine, to which I have the honour to belong. It is by placing myself in this point of view, that I feel justified in being here ; and I am profoundly grateful for your kindness and for the marks of sympathy with which you are kind enough to honour me. Permit me, also, from the elevated position in which you have placed me, to express to you our lively acknowledgments of the sympathy which you have manifested towards unhappy and conquered France, saddened by a civil war without an equal in modern times, but now raising herself with courage from her overthrow. Any one who would fully understand our friendship for you, and our gratitude, must imagine himself placed in a large besieged town into which nothing could penetrate, and where the primary necessities of life were beginning to fail. Well ! gentlemen, it was in such a town that the echoes which reached us from without informed us that many of you had left your families and your affairs, and, led on by the noble impulses of your hearts, had come to take care of our wounded. This mark of sympathy was deeply felt by the whole of the medical profession in France ; which, in the painful circumstances, showed as much courage as devotedness from those in the first rank, at the head of whom I will place MM. Ricord and Nélaton, to the humblest country doctor. These painful events have established between the English and French surgeons bonds of friendship which time will only strengthen. During our time of trouble, we contracted yet another debt of gratitude towards England, by receiving from your generous nation the gifts which Colonel Lindsay courageously brought us under the protection of the Geneva flag. Honour, then, to the English people ! honour to the medical profession of that noble country, which has shown us so much sympathy, and whose generosity has loaded us with gifts which have enabled us to afford comfort to the victims of the war, as well as to the cultivators of our land, whose harvests were mercilessly destroyed.

Permit me now to give you my personal thanks for your kind expressions regarding the painful time which we passed under the Commune. Two motives determined me to remain at my post during those sad days when M. Ricord, in order that he might not be included among the hostages, was obliged to leave Paris. I desired to protect the ambu-

lances of the Press against all encroachment, and to prevent the young medical men who had courageously aided us from being forcibly incorporated in the army of the Commune. And I further desired to affirm the principle that every wounded man, whoever he may be, when he is protected by the noble Geneva flag—the symbol of Christian charity—ought to lose all nationality and all political colour, and become merely a wounded man, claiming, as such, care and protection. This task was also imposed on himself by Dr. Chenu; and it was a difficult one. We had much to bear in maintaining our rights, and in making our services appreciated.

At the commencement of the rule of the Commune, M. de la Grangerie, our General Secretary, was arrested, and detained as a hostage with the Archbishop of Paris and with M. Bonjean, that noble victim of the French magistracy. To obtain his liberty, I was obliged to apply in succession to M. Raoul Rigault, of celebrated memory; to Delescluze; to Protot, Minister of Justice; and to Cluseret. It was not till after twelve days of applications, entreaties, prayers, and threats, that we were able to remove our good and brave colleague from the prison of La Roquette, where he occupied the cell of the too celebrated Troppman. Dr. Chenu, the excellent representative of surgery in the International Society for the Aid of the Wounded, had the honour to undergo imprisonment as a reward for having worthily performed his duty. Well! gentlemen, in these days of trouble, Parisian surgery still maintained the position in which duty placed it; and I must further add that your young and courageous countryman Markheim never ceased during the time of the Commune to bestow his care on the wounded, and to act as the medium of communication between M. Ricord and myself.

The grand proof of esteem and friendship which you have given permits me to conclude my speech with proposing as a toast "The Union of English and French Surgery", which up to this day have done most in Europe, by the extent and the importance of their labours, for the good of humanity.

Mr. PAGET proposed "The International Aid-Societies of England and France", and spoke of the great works done by the French societies over the whole field of war in France, and especially within the walls of Paris during both the sieges. He expressed the earnest hope that the proof of national friendship and mutual benevolence which was afforded by the works of all the aid-societies of Europe would lead in time to a thorough hatred of war and a strong resolve against it.

Count SERRURIER and Captain BRACKENBURY replied.

Dr. GULL proposed "The Press and its Good Works". Drs. Ricord and Demarquay were the representatives of a noble work of the French Press—its ambulances—founded and sustained by the exertions of the Press. The Crimean Fund of the *Times*, the funds for the relief of the sufferers around Sedan, Metz, and Paris, were examples of the good works of the English Press. Than Dr. Russell no more apt representative of their works could be found. The present gathering, and the opportunity which it afforded of drawing together in closer bonds of friendship two great nations and two great professions, were due to the initiative of Mr. Ernest Hart, a leading mind in the medical Press, aided by the exertions of Sir Henry Thompson. He coupled with this toast the names of Dr. William Russell and the Hon. Lewis Wingfield.

Dr. RUSSELL said that the Press usually preserved a decorous silence as to its good works. It had sometimes, he feared, to answer for exciting passions, and producing unpleasant irritation. Such works as those alluded to redeemed its character. A long experience of wars gave him a continually growing horror of its cruelties. He trusted that the influence of the Press might be used to avert the causes of war, to mitigate the sufferings incidental to it, and to support those who devoted themselves to such noble work as that which he had seen under the Red Cross.

THE MUSWELL HILL ESTATE.—The new project for supplying the North of London with gardens as extensive and as beautiful as those of Sydenham will attract the interest and favour of all Londoners, who know how much thickly crowded populations stand in need of multiplied facilities for healthful outdoor recreation.

ROYAL COLLEGE OF SURGEONS: PUNISHMENT.—At the last meeting of the Council of the Royal College of Surgeons, a letter was read from Messrs. Wilde, the solicitors, enclosing a copy of the conviction and of the sentence to six months' imprisonment of Frederick Henry Morris, a member of the College, who was tried at Deves on March 27th last for an indecent assault; and it was resolved that, in pursuance of the bye-law relating to the misconduct of Fellows and Members, he be removed from being a member of the College. His name has also been removed, by order of the Medical Council, from the *Medical Register*.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: ANNUAL MEETING.

THE Thirty-ninth Annual Meeting of the British Medical Association will be held in Plymouth, on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th of August next.

President—E. CHARLTON, M.D., D.C.L., Physician to the Newcastle-upon-Tyne Infirmary.

President-elect—JOHN WHIPPLE, Esq., F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital.

An *Address in Medicine* will be delivered by GEORGE JOHNSON, M.D., F.R.C.P., Professor of Medicine in King's College, London.

An *Address in Surgery* will be delivered by JOSEPH LISTER, Esq., F.R.S., Professor of Clinical Surgery in the University of Edinburgh.

The business of the meeting will be conducted under four Sections.

SECTION A. MEDICINE.—*President*, Dr. Barham, Truro. *Vice-Presidents*—Dr. Quain, F.R.S., London; Inspector-General Smart, M.D., C.B., R.N., Penge, Surrey. *Secretaries*—Dr. Clay, Windsor Villas, Plymouth; Dr. Wade, Temple Row, Birmingham.

SECTION B. SURGERY.—*President*—Joseph May, Esq., Stoke, Devonport. *Vice-Presidents*—P. C. De la Garde, Esq., Exeter; Deputy-Inspector-General Longmore, C.B., Netley. *Secretaries*—W. P. Swain, Esq., Ker Street, Devonport; C. Steele, Esq., Meridian Place, Clifton, Bristol.

SECTION C. MIDWIFERY.—*President*—Dr. Beatty, Dublin. *Vice-Presidents*—Dr. Swayne, Clifton, Bristol; Dr. Alfred Meadows, London. *Secretaries*—Dr. John Rolston, Stoke, Devonport; Dr. Phillips, 26, Finsbury Square, London, E.C.

SECTION D. PUBLIC MEDICINE.—*President*—Dr. A. P. Stewart, London. *Vice-Presidents*—P. W. Swain, Esq., Stoke, Devonport; Dr. Beddoe, Clifton, Bristol. *Secretaries*—Dr. Row, Ker Street, Devonport; David Davies, Esq., 2, Queen Square, Bristol.

TUESDAY, August 8th.

The meetings this day will be held at the Royal Hotel, PLYMOUTH.

1 P.M.—MEETING OF COMMITTEE OF COUNCIL.

3 P.M.—MEETING OF GENERAL COUNCIL.

8 P.M.—FIRST GENERAL MEETING. *Business*: a. Reception of Congratulatory Address from Plymouth Corporation; b. President's Address; c. Vote of thanks to the President; d. Report of Council, and Discussion thereon; e. Election of General Secretary; f. Election of Auditors; g. Report of Medical Benevolent Fund; h. Presentation of Hastings Medal.

WEDNESDAY, August 9th.

8.30 A.M.—PUBLIC BREAKFAST—Royal Hotel, DEVONPORT.

9.30 A.M.—MEETING OF NEW COUNCIL—Royal Hotel, DEVONPORT.

11 A.M.—SECOND GENERAL MEETING—Town Hall, DEVONPORT.

Business: a. Reception of Congratulatory Address from Devonport Corporation; b. To appoint place of meeting for 1872, and President-elect; c. Address in Medicine by Dr. GEORGE JOHNSON.

1 P.M.—Adjourn.

2 P.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

9 P.M.—PRESIDENT'S SOIRÉE—Assembly Rooms, Royal Hotel, PLYMOUTH.

THURSDAY, August 10th.

10 A.M.—THIRD GENERAL MEETING. *Business*: Reports of Committees—Royal Hotel, PLYMOUTH.

11 A.M.—ADDRESS IN SURGERY, by Professor LISTER, F.R.S.—Royal Hotel, PLYMOUTH.

2 P.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

6.30 P.M.—PUBLIC DINNER—St. George's Hall, STONEHOUSE.

FRIDAY, August 11th.

10 A.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

2 P.M.—CONCLUDING GENERAL MEETING—Royal Hotel, PLYMOUTH.

A RECEPTION ROOM will be opened at the Royal Eye Infirmary, close by the Plymouth Railway Station. Members and others who require information with respect to the meeting are requested to make application in this room.

Members are requested to proceed to the Reception-Room immediately on their arrival, to enter their names and addresses, and to obtain the tickets necessary to secure admission to all the proceedings.

HOTELS.—The principal hotels are, at **PLYMOUTH**, the Royal Hotel, the Duke of Cornwall, the Globe, the Albion, Chubb's Hotel, Farley's Hotel, Harvey's Hotel; at **DEVONPORT**, the Royal Hotel, Thomas's Hotel, and the Crown Hotel.

* * * **GENTLEMEN INTENDING TO VISIT PLYMOUTH** during the meeting are requested to send their names to Dr. Littleton, the Local Secretary, 1, Lansdowne Place, Plymouth.

NOTICES OF MOTION.—The following notices have been given.

The **PRESIDENT OF THE COUNCIL**: Rule 4. To insert "President-elect", and to omit "Secretary".—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting."—Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary".—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District", and to erase the words "the Secretary of the Association".—Rule 9. To omit the words between "The President of the Council" and "shall be elected"—Rule 10. To omit the words between "The Treasurer" and "shall be elected".—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office". To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting".—Rule 13. To erase the words "Secretary shall call", and to substitute "President of Council shall direct to be called".—Rule 14. Between "shall" and "be recommended", to insert "express his desire in writing, and shall be".—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea". To erase the words after "such member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding".—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association".—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and".

Dr. STEELE (Liverpool): Election of Committee of Council. Every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than ~~two~~ months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: "I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed) _____." Together with a nomination-paper signed by six members of the Association, in the following terms: "We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association." The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the **BRITISH MEDICAL JOURNAL** not later than months prior to the Annual Meeting of the Association.

Mr. NICHOLSON (Hull): To alter Law 16, line 2. For "three", insert "two".

Dr. WADE (Birmingham): In Law 8, Paragraph No. 3, of the duties of Council, to alter "ten" into "twenty-five"; and to omit the words "and one Secretary from each Branch".

INVITATION TO TORQUAY.—The members of the medical profession at Torquay request the pleasure of the company at luncheon, on Saturday, August 12th, at 3 o'clock, of any member of the British Medical Association residing beyond fifty miles from the place. Their object in this limitation as to distance is that of furnishing an opportunity to strangers unfamiliar with Devonshire to become acquainted with Torquay and its immediate neighbourhood. Any member who may wish to favour them with his presence, will oblige by notifying the same at his early convenience—and not later than on the Wednesday of the Plymouth meeting—to the Honorary Secretary, Dr. Powell, Infirmary, Torquay.

SPECIAL RAILWAY ARRANGEMENTS.—First and second class ordinary and express return tickets issued at any Station on the Bristol and Exeter Railway, or on the South Devon, Cornwall, or West Cornwall Railways, on August 7th and following days, will be available for the return journey to and from Plymouth any day up to and including Monday, Aug. 21st. First and second class return tickets, at single fare for the double journey, available as above, may be issued from any Station on these lines to Plymouth, or from Plymouth to any South Devon, Cornwall, or West Cornwall station, on August 7th and following days to

August 21st inclusive, to the members of the *British Medical Association* producing a certificate or the Association card of membership. Unless such documents be produced, return tickets at ordinary or express fares must be issued. When tickets at single fare for the double journey are issued, the booking clerks must write "return" upon them, and place their initials below the word "return". Ordinary tickets endorsed "return" will be available by express trains without payment of the difference of fare. The South Devon, Cornwall, and West Cornwall Railways have also promised to convey any instruments, medical and surgical appliances, etc., for the Annual Museum, at *half the usual fares*, at the owner's risk.

EXCURSIONS, ETC.—The Local Committee appointed by "The Three Towns", Plymouth, Devonport, and Stonehouse, to prepare for the annual meeting of the British Medical Association in 1871, have much pleasure in acquainting the members that they have succeeded in obtaining the cordial cooperation and assistance of the civil and military authorities; so that every facility will be furnished them for inspecting this naval and military arsenal; Her Majesty's ships of war in the Hamoaze and Plymouth Sound; Her Majesty's dockyards at Devonport and Keyham; the Royal William Victualling Yard and the naval and military hospitals in Stonehouse; the Breakwater and its lighthouse; the Eddystone Lighthouse; the Plymouth Citadel, the Hoe, and the forts recently erected within a radius of five miles.

By the kind permission of His Grace the Duke of Bedford, the Right Honourables the Earl of Mount Edgcumbe, the Earl of St. Germans, and the Earl of Morley, and other gentlemen, opportunities will be offered to the members of surveying the grounds and the extensive views commanded in the parks attached to their mansions on the banks of the Tamar and Plym; whereby they will be enabled to pass in review the objects before-named, as well as the magazines at Bull Point; Antony House, the seat of W. H. Pole-Carew, Esq., whereat is preserved Holbein's portrait of Dr. Butts, Physician to Henry VIII; Ince Castle, the residence (*temp.* Charles II) of the Wit of Cornwall, Killebrew; St. German's Church, the site of Cornwall's ancient Cathedral, and Port Eliot (the ancient Priory); Trematon Castle, the residence of the Norman Earls of Cornwall; the late Brunel's master-piece, the Royal Albert Bridge at Saltash; Landulph Church; Buckland Abbey, the seat of Drake, the great circumnavigator; Maristowe; Cothele House; Pentillie Castle; Morwell Rocks; Harewood, the scene of the fair Elfreda's treachery; and other objects of interest in a trip of twenty miles by steamboat.

A steamer will be engaged to make short trips daily, and at stated hours, during the visit of the Association, thus enabling those members who may not be desirous of hearing the delivery of certain papers, to spend their time agreeably in viewing the rich scenery of the port of Plymouth.

Other excursions will be arranged, with the sanction of the Directors, etc., of the Railways—to Launceston Castle, the Ancient Cornish stronghold; to the Saxon Abbey at Tavistock; to Endsleigh Cottage; and to the wild and romantic scenery of Dartmoor.

A most interesting excursion into West Cornwall has also been planned to take place during the Association's visit.

The Royal Institution of Cornwall, under the presidency of Mr. D. J. Henwood, F.R.S., in order that opportunity may be given to the members of the British Medical Association for seeing the most noted and interesting objects in the extreme West of England under the most favourable circumstances, will make its annual excursion on Monday and Tuesday, the 14th and 15th of August. Penzance, the approach to which affords an excellent view of St. Michael's Mount, will be the place of rendezvous on the first day; and, after an inspection of this most westerly and mildest of British Winter resorts, the party will visit the Logan Rock and Land's End, concluding the day with an evening meeting at St. Just. On the morrow, the famous mine of Botallack will be explored, the fine northern coast line will be skirted, and the excursion will terminate in the picturesque neighbourhood of St. Ives, in time for the return journey to Plymouth. The line of route presents a great many remarkable objects of antiquity, especially primeval ones.

ANNUAL MUSEUM.—The "Annual Museum" of this Association will be open during the four days of the meeting, for the exhibition of:

1. The latest inventions in medical and surgical instruments and appliances of every kind. Also, for the special exhibition of ancient and modern fracture apparatus, or diagrams of such, thus setting forth the history of the treatment of fractures from the earliest records down to the present day.

2. New drugs and their preparations.

3. New articles of diet for invalids.

4. Pathological Specimens; also photographs, casts, etc., illustrating disease.

5. New works on medicine, surgery, etc.
6. Models or drawings of any object of professional interest not included in the above list.

Notice to Exhibitors.—Application should be made as soon as possible; at the same time giving a list of the objects to be exhibited, and mentioning the space required. All objects sent must have a description attached. Parcels for the Museum should be addressed—"British Medical Association, the Assembly Rooms, Royal Hotel, Plymouth; care of H. Greenway, Esq." They must be delivered on or before July 31st, and be removed within three days after the termination of the meeting. Expenses of carriage and all risk must be borne by the exhibitors. All instruments and other articles intended for the Local Museum will be conveyed at owners' risks for *half the usual fares* on the Bristol and Exeter, South Devon, and Cornwall lines of railway. A card, bearing the name and address of the exhibitor, must be enclosed in each package, ready to be fixed on the outside. All communications respecting the Museum to be addressed to "Henry Greenway, Esq., Surgeon, Plymouth", the Secretary for that department.

PAPERS.—The following papers have been promised.

C. Barham, M.D. 1. Diseases of Plymouth during the Second Quarter of last Century (1725-1750. 2. Diseases of Cornish Miners.
 Tilbury Fox, M.D. 1. Hydroa. 2. A Note on Phtheiriasis, erroneously styled Prurigo.

J. Crichton Browne, M.D. Syphilis and Insanity.

J. Althaus, M.D. Paralysis of the Bladder, and its Treatment by the constant Galvanic Current.

T. J. Austin, M.R.C.S. Medical Electrification.

Thomas Littleton, M.B. The Effects of Submarine Descent on Man, and the Limits of his Capability.

William Roberts, M.D. Intemperance as a Cause of Chronic Bright's Disease.

W. H. O. Sankey, M.D. The Relation and Diagnosis between General Paresis and Locomotor Ataxy.

D. De Berdt Hovell, F.R.C.S. 1. The different Therapeutic Indications of Rheumatism and Neuralgia: with Remarks on Rheumatism as a Sequela of Diphtheria. 2. Uterine Truss or Support for *Post Partum* Hæmorrhage.

George Southam, F.R.C.S. Excision of the Tongue.

T. H. Bartleet, M.B., F.R.C.S. Splint for Excision.

Edward Lund, F.R.C.S.—1. On Antisepticity in Surgery. 2. Apparatus for Syringing and Irrigating Wounds.

Furneaux Jordan, F.R.C.S. 1. On the Extension of Inflammation from the Epididymis to the Urethra: with Cases. 2. Self-holding Forceps for tying Arteries.

Thomas Beatty, M.D. 1. Fibro-cystic Disease of the Uterus. 2. The Radical Cure of Retroflexion of the Uterus.

Robert Barnes, M.D. Hypertrophic Elongation of the Cervix Uteri.

J. Braxton Hicks, M.D., F.R.S. 1. A Rare Form of *Post Partum* Hæmorrhage. 2. The Reduction of Inversion of the Uterus: illustrated by six Cases.

E. J. Tilt, M.D. Hysteria, and the various ways in which it has been viewed by Pathologists.

A. Meadows, M.D. The Treatment of Fibrous Tumours of the Uterus.

J. G. Swayne, M.D. Treatment of Hæmorrhage arising from Retention of the Secundines after Abortion.

Thomas Underhill, M.D. The Treatment of certain Cases of Placenta Prævia and of *Post Partum* Hæmorrhage.

J. G. Davey, M.D. Jenner and his Teachings.

Dr. Merrifield, Ph.D. The Meteorology of Plymouth for the last six years.

Cornelius Fox, M.D. The Estimation of Atmospheric Ozone by means of Aspirators and Acids.

J. W. Eastwood, M.D. Alcohol in Health and Disease.

R. Elliot, M.D. Life-Insurance Offices and Medical Fees.

William Ogle, M.D. Medical Reform personal, not parliamentary.

V. Jagielski, M.D. Koumiss: a Dietetic Remedy.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Sections in which the paper is to be read. All papers should be forwarded to one of the above named officers on or before the 1st of August.

No paper must exceed twenty minutes in reading; and all subsequent speakers must not exceed ten minutes.

All speeches at the General Meeting must not exceed ten minutes each.

T. WATKIN WILLIAMS, F.R.C.S., General Secretary.

13, Newhall Street, Birmingham, July 15th, 1871.

YORKSHIRE BRANCH.

THE annual meeting of the above Branch will be held at the Infirmary, Bradford, on Wednesday, 26th July, at 2.15 P.M.; R. H. MEADE, Esq., President, in the Chair.

The dinner will take place at the Victoria Hotel, at 5 P.M. Tickets (exclusive of wine), 7s. each.

Gentlemen having papers or cases to communicate, or who intend dining, are requested to send an early intimation to the Secretary, so that the necessary arrangements may be made.

W. PROCTER, M.D., *Honorary Secretary.*

York, July 12th, 1871.

NORTH WALES BRANCH: ANNUAL MEETING.

THE twenty-second annual meeting of this Branch was held at the Castle Hotel, Ruthin, on Tuesday, July 4th, under the presidency of J. R. JENKINS, M.D. There were also present twelve members and one visitor. Several letters were received and read from members regretting their inability to attend.

New Members.—The following gentlemen were duly elected members; viz., Lewis Jones, L.R.C.P. Edin., Menai Bridge; Francis Manisty, Esq. (Surgeon-Major H.M. Indian Army), Gresford, Denbighshire; and H. J. Lloyd, L.R.C.P. Ed., Barmouth, Merionethshire.

President's Address.—The President delivered an interesting and eloquent address, which was heartily applauded, and for which an unanimous vote of thanks was accorded.

Report of Council.—The Secretary read the following report.

Your Council have the pleasure of stating that the North Wales Branch continues steadily to increase. The value of the Association in the many advantages attaching to it is becoming more and more recognised; and the high scientific position it has attained is at once a proof that it has taken a firm hold upon the professional mind of the many. And although very prosperous, it would be well to continue using our influence in inducing medical men of respectability to join our Society; and as a step in some measure to attain this, prospectuses of the objects of the Association with forms of application for admission to membership have been again recently posted to all in the northern principality whose names can be reached through the *Medical Directory*. The North Wales Branch having grown to a larger proportion, it is now entitled to one additional representative upon the General Council of the British Medical Association.

It is much to be regretted that the question of an amendment of the Medical Act of 1858 has been again postponed. Your Council adhere to the principles of the Bill as shadowed forth by the Reform Committee of our Association. They believe it is the only one that will satisfy the wishes of the great majority of the profession, and they ardently hope that all parties will agree to urge upon Government the desirability of settling the matter in the next session.

The Royal Sanitary Commission have at length issued their report, and appended to it a very important "memorandum," which refers to the establishment of a system of sanitary laws under a minister of health. This measure will probably be introduced into Parliament next session, and no doubt will give rise to a great deal of discussion. It is certain, if it become law, to place *State Medicine* in a very prominent and conspicuous place.

With feelings of the deepest regret your Council desire to advert to the loss this Branch has sustained in the awfully sudden and melancholy deaths of Mr. T. Francis Edwards of Denbigh, who was very creditably filling the office of President for 1870 and 1871; and Dr. Owen Roberts of St. Asaph, whose name was familiar not only to every member of this Branch, but to numerous others in the British Medical Association, of which he was an old member, and of which he strove to increase the usefulness and success with earnestness and zeal, combined with sound practical knowledge and genial character.

Your Council are happy to say that the Treasurer reports very favourably upon the financial state of the Branch.

Upon the motion of Mr. EYTON JONES (Wrexham), the Report of Council was agreed to, and ordered to be entered in the Minutes of the Branch.

Vote of Thanks.—Dr. HUGHES (Denbigh) moved a vote of thanks to the officers and Council of the Branch for the past year for their kind services, which was cordially assented to.

President-elect for 1872: Place of Annual Meeting.—It was moved by Dr. WILLIAMS (Mold), and seconded by Mr. EYTON JONES, and unanimously carried—"That Richard Chambers Roberts, Esq., of Ruabon, be President-elect for 1872, and Bala the place for the annual meeting for that year."

Council of the Branch.—Dr. TURNOUR (Denbigh) moved, and it was agreed to—"That the following members constitute the Council of the Branch for next year; namely, T. Taylor Griffith, Esq., E. Williams, M.D., and T. Eyton Jones, Esq. (Wrexham); W. Jones, Esq., Ruabon; W. Williams, M.D., Mold; and J. R. Walker, Esq., Corwen."

Representatives in the General Council.—It was moved by Dr. WILLIAMS (Mold), and seconded by Mr. TURNER JONES (Denbigh), and unanimously carried—"That the following members represent the Branch in the General Council of the British Medical Association:—A. E. Turnour, M.D., Denbigh; T. Taylor Griffith, Esq., Wrexham; and E. Williams, M.D., Wrexham."

Representative in the Parliamentary Committee.—Upon the motion of Dr. HUGHES (Denbigh), seconded by Mr. LODGE (St. Asaph), Thomas Eyton Jones, Esq., Wrexham, was elected the Parliamentary Committee Representative of the Branch.

Intermediate Meeting for 1872.—It was moved by Dr. TURNOUR, seconded by Mr. R. DAVIES (Llanfairtalhairn), and unanimously carried—"That Wrexham be the place for holding the next intermediate meeting."

Secretary and Treasurer.—Mr. D. Kent Jones (Beaumaris) was re-elected Secretary; and Mr. G. Turner Jones (Denbigh) was re-elected Treasurer for next year.

Subject for Discussion at the Annual Meeting.—Mr. EYTON JONES proposed, and it was duly seconded and carried—"That a medical subject, selected by the Council at a previous Council meeting, be introduced by the President in his annual address, with a view to its discussion by the members."

Papers, Cases, etc.—1. Avulsion of the Arm: Recovery. By J. R. Jenkins, M.D., President. The young man was brought into the room and the parts shown to the meeting.—2. Excision of the Elbow-Joint. By T. Eyton Jones, Esq., Wrexham.—3. Entire loss of Arm. By A. E. Turnour, M.D., Wrexham.—4. General Paralysis where there was a Growth of Bone between the Membranes of the Brain, without any attachment to the Skull. By G. Turner Jones, Esq., Denbigh.—5. Aneurism of the Posterior Tibia. The preparation was exhibited. By E. Shelton Jones, Esq., Denbigh.—6. Gun-shot Wound. By W. Williams, M.D., Mold.—7. Extrauterine Foetation. By T. Eyton Jones, Esq., Wrexham.—8. Fracture of the Arm, in which no union of bone occurred. By J. R. Jenkins, M.D.—9. Dislocation of the Wrist in a boy aged 12. By T. Eyton Jones, Esq.—10. Compound Comminuted Fracture of Thigh. By J. R. Walker, Esq., Corwen.

Dinner.—All the members, after a pleasant stroll through the principal places of interest in the romantic old town of Ruthin, dined together, and spent a very agreeable evening.

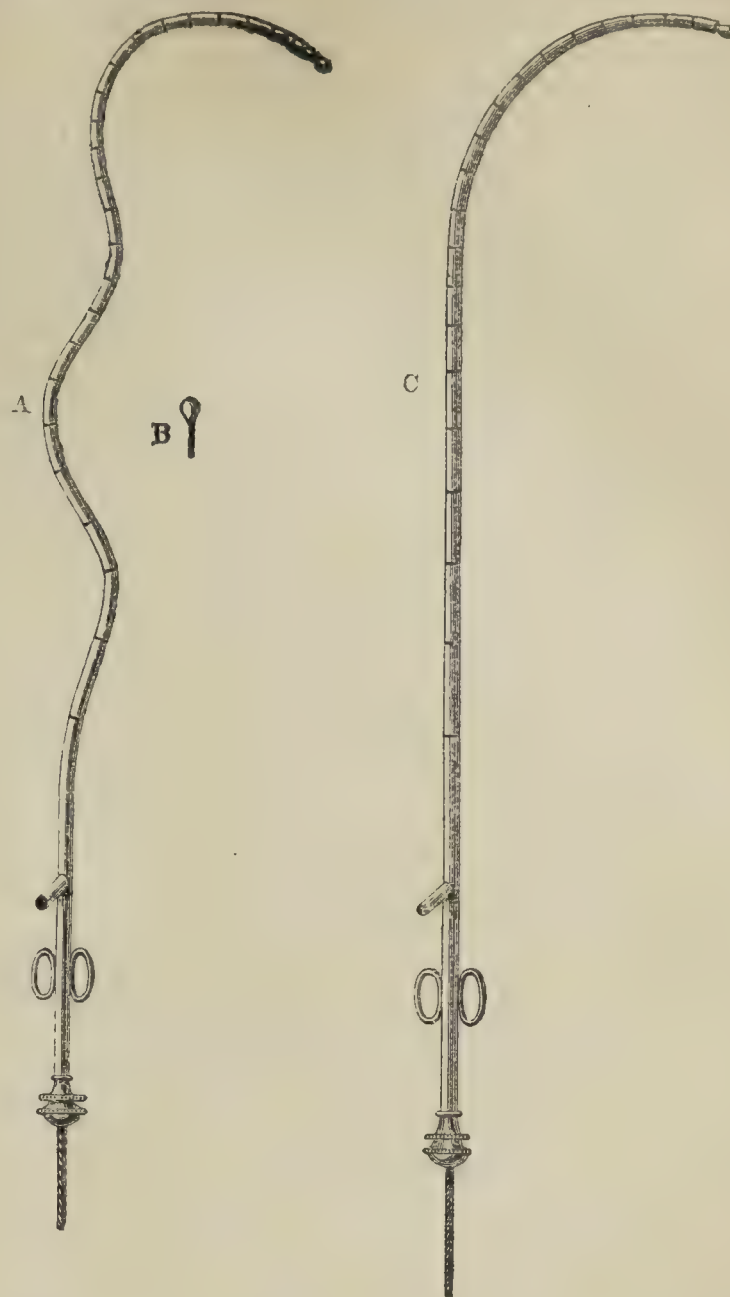
CORRESPONDENCE.

SAYRE'S VERTEBRATED PROBE AND CATHETER.

SIR,—Many requests have been made from different surgeons and instrument-makers to examine my Vertebreated Probe and Catheter for detecting dead bone in tortuous sinuses and for drawing off urine in cases of enlarged prostate, and also for use as a bent probe. I therefore send you a copy of the same, with a brief description for publication, if you think desirable.

It consists simply of a series of hollow silver disks, made a trifle smaller at one end than at the other, so as to fit into one another, like a pile of cups or tumblers. These are held together by a linked chain running through the series, and jointed nearly opposite each disk-insertion. This chain terminates in a square rod, which runs through the last disk, and is much larger than any of the others; and on the end of the small rod is cut a thread on which runs a small button-screw, which can make the chain tight or loose at pleasure. Of course, when the screw is turned back, the chain being lengthened, the disks fall away from each other, and the probe is as limber as a chain, capable of following any sinuosity into which it may be pushed. And by a few turns of the screw, the chain being shortened, the disks are drawn firmly together, so as to make a *solid* probe, which will give the concussion against carious or necrosed bone, the same as any other probe. A small slot is made in the cannula containing the screw, for the purpose of putting a small nut which regulates the tension of the chain, and thus prevents any possibility of applying sufficient force to break it. There are two fenestræ in the distal disk, for the purpose of drawing an oakum seton through deep sinuses and carious joints: this makes it also very useful as a catheter in cases of tortuous urethras from enlarged prostate. It is impossible to make a false passage with it;

and, as it is simply a series of ball and-socket, or universal joints, it will follow any passage, however devious. By simply unscrewing the



steel bulb at the end, and inserting a bulb of porcelain, according to the suggestion of Nélaton, you have the most perfect bullet-probe that can be desired.

I have used this probe for more than seven months, and found it of the greatest advantage in the three several cases for which I have recommended it. I presented it to the New York Medical Society in July last; and an account of it will be published in their Annual Reports this year. But until now it has not been published to the profession, except in my public lectures at Bellevue Hospital, where I have used it frequently with great advantage. Mr. Weiss of the Strand is now making a number of them, by the order of Sir Alexander Armstrong, Director of the Medical Department of the Royal Navy; and I am happy to say that he has copied the model very admirably. Of course, like all other probes, this one requires to be made of different lengths and sizes.

To clean it, it is necessary to unscrew it at the end, and to remove the small screw at the slot in the cannula, when it will immediately fall to pieces. After washing, it is easily put together, just the same as a string of beads, only remembering to put the small end of the disk on the wire first; and, as each disk increases in length until the end, of course no error can occur in making them fit properly. The cut, together with this description, I think will make it plain. I am, etc.,

LEWIS A. SAYRE, of New York.

Bath Hotel, Arlington Street, W., July 14th, 1871.

OUR LUNACY SYSTEMS.

SIR,—Carlyle has written, "But verily in these times, with their new stern Evangel, that Speciosities which are not Realities can no longer be, all Aristocracies, Priesthoods, Persons in Authority, are

called upon to consider"; and, in verity, we so-called alienists are having our turn now. If there are any "speciosities" in our system, the medical press seem determined that they "can no longer be"; and I see that in the BRITISH MEDICAL JOURNAL for July 1st, in a leading article under the above heading, you publish an elaborate condemnation of the present system. There is no doubt much that is true in your article; and as one of those therein put on their trial, I trust you will allow me to make a few observations.

Respecting the impropriety of the medical officers of asylums wasting their time and energies in the getting up of grand entertainments, I have as strong an opinion as yourself. In the asylum to which I am Superintendent, we have a dance once a week during the winter months; but it is managed entirely by the chief attendants; and the medical officers scarcely ever enter the room. So with all the other amusements got up for the benefit of the patients.

The part, however, of your article which will without doubt chiefly wound the susceptibilities of myself and my *confrères*, is that wherein you follow the fashion set of late by one or two other papers and sneer at our medical knowledge. You infer that a Medical Superintendent is, as a rule, behind an ordinary medical practitioner in the general knowledge of his profession, and that this is necessarily so, as he comes directly from the schools to engage in a specialty giving but few opportunities of practising general medicine. Now, sir, facts are stubborn things, and I wish to give you a few *apropos* of this.

I do not know how it may be across the Tweed, where the asylums, as a rule, are small; but here in England, where the asylum population is much larger, we see plenty of general medicine. In the asylum to which I belong, there is a population, counting sane and insane, of nearly nine hundred people of all ages. This is a good-sized village, and probably as large as the general run of country doctors' constituents. Looking through my case-books, I find that I have had to treat the following cases since this time last year; viz., strangulated hernia; fractures of tibia, fibula, ribs, and humerus; necrosis of tibia, femur, tarsal, and metacarpal bones; scirrhus of mamma; scirrhus of uterus; carbuncle; fevers; pneumonia; bronchitis; phthisis; morbus cordis; hæmatemesis; hæmoptysis; apoplexy; psoas abscess; lumbar abscess; nasal polypi; prolapsus uteri; prolapsus recti; various skin-diseases; uterine complaints; indigestion; diarrhoea; angina pectoris; iritis; cataract; etc. And yet I am told in your leading article that I have no opportunity of studying the ordinary branches of my profession.

Again, it is said that Medical Superintendents are so engrossed with their administrative duties that they have no time to devote to the advancement of the literature and practice of their profession. Surely people who make such statements cannot be aware that for more than twenty years we have maintained a high class quarterly devoted to the specialty, and which has been edited with acknowledged ability by asylum superintendents, and to which articles have been contributed on all sorts of subjects by the majority of English superintendents. Why, at the present moment, out of the little more than thirty English superintendents, fifteen are engaged in literary pursuits, and constantly contribute to the current medical literature of the day. And this list does not include such distinguished ex-superintendents as Bucknill, F.R.S., Lockhart Robertson, Maudsley, Boyd, Sankey, etc., whose fame is European.

No drug of any note is introduced to the medical world that is not eagerly seized upon, and extensively tried by asylum medical officers. We had probably used pounds of chloral before even its name was familiar to the majority of English practitioners. Bromide of potassium was first used extensively for epilepsy in asylums. The Turkish bath, the water treatment, the use in insanity of digitalis, subcutaneous injection of morphia, chloroform, Calabar bean, hydrocyanic acid, ergot, etc., have all been introduced to the notice of the profession by asylum superintendents; and when it is remembered how small our numbers are, surely, with the above fact before us, we cannot be justly accused of such utter disregard for the advancement of professional knowledge.

But, probably, the part of your article most open to objection is that in which you would appear to advocate the appointment of lay-superintendents, and deride the so-called moral treatment. Doubtless, under the shelter of moral treatment, much abuse has crept in; nevertheless it undoubtedly is the corner-stone of the non-restraint system, without which the whole edifice, so carefully built up by Pinel and Conolly, would totter to the ground; and, although probably its benefits have been much over-rated by enthusiasts, no man of any experience can deny its importance. It appears to me impossible that the thousand and one arrangements incidental to the management of an asylum can be made by anyone but a medical man. To give you only one or two instances. In cases of recent insanity, nothing is so likely to cause a relapse as the too early visit of relatives. And, as we all know, a relapse in a case of acute insanity, frequently means chronic insanity or

dementia as sequel. How can a lay superintendent decide when it is safe to admit such visits. I have frequently known an injudicious letter from a friend do great harm. Most assuredly, carefully regulated and varied employments are very essential to the well-being of lunatics, and frequently promote a return to reason. But, to be used to any advantage, this requires an intimate knowledge of the cases such as only the doctor can have. Such examples could be multiplied *ad infinitum*, and yet you ask, "Is there anything more complicated in the management of a lunatic asylum than of a workhouse or prison?"

I am, etc.,

S. W. D. W.

OBITUARY.

THOMAS HAWKES TANNER, M.D., M.R.C.P.

WITH deep regret we record the death of one of the most accomplished members of the profession. Thomas Hawkes Tanner, son of Thomas Tanner, Esq., for many years Secretary to the Army Medical Board, was born in London, on July 9th, 1824. He received his early education at Messrs. Wood and Thorowgood's school at Totteridge, and afterwards at the Charterhouse, where he met with a severe accident, which rendered his health delicate for many years. In 1843, he became a medical student at King's College, and served in its hospital as dresser to Mr. Simon and Sir William Fergusson, as well as clinical clerk to Drs. Guy, Arthur Farre, and Todd. In 1847, he passed the College of Surgeons, and in the same year was appointed House-Physician to King's College Hospital, became an Associate of King's College, and took the degree of M.D. at St. Andrew's. He commenced practice in Charlotte Street, Fitzroy Square, in the latter part of 1847, and was soon afterwards elected Physician to the Farringdon Dispensary. In 1850, he became a Member of the Royal College of Physicians, and in the course of the following year was appointed Physician to the Hospital for Women, Soho Square, and lectured on Forensic Medicine at the Westminster Hospital Medical School. In 1854, he published a *Manual of the Practice of Medicine*, which has run rapidly through several large editions. So popular has this work been, alike with medical men and with students, that in 1869 the sixth edition was published in two large volumes. Among other proofs of its success, may be mentioned the fact that this, together with five other works by Dr. Tanner, have had an extensive circulation in America, but without any remuneration either to the author or to the publisher. His chief works have been: 1, *Practice of Medicine*; 2, *On the Signs and Diseases of Pregnancy*; 3, *Manual of Clinical Medicine*; 4, *Practical Treatise on the Diseases of Childhood*; 5, *Memoiranda on Poisons*; 6, *Index of Diseases*; 7, *A Clinical Report on Cancer of the Female Sexual Organs*; and many articles and reviews contributed to the various medical journals. Throughout the wide range of their subjects, we notice an eminently practical tendency, and the style of a writer who holds firmly the conclusions at which he has arrived by clinical observation made during an extensive practice.

In 1858, Dr. Tanner, in concert with Dr. Tyler Smith, Dr. Rigby, and Dr. Graily Hewitt, took an active part in the formation of the Obstetrical Society of London, and acted as its Secretary from the time of its foundation until the close of 1863. He contributed several valuable papers to the volumes of *Transactions*, and was elected one of the Vice-Presidents of the Society on his retirement from the post of Honorary Secretary.

In 1860, Dr. Tanner was elected Assistant-Physician for the Diseases of Women and Children to King's College Hospital, and thereupon retired from office as Physician to the Hospital for Women, and resigned also his place as Lecturer on Forensic Medicine in the Westminster Hospital Medical School. While holding his appointment in King's College Hospital, which he resigned in 1863, Dr. Tanner lectured on Obstetrics to the class of midwifery pupils supported by Miss Nightingale. Since the date of his resignation, his private practice has been very extensive. In 1862, he removed from Charlotte Street to Henrietta Street, Cavendish Square. Previously to this, his career had not been so prosperous as many might imagine. He had fought an uphill fight, but always confident in his certainty of success. He had an excellent memory, a mind well cultured and richly stored; he had great literary power, as shown by his works, and was most orderly and accurate in every minutia. Few have stronger feelings than he had about the proper remuneration of medical men, but none have deeper sympathies with the poor; and, out of his six thousand registered gratuitous patients, numbers will feel that they have lost their best earthly friend. Dr. Tanner was a man of great taste, as all who may have seen his splendid library must have recognised.

In 1854, he had an attack of scarlet fever, which left evidence of

renal congestion. The necessary work and anxiety of a physician's large London practice never enabled him to lay by and eradicate the disease, and thus by degrees it crept on and began to tell on his general health. Scarcely had he completed and published his sixth edition of the *Practice of Medicine* when the disease (Bright's), which had been long smouldering, appeared with unmistakable clearness; and by degrees the state of his health became so serious that last April he determined to relinquish practice for a time and go to Brighton for complete rest and change. Uræmic symptoms came on shortly afterwards, and four weeks of great suffering put an end to this valuable life. He died at Brighton, on July 7th, two days before the completion of his forty-seventh year. He was married in 1859, and leaves a widow and four children. According to his express wish, he was buried (on Thursday, the 13th) at Highgate Cemetery, in the least ostentatious way possible. Many friends, who wished to pay their last tribute of respect, joined the relations at the cemetery, and followed him to his resting-place.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

THE following gentlemen have been nominated Examiners for medical degrees during the ensuing academical year. *First M.B. Examination*: Coutts Trotter, M.A., Fellow and Natural Sciences Lecturer in Trinity College; W. P. Hiern, M.A., late Fellow of St. John's College. *Second M.B. Examination*: The Regius Professor of Physic (*ex officio*); John Wood, F.R.S., F.R.C.S., Professor of Surgery, King's College, London; J. B. Bradbury, M.D., Medical Lecturer in Downing College and Physician to Addenbrooke's Hospital. *Third M.B. Examination*: The Regius Professor of Physic (*ex officio*); Herbert Davies, M.D., late Fellow of Queen's College, Physician to the London Hospital; J. W. Ogle, M.A., M.D. Oxon, Physician to St. George's Hospital.

Dr. Barclay, Physician to St. George's Hospital, has been nominated Assessor to the Regius Professor of Physic.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology, at a meeting of the Court of Examiners, on July 18th; and, when eligible, will be admitted to the pass examination.

Messrs. G. Warner Bell, W. C. K. Foster, S. William Douglas, George R. Steil, and W. E. N. Erith (Students of University College Hospital); James Ritchie, Francis Imlach, H. Macdonald Church, and Edwin Hinchcliff (Edinburgh School); J. Christopher Irving, and J. Randell Burton (Guy's Hospital); Arthur J. Vouse, and Albert E. Kirby (Leeds School); Frederick W. Corry, and Francis Johnson (London Hospital); James H. Stowers (St. Bartholomew's Hospital); R. Campbell Fair (Canada); Matthew J. Fitzpatrick (Dublin); John D. Jennings (Birmingham School); and John B. Stuart (Liverpool School).

The following gentlemen passed on July 19th.

Messrs. Peter Bradford, Henry C. Lang, Harold Rugg, Oliver Barber, J. G. R. Symons, Richard St. M. Dawes, and Maurice Eskell (Students of University College); H. J. F. Groves, William Y. Davenport, Richard D. Hughes, Joseph H. Townend, Daniel Nunez, and Evan M. Boddy (Guy's Hospital); John M. Hart, W. C. G. Collins, G. T. B. Moffatt, R. Leymans Bridges, B.A. Oxon, and Lonsdale A. Holden (St. Bartholomew's Hospital); Charles Hartley (Charing Cross Hospital); and Charles F. Grindrod (St. Mary's Hospital).

The following gentlemen passed on July 20th.

Messrs. J. W. Greenwood, Daniel A. Sinclair, W. S. Mavor, E. Welchman, C. G. Johnson, G. E. Wherry (St. Thomas's Hospital); Herbert B. Blackburn, George E. Keer, J. Sutherland Wilkins, William J. Gard, and W. Jackson Heddy (Guy's Hospital); H. C. M. Gibson, Theophilus G. Vawdrey, Edwin M. Redman (University College); Matthew A. Messiter, Charles Lakin, and Hyacinth D'A. Ellis (Birmingham); Rees R. Llewellyn, and W. A. Grogano (London Hospital); Arthur Kirkpatrick, and Robert F. Samuels (Liverpool School); T. W. F. Gray, and Montague Ford (Charing Cross Hospital); Francis E. Atkinson (St. Mary's Hospital); William Coulter (Belfast School); and Campbell W. Pridmore (Westminster Hospital).

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, July 13th, 1871.

Briggs, Henry Myddleton, Birmingham
Lyons, Isidor Isaac, St. John's Wood
Richards, George Pickering, Newman Street, Oxford Street
Rix, Benjamin, East Meon, Hants
Thoruton, William Pugin, Canterbury
Williams, Edward, Llandysil, South Wales

The following gentleman also on the same day passed his first professional examination.

Garrard, William Arthur, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Gould, Eli, Reddal Hill, near Dudley
Holmes, Nathaniel W., Chorlton-on-Medlock
Pollard, William, Wakefield

MEDICAL VACANCIES.

THE following vacancies are announced:—

ABERFOYLE, Perthshire—Parochial Medical Officer.
BIRMINGHAM and MIDLAND FREE HOSPITAL for SICK CHILDREN—Resident Medical Officer.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon.
BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.
BURY (Lancashire) DISPENSARY—Resident Medical Officer.
CHARING CROSS HOSPITAL—Physician.
DERBYSHIRE GENERAL INFIRMARY, Derby—Resident Assistant House-Surgeon; Two Dental Surgeons; Non-Resident Dispenser.
FARINGDON UNION, Berks—Medical Officer and Public Vaccinator for the Buckland District.
GAINSBOROUGH, Lincolnshire—Medical Officer of Health.
GENERAL HOSPITAL and DISPENSARY for SICK CHILDREN, Bridge Street, Manchester—Resident Medical Officer.
GUISBOROUGH UNION, Yorkshire—Medical Officer for the Danby District.
HEREFORD GENERAL INFIRMARY—House-Surgeon.
HUDDERSFIELD and UPPER AGBRIGG INFIRMARY—Physician; House-Surgeon.
INFIRMARY for EPILEPSY and PARALYSIS, Charles Street, Portman Square—Physician.
KILLALA, co. Mayo—Medical Attendant to the Royal Irish Constabulary.
KING'S COLLEGE HOSPITAL—Assistant-Physician; Assistant Surgeon.
LOUDOUN, Ayrshire—Medical Officer and Public Vaccinator.
LOYAL EARL OF LONSDALE LODGE OF ODD FELLOWS, Bampton, Cumberland—Medical Attendant.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Assistant-Physician.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Lecturer on Physiology, including Practical Physiology.
NEWBURY UNION, Berks—Medical Officer for the Thatcham District.
NEWCASTLE-ON-TYNE LYING-IN HOSPITAL—Visiting Surgeon for the Out-department.
PLYMOUTH INCORPORATION OF THE POOR—Medical Officer for the Northern District.
ST. PANCRAS—Dispenser for the Dispensary for Out-door Poor, King's Road.
SANDAY, Orkney, Island of—Medical Officer.
SEAMEN'S HOSPITAL (late *Dreadnought*)—House-Physician; House-Surgeon.
SKIRLAUGH UNION, Yorkshire—Medical Officer for the Skirlaugh District and the Workhouse.
WATERFORD UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilmedden Dispensary District.
WEST LONDON HOSPITAL—Junior Physician; House-Surgeon.
WESTMINSTER HOSPITAL—Surgeon; Assistant-Surgeon.
WIRRAL HOSPITAL and DISPENSARY FOR SICK CHILDREN, Birkhead—Honorary Medical Officer.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BUCKLEY, Dr., appointed Medical Officer for the Clane and Timahoe North Dispensary District of the Naas Union, co. Kildare.
DREW, John, M.B., M.C., appointed Medical Officer for the parish of Logie, Clackmannanshire.
*GARNHAM, J. Devereux, Esq., appointed Medical Officer to Nos. 2 and 11 Districts of the Lincoln Union.
LOUGH, John Joseph, M.B., appointed Medical Officer for the Termon Dispensary District of the Balieborough Union, co. Cavan.
McCRAITH, Edward, L.R.C.P. Edin., appointed Medical Officer for the Mitcheltown Dispensary District of the Mitcheltown Union, co. Cork.
MACFARLANE, Wm. D., L.R.C.P. Edin., appointed Medical Officer for the Carmun-nock and Busby District of the parish of Mearns, Lanarkshire.
MADDEVER, John C., M.D., appointed Medical Officer for the parish of Rothesay.
PALFREY, James, M.D., appointed Physician-Accoucheur to the Out Patients at the General Lying-in Hospital, *vice* *Alfred Meadows, M.D., resigned.
*SHEEN, Alfred, M.D., appointed Surgeon in Ordinary to the Cardiff Infirmary, *vice* J. R. Reece, Esq., resigned.
SKINNER, S., M.D., appointed one of the Medical Officers to the Clevedon, Walton, and Tichenham Dispensary, *vice* *Theodore Davis, M.D., resigned.
STITT, Adam, L.F.P.S. Glasg., appointed Medical Officer for the parish of Lochmaben, Dumfriesshire.
STONEV, Hugh B., M.B., appointed Medical Officer for the Durrow Dispensary District of the Abbeyleix Union, Queen's County.
SWAN, R. Jocelyn, M.R.C.S.E., appointed Medical Officer and Public Vaccinator for the No. 2 District of the Northleach Union, Gloucestershire.
SYMES, Edmond West, M.B. Edin., elected Senior Resident Medical Officer to the Leeds Public Dispensary, *vice* *J. M. Fothergill, M.D., resigned.
*WORKMAN, Charles J., M.D., appointed Ophthalmic Surgeon to the Teignmouth, Dawlish, and Newton Infirmary.

LINCOLN MEDICAL SOCIETY.—This society held its ninth annual summer meeting at Drinsey Nook, near Lincoln, on July 11th. The President, Mr. F. D. Walsh, opened the meeting with an address on subjects of general interest to the profession, and concluded with a short paper on paralysis of the insane. New members were made; and Mr. D. J. Garnham of Lincoln was unanimously elected President for the next season. The meeting was brought to a close with a vote of thanks to the honorary secretary, Mr. Male, of the Lincoln County Hospital. The members afterwards dined *al fresco*, and a pleasant afternoon was spent.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.

FRIDAYWestminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. STEELE (Bristol) will find an answer to his communication in Dr. Sayre's letter this week.

DR. GOODHART (London).—The interesting case forwarded for our hospital reports, shall be inserted as early as possible. In consequence of the large amount of Association matter on hand at this time, its appearance may be delayed for a short time.

GANGLION.—The note arrived, and will appear probably next week.

THE gentleman who took a hat by mistake at the meeting of the Metropolitan Counties Branch at Windsor on Friday last is requested to return it to Mr. Coles, hatter, Strand, where his own has been since Saturday.

A MEMBER OF THE BRITISH MEDICAL ASSOCIATION, at the ensuing meeting to be held at Plymouth, could pay a visit to the Fowey Cottage Hospital. Dr. Arthur Davis will afford every information on the subject.

MR. T. K. GRAY (Carlisle).—In type, but delayed by pressure of matter.

MARINE PHOSPHORESCENCE.

DR. DALTON of Bournemouth writes to us that, while on board the ship *Carlisle Castle*, on May 18th, 1871, in latitude 0.50 N., longitude 29.15 W., the sea was observed after sunset to become highly luminous. The appearance extended to the horizon in every direction, every little wave giving off the phosphoric lustre in a beautiful manner. On May 19th, during the day, the sea was again dark, and the sea water was found, by the aid of a microscope, to contain innumerable animalcules, as reported by the captain. At darkness, the same brilliant sight was again visible, the sea rolling gently with a fiery surface; and the horizon appeared as at twilight. At 8 P.M., the ship suddenly passed out of this luminous sea into a dark sea, the line of demarcation running east and west, so far as could be seen. The sky was clear, and the weather fine. On Saturday, May 20th, the water had assumed its usual blue colour. From January 1823, to January 1829, Dr. Dalton says he passed at sea as surgeon to a ship, with the exception of an interval of six months between his two voyages to the Pacific Ocean. Since his retirement from practising at Cheltenham, he has visited Australia and circumnavigated the globe. In all his experience at sea, he never before saw the sea so generally luminous; and this was the feeling of all on board with whom he conversed on this subject.

DR. CRICHTON BROWNE (Wakefield), Dr. Taylor (Penrith), and Mr. Roberts (London), shall have their wishes complied with if possible.

MR. WORTHINGTON (Worthing).—With pleasure, so soon as space allows.

WE have to thank many correspondents for their kind communications with reference to the subjects raised by Mr. Gamgee's correspondence. We suggest that the further consideration of the matter will best be had at the Annual Meeting, when the report of the Council on the general subject will be in the hands of the members, and all opinions can be expressed after a deliberate review of the facts.

A MEMBER (Leicester).—The diplomas mentioned are sufficient.

COMPETITION IN THE POOR-LAW MEDICAL SERVICE.

SIR,—In your JOURNAL of April 15th, you kindly inserted a letter of mine regarding a difference existing between the Board of Guardians and myself. In reply to their advertisements, it is to be regretted an applicant has been found duly qualified, with very good testimonials, late Assistant Medical Officer at a County Asylum, and Resident Medical Officer of an Infirmary, who is willing to undertake the duties at the miserable salary mentioned in my letter. I send these particulars for your perusal, and to make any comment upon them that you may feel disposed. The niggardly manner in which Boards of Guardians treat their medical officers is little to be wondered at. I am, etc., MAURICE G. EVANS.

Narberth, June 30th, 1871.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

THE ANNUAL MUSEUM AND LIMB-SUSPENDERS.

SIR,—Allow me to draw attention to my letter in a contemporary of last Saturday, in reference to Mr. Gamgee's communication on a limb-suspender. I wrote that gentleman in April last, asking him to assist in the special exhibition at our Museum; and he has not troubled himself to reply. I also brought before his notice a photograph of my limb-suspender, and mentioned its advantages. I wonder whether he and the Birmingham builder would have brought out a suspender at this moment but for my communication? Mr. Gamgee speaks in a very disparaging tone of the suspenders made by the London makers.

Plymouth, July 17th, 1871.

I am, etc.,

H. GREENWAY.

MIDWIFERY EXAMINATIONS.—From our advertising columns, it will be seen that the next examination for the "L.M." of the Royal College of Surgeons will take place on Monday, the 31st instant. In all probability, this will be the last occasion of granting that license, owing to the conjoint examination of the two colleges.

J. H.—Mr. Quain will move, at the next meeting of the Council, that a Committee be appointed to investigate the expenses of the College in all its departments, and report thereon, with a view to the diminution of expense where practicable.

BIBLIOPOL.—The Libraries of the Royal Medical and Chirurgical Society, and of the College of Surgeons will be closed at the time mentioned; at the latter institution during the month of September.

DR. CORNELIUS FOX (Scarborough).—In publishing letters concerning vaccination we are influenced not by the partial considerations which Dr. Fox suggests, but by the limits of space and the original value of the communication. We have had in type for several weeks an extremely able communication by Dr. A. B. Steele, of Liverpool, on the other side of the question to that assumed by Dr. Fox, but have been compelled by pressure on space to postpone it week after week. The publication of the letters of Mr. Startin and Dr. Snow Beck has shown that we are not open to the charge which Dr. Fox improperly insinuates. We will, if possible, publish also Dr. Fox's letter.

THE ADMINISTRATION OF CHLOROFORM.

DR. THOMAS CATTELL writes to us that he was the first to promulgate the principle in the administration of anaesthetics, which was applied by Mr. Clover in devising his improved chloroform apparatus in 1862. He quotes a letter which he published in a contemporary in 1860, in which he expressed the opinion "that no anaesthetic agent should be allowed ingress to the lungs of a higher specific gravity than the air we breathe." He said further in the letter, that, to carry the principle into operation, an arrangement was required "which will permit the specific gravity of the vapour to be lowered to the standard in question, and uniformly maintained during the process of inhalation, which will allow of each vapour being inhaled directly intermixed with a given proportion of free oxygen or in connection with another compartment containing it."

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, July 15th; The New York Medical Record, July 6th; The Boston Medical and Surgical Journal, July 6th; The Madras Mail, May 8th; The Shield, July 15th; The Philadelphia Medical Times, June 28th; The Philadelphia Medical Independent, July 1st; The Birmingham Morning News, July 17th; The Daily News, July 12th; The Surrey Comet, July 15th; The Western Daily Mercury, July 13th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. T. L. Brunton, London; The Rev. Dr. Haughton, Dublin; Mr. T. Watkin Williams, Birmingham; Mr. W. H. Spencer, Preston; Dr. G. E. Day, Torquay; Dr. Crawford, Stafford; Dr. J. Wilkie Burman, Wakefield; Dr. J. B. Bradbury, Cambridge; Dr. Heaton, Leeds; Dr. Adam Roberts, Coldstream; Mr. T. E. Clark, Clifton; Dr. A. Mackintosh, Callington; Dr. G. H. Kidd, Dublin; Our Edinburgh Correspondent; Mr. C. H. May, London; Dr. W. Whitelaw, Kirkintilloch; Mr. H. Duncalfe, West Bromwich; A Member; Dr. Sayre, New York; Dr. Broadbent, London; Mr. T. Charters White, London; Dr. Forester, Barnstaple; Dr. T. B. Forster, Plymouth; Dr. T. R. Glynn, Liverpool; Dr. Robert Adams, Dublin; Mr. Durham, London; Mr. C. F. Maunders, London; Mr. Joseph Lister, Edinburgh; Mr. W. F. M. Jackson, Smethwick; Dr. Woodward, Worcester; Dr. T. D. Nicholson, Bristol; Dr. G. Johnston, Dublin; Mr. Austin Meldon, Dublin; Mr. N. Crisp, Reading; Mr. H. Greenway, Plymouth; Mr. B. Alfred Rugg, Bournemouth; Dr. Kemp, Wellington, New Zealand; Dr. T. M'Clure, Bath; Mr. Worthington, Wellow Worthing; Mr. A. P. Evans, West Bromwich; Dr. Charles Ford, Dumfries; Dr. Eade, Norwich; M.R.C.S. Eng.; Dr. M. G. Evans, Narberth; Mr. Walter Yates, St. Peter's, Jersey; Mr. R. P. Curran, Dublin; Mr. Fowler, Hereford; Mr. Benson Baker, London; The Secretary of the Epsom College; M.D. Edin.; Dr. T. Clifford Allbutt, Leeds; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. J. Batty Tuke, Cupar, Fife; Dr. G. Goddard Rogers, London; Mr. H. W. Turner, New York; Mr. A. B. Steele, Liverpool; Our Dublin Correspondent; Dr. J. Crichton Browne, Wakefield; Our Glasgow Correspondent; Dr. F. J. Brown, Rochester; Mr. Callender, London; Sir H. Thompson, London; Dr. Ricord, Paris; Dr. Demarquay, Paris; Mr. Husband, York; Mr. R. W. Parker, London; Mr. Jessop, Leeds; Mr. Worth, West Ayrton, Devonport; Surgeon-Major Atchison, London; Dr. Cheadle, London; Dr. Taylor, Penrith; Mr. Steele, Bristol; Dr. Wade, Birmingham; Dr. S. Skinner, Nailsea; Mr. Grant, London; Dr. Crace Calvert, Manchester; etc.

CLINICAL LECTURES

ON

MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,

Medical Director, West Riding Asylum; Lecturer on Mental Diseases to the Leeds School of Medicine; etc.

II.—HYSTERICAL MANIA.

GENTLEMEN,—Your reading and observation must already have taught you something of the intimate correlations which subsist between the brain and the reproductive organs; and your experience in the wards of our asylum will frequently illustrate these correlations, and impress them upon you. Your study of mental phenomena in health and disease will speedily convince you that they are influenced in no slight degree by the sexual functions, and that they exercise a reciprocal control. Jenner and Hunter showed that the ovaria and testes in birds enlarge during the breeding season, when their highest instinctive efforts are achieved, and waste again at the end of that season, when they sink down to a lower level of life. The period of the rut in animals is accompanied by mental activity, which borders upon morbid excitement, while the gravid state of the uterus in females of our own species may lead not merely to change of temper, morbid appetites, and capricious eccentricity, but to chorea, somnambulism, amaurosis, convulsions, or mental derangement. On the other hand, a condition of mental agitation may derange the menstrual discharge, and ideas may modify the nutrition of the sexual apparatus. A very striking illustration of the power of a persistent delusion to induce changes in the vascularity of the uterus and ovaries was afforded lately by I. N., who is still an inmate of Ward 22. This woman, about whose exact age there seems to be some doubt, but who is certainly over fifty, was received here from Leeds on June 4th, 1870. She is the mother of five children, the youngest of whom is fifteen years old, and was stated by her relatives to have passed through the change of life some four years ago. When admitted here she announced that, notwithstanding her age and other seeming improbabilities, she was two months advanced in pregnancy; and arguments and assurances, after a careful examination, failed to shake her belief in this fact. She very cogently remarked that she knew what it was to be in the family-way better than the doctors; and for seven months, in spite of the absence of every recognised sign of her alleged condition, held firmly to her singular belief. At the end of that time—precisely nine months from the date of conception which she had fixed—she intimated that labour-pains had commenced. She went to bed, and insisted on observing all the formalities of the lying-in room. She had a dose of castor-oil and some gin; she had a sheet fastened to the top of her bed, and by that she held, at stated intervals, gradually diminishing in length, when she cried out as if in the pains of labour, manifested all the appearances of suffering, and broke out in profuse perspiration. Nothing could dislodge the idea that she was about to be delivered of a fine child. This went on for four days, when the abdomen became tympanitic, when she looked as if really exhausted by a protracted labour, and when—and this is the remarkable fact—menstruation recommenced after an interval of four years. The vivid belief had actually modified the circulation in the pelvic viscera, and caused them to resume a function which had been abolished in the order of nature.

Now, it is in the close and subtle relation between the brain and the pelvic viscera, which is so curiously exemplified in the case just described, that the source of hysterical mania, which we are to-day to consider, must be sought. The one constant element in all cases of this disorder is a disturbance of the balance of action and reaction which subsists between the nervous centres and the reproductive organs. In every instance of it the brain and the uterus have their functions conjointly deranged; for, whatever may be true of simple hysteria, as encountered in general practice, it would not hold good of hysterical mania, as seen in asylums, that it may accomplish its whole course in the cerebrum without involvement of the generative system. The morbid process may originate in the brain or in the uterus; but in either case it spreads from the one to the other, and upsets that harmony and just proportion of function in which health consists. The mental affection is the more prominent feature in the complaint; but the uterine factor is not wanting, and it is the latter that confers upon it its distinctive characters. All forms of ordinary hysteria have some mental commotion or enfeeblement associated with them; and, indeed, so constantly is this the case that hysteria might not improperly be regarded as a men-

tal disease. The incontinence of the emotions, the moral obliquity, the towering egotism, the positive delusions, which characterise it, are common to it and to some recognised forms of insanity, and a slight increase in their intensity and persistency would amount to recognised mental derangement. But the singular fact is, that this slight increase very rarely takes place. Hysterical mania does not, as a rule, occur in girls who have been most acutely hysterical. It much more frequently attacks those who have manifested only hysterical tendencies. True, it does occasionally happen that, at the close of an hysterical paroxysm, mania is developed. Much more commonly, however, the mental disorder which we are now discussing presents itself in those who have only exhibited very mild hysterical phenomena.

It is clear, therefore, that hysterical mania is not a mere exaggeration of the hysterical state. What additional element, then, is involved in its constitution? To this question I have little hesitation in answering that the insane temperament is that which, when combined with the hysterical temperament, determines the development of hysterical mania on the occurrence of an appropriate exciting cause. My observations have convinced me that a distinction requires to be drawn more accurately than has hitherto been done between the nervous temperament, the hysterical temperament, and the insane temperament; and that it is in the coexistence of the last two of these that the risk of hysterical mania resides. Where the hereditary taint of madness is present, and betrays itself in peculiarity of thought and feeling, and where at the same time the exalted sensibility and mobility of hysteria are also present to some extent, there is the appropriate soil for the growth of hysterical mania. If, under such circumstances, any irregularity of menstruation lower vital power and augment irritability, then almost inevitably we have hysterical mania. Or if, under such circumstances, intense annoyance, or distress, or disappointment, be encountered, then again almost inevitably we have hysterical mania.

Verification of these statements is easily obtained in the history of cases which have lately passed through this asylum. Some of you must remember S. H., who was an inmate of Ward 34, and who went home on February 17th. This girl was admitted on the 2d June, 1870, and was then seventeen years of age. She was a weaver from Bradford. Her mother had been once temporarily insane and confined in an asylum, and a brother had also been for a brief period out of his mind. She had always been a hard-working girl, and had latterly overtaxed her strength by undertaking many household duties in the evening after her return from the mill, in order to help her mother, who was an invalid. Although she had never before exhibited any signs of mental disease, she had always been excitable and susceptible, and prone to blended outbursts of laughter and tears, which had ended occasionally in choking and twitches. Fourteen days previously to her reception here, her youngest brother, to whom she was fondly attached, died after a short illness. The bereavement preyed upon her mind. She was very quiet in her manner, and desired to be left alone, until ten days after the event, when suddenly, on the 28th May, grave gave way to gay, the solemn to the ludicrous; she became hilarious and excited. In a few hours, the excitement had passed into mania. Dances, gesticulations, snatches of songs, and ribald jests, occupied the night, and, with few and short interruptions, the next three days, until she was removed to this hospital. When admitted here, her condition was typical of hysterical mania. She was of middle height, with brown hair, dark-blue eyes, and a pleasing and animated expression of countenance. There was none of the facies hysterica in her comely visage. She was exuberantly garrulous, chattering incoherently on a variety of topics, betraying no fixed delusions, but seizing upon whatever was said to her, and spinning it into the tangled and knotted thread of her discourse. She was quick to comprehend whatever was addressed to her, and her will had evidently not lost all dominion over her conduct, for, when spoken to in a sharp and authoritative manner, she could remain quiet for a few seconds, until the impulse to energise through the vocal apparatus became too strong for her, and broke out once more in voluble utterances. Her emotions were tinged with eroticism. She attempted to embrace the medical officers, and referred perpetually to love and friendship in phraseology which was not after the manner of Plato. She laughed immoderately and sang vigorously from time to time. Her pupils were of average size and sensibility; her skin was moist, her muscles soft and flaccid, and her tongue clean. The heart and lungs were healthy, the mucous membranes were pale, and the body, though plump, gave general indications of anæmia. She was suffering from leucorrhœa. S. H. remained here for eight months, and twice suffered relapses, after having been apparently restored to health. For the first four months there was amenorrhœa, with leucorrhœa; and, indeed, permanent recovery did not take place until the menstrual function was re-established in a proper manner.

Now you will have noticed in this case of S. H. an inherited predis-

position to madness, an innate tendency to hysterical perturbations, a great grief, a weak state of health, and menstrual irregularity—in fact, all the conditions which I have enumerated as most important in the etiology of this disease. Lest, however, you should think the case of S. H. in any way exceptional, I shall direct your attention to that of A. H., only lately discharged from Ward 30. This girl, a domestic servant from Dewsbury, twenty-one years old, was admitted on March 2nd, 1871. She was reputed to have had an aunt insane, and to have been always of a peculiar and irritable temper, which led her to go into service in opposition to the wishes of her relatives, her father being a farmer in a comfortable position. When fourteen years of age, she had what is called “a fit”, probably a paroxysm of hysteria; and two years later she suffered from rheumatic fever, which left a loud systolic *bruit* at the base of the heart. During February of this year, a lover, who had been long devoted to her, withdrew his attentions, and thus wounded her pride and her affections. On the 26th of that month, after some days of brooding, she became odd in her manner, and made numerous statements which were known to be erroneous; and on the 28th an attack occurred which those around her at once pronounced hysterics, and in which there were laughter and sobbing, and muscular tremor and startings. From this attack she emerged in a state of mania, talking loudly, incessantly, and incoherently, and then crying out “William” for hours together. When admitted here on the 2nd of March, she presented the symptoms of hysterical mania in as characteristic a way as did S. H., to whom we previously referred. Now in this case also you must remark that the causes in operation were almost precisely those which existed in the case of S. H., and correspond closely with what I have laid down as the essential conditions for the production of hysterical mania. The one condition wanting was the menstrual irregularity; and this was absent only at the outset of the attack, for during its progress the menses were suppressed. As the result of a large experience of hysterical mania, I am satisfied that it is without exception preceded or accompanied by some derangement of the reproductive system, the existence of which is most frequently indicated by alteration or obstruction of the monthly discharge. Even where, however, neither amenorrhœa, leucorrhœa, nor menorrhagia can be discovered, other signs of disorder in the functions of the reproductive organs can be found, if carefully looked for. I well remember a girl named E. B., labouring under hysterical mania, in whom no disturbance of the sexual system could be detected until, towards the close of the attack, distinct irritability of one breast came on. While the excitement lasted, and even after it had subsided, the left mamma was swollen, turgid, and the seat of uneasy sensation, aggravated by pressure, and reaching sometimes to exquisite pain. The consensus existing between the mammæ and the uterus, indicated by a variety of facts such as these—that a secretion of milk has been produced by irritation of the womb and the catamenia by poulticing the breasts—entitles us to conclude that there was in this case some uterine or ovarian condition corresponding to the irritability of the mamma, and that there may be in other cases of hysterical mania a disorder of the reproductive system without any very conspicuous outward manifestation. We must bear in mind that irritation or inflammation of an ovary, or ulceration of the cervix uteri, may proceed to some extent without interfering with menstrual regularity, or giving rise to any symptoms which would directly suggest their presence; and we must not, therefore, hastily infer that there is no involvement of the reproductive system in any case of hysterical mania because patent signs of such involvement are not at first discoverable. Masturbation and venereal disorders occasionally cause that irritation of the reproductive system from which hysterical mania results.

To complete your acquaintance with the causes of hysterical mania, I have only now to add that it occurs only in the female sex, and almost exclusively between the ages of fourteen and thirty, and is much more frequent among the single than the married, and in the upper than in the lower classes of society. I know of no form of mental disease thoroughly analogous to it occurring in males. Insanity due to masturbation and sexual excitement in them, although sometimes described as hysterical mania, admits of another classification, and does not conform to our knowledge of that well marked disease. During the last five years there have been only two cases of distinct hysterical mania in this asylum in which the age exceeded thirty. In eighteen cases of which I have drawn up reports, the average age was twenty-one years. This fact in some measure accounts for the larger proportion of single women attacked by hysterical mania, as it is clear that the incursion of the disease most often takes place before the age at which women commonly marry in this country. The hothouse education and artificial and luxurious modes of life prevalent amongst the upper and middle ranks are of course conducive to the evolution of hysterical tendencies. Even in a pauper asylum, the victims of hysterical mania

are seldom without some touch of refinement, some traces of sentiments rather superior to their social lot.

You will have gathered from what I have already said that hysterical mania is a much simpler and better defined disease than ordinary hysteria; and you will be correct in that inference. It is not a mimic nosology, an epitome of morbid action, nor a Protean affection assuming a hundred strange shapes for the very love of lying. It does not puzzle nor baffle diagnosis. It is a tolerably straightforward disorder, and as a rule may be readily recognised. The additional conditions superimposed upon hysteria, when hysterical mania occurs, materially restrict its wanderings, and facilitate its observation and treatment. They cut off innumerable divergencies, render impracticable many disguises, and make its true character much more apparent. But do not imagine therefore that the whole relations of hysteria to insanity are of a comparatively simple character, and that physicians who treat mental diseases are exempt from the worries and perplexities which in general practice hysteria begets. Hysterical mania is not the only form under which hysteria occurs in lunatic asylums. On the contrary, there are several other varieties of insanity which are occasionally complicated by hysterical symptoms, and which may partly originate in hysteria. At the present time, you may see in Ward 24 J. M., and in Ward 26 M. M., who are both labouring under dementia and indubitable epilepsy, and who both also suffer from unquestionable hysteria. In both of them, the hysteria preceded the epilepsy, and seemed to deepen into it. In one, it betrays itself in the simulation of paralysis and numerous other maladies; and in the other, in anomalous paroxysms, in which globus, grimaces, and panting respiration are mixed up with tonic and clonic spasms. You may also see, in Ward 21, R. D., in whom hysteria is mingled with profound melancholia. It is not our present purpose, however, to examine into the hysterical complications of insanity, but only into one well marked type of madness, to which the name of hysterical mania has been correctly assigned.

[To be continued.]

LATENT TYPHOID FEVER: ULCERATION: PERITONITIS: DEATH.

JOHN WITTON, aged 16, labourer, was quite well until from ten days to a fortnight before I saw him, when he was seized with slight shivering, headache, and pains about his body generally. He felt no desire for food, but “took what came”, and continued working until February 26th, but, finding he got no better, came home; and two days afterwards I was sent for to see him. He had not suffered from diarrhœa during this time. I saw him on the afternoon of March 1st, and found him lying on his back. His countenance was anxious and expressive of pain; the skin warm, not sweating or unusually hot; pulse 112, feeble; tongue moist, furred on the dorsum in the centre. The abdomen was not much distended, tympanitic, and very tender on pressure. The bowels had acted the day before. I ordered him calomel and opium, and turpentine stupes to be kept constantly applied. When I saw him on March 2nd, he was in a state of collapse; his extremities were cold and clammy; there was great distress of countenance; the abdomen was very much distended and tympanitic; pulse 120, small and feeble. There was no appearance of any spots. He died at 6 P.M.

NECROPSY, twenty hours after death, made by Dr. Batt and myself. —Quite recent lymph covered the peritoneal surface of the bowels. A perforated ulcer was found in the ileum. Peyer's patches generally were inflamed and congested; and ulcers in various stages were found upwards to the end of the jejunum and downwards as far as the ileo-cæcal valve. Several lumbrici were found in the intestines. The body otherwise was healthy.

I am quite at a loss in this case to account for the lad having typhoid fever at all, as the house in which he lived was situated on the side of a high hill, and quite apart from any other dwelling. The water-supply is from a clear stream rising in the hills at some distance from the house, and so situated that it could not possibly be contaminated with sewage in any way. The germs of fever are, however present; for, about a fortnight after the death of this patient, another lad living in the same house came to me complaining of all the premonitory symptoms, since which he has gone through a severe attack of the disease. I have no doubt that the lad whose case I have given would have been (humanly speaking) alive now, had he laid up at the commencement of his illness. This case shows well the fact that there is no necessary connexion between the intensity of the general symptoms of the disease and the extent of the intestinal mischief going on or the absolute danger of the case.

WILLIAM G. KEMP, L.R.C.P.Lond.
Wellington, New Zealand, May 8th, 1871.

THE HASTINGS PRIZE ESSAY,

1870.

ON DIGITALIS: ITS MODE OF ACTION
AND ITS USE.*

By J. MILNER FOTHERGILL, M.D.,

Late Senior Resident Medical Officer to the Public Dispensary, Leeds.

Shock.—In temporary conditions of paralysis of the sympathetic, agents which act as stimulators to this nerve are of great importance. Thus in shock, which Romberg calls paralysis of the sympathetic, the use of these agents is beneficial. Whatever may be the mode of action of external impressions, physical or psychical, that produce shock, whether in altering the molecular condition of the nerve-cells, or some other subtle action, certain it is that we have a small feeble pulse, coldness of the skin, cold breath, diminished temperature, and other evidences of the organic system of nerves being acutely depressed. In this condition, the heart-walls contract ineffectively, and do not respond to the stimulus of their contents; there is failure of the heart's action—a species of paresis. In this condition, general stimulants act well; but the question of special stimulants to the sympathetic ganglia has scarcely ever been broached. In one case of shock following parturition with twins (a common cause of shock), where there was the utmost danger of the patient's sinking, and the pulse was feeble, fluttering, and almost imperceptible, the administration of digitalis was followed by the most satisfactory results. It may be perhaps better to give the experience of some one else on so intricate a subject. Thus, in a case under Dr. Wilks (reported in the *Medical Times and Gazette*, January 16th, 1864), the patient was literally restored to life under its use. She was apparently in *articulo mortis*; her limbs were cold, her body in a state of deathly clammy sweat; the face was livid, no pulse could be felt at the wrist, and a mere fluttering was heard when the ear was placed over the region of the heart. Brandy and ether had been given without any good effect; and, as dissolution was every moment expected, it was determined to try digitalis. Half-drachm doses of the tincture were given every hour; after four doses a reaction took place, and after seven doses complete recovery occurred. The lividity of the face showed that the blood was lying in the venous system, and that it was not absent altogether. In this condition of shock, there is every reason to believe that the condition is one of passing paralysis, and that the condition of the heart is one of distension. Were digitalis a cardiac sedative, death in the two above related cases should have inevitably occurred. From the question of cardiac inability and unquestioned asthenia, we pass on to the condition of palpitation.

Palpitation.—Palpitation is more nearly allied to asthenia than we are in the habit of commonly thinking. Taught to regard it as over-action, we have come to associate it with excess of power; yet nothing can be more fallacious. Palpitation is a laborious evident effort, and reveals that the heart is over-taxed. It is over-taxation, not over-action with which palpitation is associated. We know perfectly well how palpitation is evoked by exertion in persons with structurally altered hearts. Here we know well that it is an accompaniment of effort; but the so-called nervous palpitation has been a troublesome stumbling block. Violent action of the heart, with a small and reduced pulse, suggested a tumultuous contradictory action of the muscular fasciculi as the only explanation of the condition admissible in the then existing state of knowledge. A condition of augmented cardiac action with no effect upon the radial pulse, was an anomaly, until advancing knowledge let us into the secret of vaso-motor alteration of the calibre of arteries. Then we began to see light shining through the darkness. Direct experiment then showed how augmented action of the heart followed certain irritation of the medulla oblongata when all nerve-communication with the heart was severed. (See Carpenter's *Human Physiology*, 7th Edition, p. 269.) It was found that alteration in the calibre of the arteries, by offering opposition to the flow of blood, caused laborious action of the heart, *i.e.*, palpitation. This action of the heart was not apparent in the arteries, because occasioned by a condition of them, which neutralised the effect of the increased action of the heart; or, more

correctly speaking, the heart's action was called out to neutralise the condition of the arteries. Thus without muscular effort, which necessitates augmented action of the heart, perceptible in the radial pulse, an evident laborious stroke of the heart may be evoked by a spasmodically contracted condition of the arteries and arterioles. Thus we have palpitation very common among the sufferers from chronic Bright's disease, in whom structural changes in the heart are most common. The diseased condition, according to Dr. George Johnson, is a thickened muscular tunic of the arterioles. The arterioles, by contraction, oppose the entrance of the blood, altered by excessive quantity of the products of retrograde tissue-metamorphosis. This contracted condition, when long continued, generates hypertrophy of the muscular tunic, and chronic opposition to the flow of blood, and then leads to changes in the heart-walls. Thus a species of balance is struck between the arterioles and the heart; cardiac compensatory hypertrophy endowing the sufferer with power to move and act; dilatation admitting a crippled existence only. Any unusual accumulation of the products of histolysis then evokes palpitation. That is, excess of the irritant provokes contraction of the hypertrophous muscular tunic, and that in its turn affects the heart; accumulating demands on it evoke laborious effort or palpitation, and this, too, more in the dilated than in simply hypertrophied conditions of the heart. Palpitation occurs commonly in such people, along with other evidences of an uræmic condition of the blood. So, also, in the palpitation of jaundice, the arterioles, by contraction, oppose the entrance of the poisoned blood, and, by the obstruction thus offered, evoke palpitation. Further acquaintance with the finer processes of pathology are doing much to enlighten us as to cardiac (so-called) functional disorders. But it is the effort at compensation which is apparent, not the disordered condition, which is the real cause. Thus hypertrophy, the evidence of constant call on the heart, was at first thought the disease; now we know that it is a reparative proceeding. Palpitation, the evidence of over-taxation, will soon be relegated to its proper position as a symptom, not as a disease. A proper knowledge of palpitation can alone tell us what agents are likely to relieve it. It is evident, then, that the means of relieving palpitation will be found in the rank of agents, which increase the ventricular contraction. It is obvious that the obstruction of a constricted aortic orifice is analogous in its action to the contracted condition of the arteries. The agents which relieve one condition must act in the other. Thus the agents which have empirically been found to exercise the strongest influence over palpitation are found to be drugs—as digitalis, belladonna, caffeine, and others—which physiological experiment demonstrates to possess the power of increasing the ventricular contraction, and which clinical observation has shewn to be of service in other conditions of cardiac asthenia. Palpitation is intimately connected with ventricular engorgement, and the means of relief are only to be found in the list of agents which augment ventricular contraction. The strangling the heart's efforts by a direct sedative like prussic acid, or allaying them by a narcotic like morphia, does not militate against this view; the one is a lowering of all vitality till the heart is equal to its work, or the general lethargy produced by a narcotic; and so the most complete cessation of palpitation could be procurable by death. The means of relief of palpitation, which leave the general system unaffected, are those which enable the heart to act more efficiently; and of these, digitalis is the chief. The whole question of temporary failure of the heart's action is scarcely yet even *sub judice*. The subject is only a promising one, and one of the deepest interest and importance; but sufficient is known to be most encouraging, and only those, who have dived deepest into the recesses of therapeutics, can estimate the amount of good which may result from the prosecution of the inquiry. The conclusions given above are not supposed to be complete; but such as they are, they have appeared to me as the result of careful thought and investigation. Better results have certainly followed, and that, too, with a greater certainty since the foregoing conclusions have shaped themselves; and in venturing to recommend them to the notice of others, the writer must deprecate any idea of a wish to proselytise. The questions are questions of fact, not questions of opinion; and though to some readers the conclusions may appear somewhat startling, they are given in all good faith; and with a strong trust that trial will be favourable, and not unfavourable, and that therefore it is to be courted. The conclusions are laid open to the verdict of the profession with all humility. It would be vain, as it would be unprofitable, to hope that the conclusions will be wholly or universally accepted. But if personal success in treatment is to be a valid test, the writer could appeal triumphantly to his experience. But it is not to record the fortunate cases here that these conclusions are fairly stated, but in the hope that, by attracting attention to this wide but little explored field of therapeutics, future benefit to sufferers may accrue.

Contraindications.—It is necessary to review the circumstances which may modify our views as to the desirability of administering or with-

* Continued from page 92 of last number.

holding digitalis. We have seen that it acts by producing contraction of the heart, and, to some extent, contraction of the capillaries (or arterioles and venules). It is obvious, then, that an increased arterial tension resulting therefrom will test the integrity of the structures intermediate—namely, the arteries. It is, then, of primary importance to ascertain and bear in mind the condition of the arterial system, and to conduct our treatment accordingly. Thus, atheroma or endoarteritis is commonly associated with cardiac complaints; and more especially with those manifestations of over-taxation for which the patient consults us. The primary consequence of atheroma is hypertrophy, which sooner or later yields to fatty degeneration, in the manner described in an early section. This exceedingly complicated condition is frequently presented to us, and increases the difficulty of adopting a treatment which secures the maximum of good, and the minimum of risk. Thus, whilst the increased action of the heart (the hypertrophy) supplements the inelastic condition of the arteries, and restores the balance of the circulation, it is in itself not without an alloy, for the atheroma is most marked at those points where there is the greatest pressure; and thus the increased action tests these weak points most severely. Thus in the thin-walled vessels at the base of the encephalon, we have often rupture. So in our treatment of cardiac debility with or without hypertrophy, we must be guarded and watch the effect of our remedies most narrowly. In the palpitation of hypertrophy, this is especially necessary. It is, however, possible with care to get at what is desired without any imminent risk, but small doses alone are admissible; and until the practitioner has familiarised himself with all the complex relations of this condition, and can wield his remedy with skill and confidence, it may be safer to resort to some other agent. It is within the limits of possibility to reach the honey and yet avoid the sting, but the attempt must only be made after careful calculations as to the force of the pulse, the state of the vessels, the amount of palpitation or irregularity, and a critical weighing of the different factors. The presence of atheroma to any extent is the contraindication *par excellence* against the use of digitalis. In considering the conditions which contraindicate the use of digitalis, it is necessary to investigate the importance of fatty degeneration of the heart itself. Brunton has, from a consideration of the increased capillary opposition, warned us against its use in fatty degeneration; his objection is, however, only a theoretical one, though unquestionably rational. Reith and Gull have also made a similar objection, but on other grounds. It may, then, not be out of place here to investigate the subject critically. Firstly, the increased action of the muscular walls resulting from its use has always more than counterbalanced any capillary opposition; and the possibility of death resulting from the enfeebled heart being unable to act against the opposition so offered, may be questioned; it is only where the coronary arteries alone are the subject of disease that this could occur. In the usual condition of general atheroma, the contractility of the arterioles would also be impaired, and not respond to the stimulus of the drug. But of more serious moment is the question of partial or localised degeneration—that is, where some portion of the ventricles are more degenerate than others. This is beyond our diagnostic powers, and is therefore a purely speculative consideration. There is no question about the existence of this condition, which apparently depends on the greater or lesser amount of disease in the walls of the small nutrient arteries. It is obvious, then, that if we act on the muscular fibre remaining at all strongly, we must increase the pressure on the non-contractile degenerate portions. If we increase the centripetal action of certain portions of a hollow globe on fluid contents, we must increase the centrifugal pressure on the non-contracting portions. Thus if we produce an increased opposition to the flow of blood, and stimulate only certain portions of the ventricle, we must endanger the degenerate portions, *i.e.*, we must increase the risk of rupture through the thinned and degenerate portions of the wall. Thus the treatment may become a nice calculation of probabilities, guided by the lessons of the deadhouse. We must remember that there are numerous cases of cardiac asthenia for one of rupture through a degenerate portion of the ventricular wall; and that, as physicians, we have to obviate the tendency to death. It is being of no use to allow the patient to die of asthenia, from a hypothetical risk of rupturing a rotten section of the heart-wall. The probabilities must guide us. The variation between the sounder and more diseased parts can rarely be so great as to make this a practical danger. The difficulty of acting on the walls at all reduces even the possibility of the risk. This condition, too, is usually associated with advanced disease of the arteries; and thus we have the practical danger of rupturing them to estimate, as well as the hypothetical one of increased centripetal action of one acting section of a hollow sphere increasing the centrifugal pressure of the fluid contents on the non-acting sections.

As well as these contraindications which present themselves as pathological conditions modifying our views as to the desirability of ad-

ministering digitalis, there are others which present themselves as connected with the diagnostic indications, as, for instance, intermittency. The occurrence of intermittency during the administration of this agent has hitherto been deemed a valid contraindication; and certainly if we feel assured that it is the consequence of the drug, it is an evidence of its physiological effects being reached. Thus, if along with it we find the pulse becoming thready, the heart's action becoming a steady thud, a diminution in the bulk of urine, showing a lessened pressure on the glomeruli of the kidney, then it may be necessary to withdraw the digitalis. It may, however, not only be no contraindication to its use, but even be the strongest evidence of the need for its administration in increased quantity. Thus, where any obstacle is presented at all suddenly to the circulation, and digitalis is given, intermittency may come on as the result of the heart's inability, in spite of the stimulus to contraction to struggle against it; and the administration of the agent in increased quantity may be clearly indicated. This is no imaginary condition. Some months ago, the writer attended an old gentleman of ninety, suffering from an acute affection of the aortic orifice, accompanied by dropsy, orthopnea, and feeble pulse. Digitalis was given by him as usual; and after a day or two the pulse commenced to intermit, and there was evident increasing circulatory debility. It was with great difficulty the scruples of the consulting surgeon could be overcome, and his permission gained to give the digitalis in double doses. After that, the pulse improved; the intermittency took its departure; the dropsy declined; the old gentleman could again lie down, after sitting in an arm-chair three weeks without intermission; the digitalis was continued, and the old gentleman was once more walking about in his garden. Thus we see that intermittency and the other evidences of cardiac debility coming on during the administration of digitalis may not only not be contraindications against its use, but may even be the strongest evidence in favour of the administration of it in increased quantities. The diagnosis as to whether the intermittency be due to the drug, or to the necessities of the patient being aggravated, would rest to a great extent on the conditions under which the drug was given. Thus, if it were given to allay the palpitation in hypertrophy, and in a healthy person, there would exist an *à priori* probability that it was due to the action of the drug; if digitalis were administered in great cardiac debility and growing obstruction, or obvious failure of the heart's action, the occurrence of intermittency may be the evidence of an imperative necessity for an increase in the dose. The occurrence of persistent vomiting, loss of appetite, noises in the head with flashes of light, or other symptoms of the system being fully under the action of the drug, or of some idiosyncrasy on the part of the patient, would suggest to us instinctively its withdrawal; and either the use of some similar agent, or its administration in some other form or combination. Thus patients who soon show an intolerance of digitalis if given on an empty stomach before food, tolerate it if given an hour or so after meals. The occurrence of attacks of syncope or other cardiac failure cannot be said to be any valid objection to its use; in fact, like intermittency, they may indicate the necessity for more of it. In some persons it is desirable certainly to give it along with diffusible stimulants. But failure of the heart under its use will be found to be the result of the affection, not the drug. Thus persons with fatty or otherwise degenerate hearts, where it is given, are subject to the attacks as the result of their ailments. "Such patients are liable to die suddenly, and will do so now and then whether digitalis be given or not." (Gull and Wilks, *Medical Times and Gazette*, July 1865.)

Antidotes.—Though digitalis-poisoning is no longer so common since a more accurate knowledge of its action has lent precision to its administration and its use, still cases might occur where, through misadventure or oversight, or perhaps some peculiar susceptibility in the patient, a condition of danger might arise from its administration. Such a condition must carefully be distinguished from attacks of cardiac syncope, the result of disease. If it were once ascertained that the danger was due to the drug, it would be necessary at once to stop its use; if it resulted from one huge dose producing acute poisoning, it might be advantageous to empty the stomach; in chronic poisoning, sickness is spontaneous. The use of agents must be resorted to which are known to paralyse the heart—for instance, aconite. In experiment on the frog, though aconite did act on the heart after the poisonous effects of digitalis had been induced, still its action was far from being so marked as when digitalis was given in aconite-poisoning. In digitalis-poisoning, aconite may be resorted to as an antidote. From the action of the Calabar bean, as described by Dr. T. R. Fraser, of Edinburgh, it is highly probable that it would act beneficially in the excessive action of digitalis. From the consideration of antidotes, it may not be out of place to consider the question of agents of similar action.

[To be continued.]

CHLOROFORM ACCIDENTS.

By JOSEPH LISTER, F.R.S.,

Professor of Clinical Surgery in the University of Edinburgh.

MR. CLOVER, in an article in the *JOURNAL* of July 15th, opposes the views expressed in my essay on *Anæsthetics in Holmes' System of Surgery*. The esteem which all who know Mr. Clover must entertain for his personal character, and his large experience in the administration of chloroform, attach a weight to his observations which compels me, though with great reluctance, to trouble your readers with some remarks in reply.

The main difference between us may be shortly stated as follows. I recommend a folded towel as at once the simplest and safest means of administering chloroform, and I hold that when this is used the respiration becomes obstructed before the circulation fails, and that circumstances occasionally arise in which the patient's life will be placed in imminent jeopardy unless the obstruction be cleared away by firm traction upon the tongue; and further that, as this interference with the breathing may occur in a very insidious manner, it is wisest for the administrator to keep his attention riveted upon the respiration rather than have it distracted by simultaneous observation of the pulse. Mr. Clover, on the other hand, regards the folded towel as a dangerous means of administration in comparison with an apparatus of his own devising, which has proved so successful in his hands that, while he has given chloroform more than seven thousand times, he has never lost a single patient, nor has he ever seen it needful to draw forward the tongue except in so far as that is done by raising the chin. But he thinks it necessary to observe the pulse, and he believes that if he had neglected it, his practice would not have been free from fatal event.

These statements of his are undoubtedly very striking, and can hardly fail to produce an impression upon your readers; but while in some respects highly instructive, they are also, I believe, calculated to mislead. When Mr. Clover tells us that out of more than seven thousand cases he has not lost one, I can but rejoice, not only because this is in itself a great and glorious fact, but because it tends strongly to confirm the proposition which I have sought to enforce; viz., that, though cases of death under chloroform must now and then occur, with which the anæsthetic has nothing to do, and though I am not prepared to deny the possibility of an idiosyncrasy of excessive rarity, and of which I have never yet seen an instance, that may make death from chloroform inevitable, yet in the main, fatal results really due to the agency of this narcotic are preventable. But when Mr. Clover attributes his great success to a special apparatus, and when, by proclaiming his own example, he practically counsels medical men in general to disregard the drawing forward of the tongue, he makes, as I believe, a great mistake, and with the best intentions, promulgates most mischievous doctrine.

With regard to the safety of the folded towel, my personal experience affords sufficient evidence. I estimate the cases in which I have been concerned in the administration of chloroform as about 3,500, and though this number is only half Mr. Clover's, the practice to which it relates is really of much greater value than his with reference to the point under discussion. In his cases, the undivided attention of the most experienced special chloroformist in the country was bestowed upon the administration. In mine, the chloroform was, as a general rule, not given by myself at all, but by young men coming fresh to the duty every three months, and whose only instructions were to watch the breathing closely, and, in case of its obstruction, remove the cloth from the face, and at once adopt means to clear away the obstacle. That under such circumstances my practice should have hitherto remained free from fatal accident is far greater evidence of the safety of the cloth than Mr. Clover's can afford respecting his apparatus. It is idle to speak of the folded towel as dangerous when it has stood a test like this.

I now come to the drawing forward of the tongue. Here Mr. Clover leaves me to choose between two horns of a dilemma. The fact that I resort to traction upon the tongue while he does not, proves, he says, either that my method of administration is at fault, or else that I resort to a needless procedure. Neither of these alternatives, however, necessarily follows. Mr. Clover, in contrasting my practice with his own in this respect, compares two things not fairly comparable, for the reasons above given. If I devoted my exclusive attention to the administration of the chloroform, I should, for aught I know to the contrary, draw the tongue forward as seldom as he. The necessity for the procedure undoubtedly implies in the great majority of cases that rather more chloroform has been given than necessary, though happily, as experience shows, not more than is safe. Accordingly we commonly see it

resorted to especially at the beginning of a session when the junior officers to whom the duty of giving the anæsthetic is entrusted are fresh at the work; and Mr. Clover is wrong in supposing that traction upon the tongue is of very frequent occurrence in our practice. I am not sure that it has been done once during the last two months, although we have had about as many operations as days. But it is of the utmost importance that students should learn the art of chloroform administration, and we regard the opportunity which they have at our Scotch schools of being instructed in this art as one of their most valuable privileges. With such beginners and with the large number of practitioners throughout the country who, unless the benefits of chloroform are to be most needlessly and lamentably restricted, must be called upon to give it without much experience, the necessity for traction upon the tongue will from time to time occur. And I have seen enough to make me perfectly sure that lives will be needlessly sacrificed if it be not resorted to. When, therefore, Mr. Clover virtually recommends medical men generally to follow him in abstaining from this practice, he gives about as pernicious a piece of advice as can well be given with reference to the administration of chloroform.

Mr. Clover gives a new theory of the obstruction to respiration under chloroform. He regards it as an act of deglutition imperfectly performed. Swallowing, he tells us, is often excited by chloroform, and "there is reason to think that the co-ordination of the movements which constitute deglutition is interfered with," so that the act "lingers in the second stage." Surely this is a mistake from beginning to end. Is there any reason to think that the act of swallowing is thus disturbed by chloroform? On the contrary, it continues to be performed in patients deeply under the influence of the anæsthetic, so that not only are the saliva and buccal mucus prevented from accumulating in the pharynx, but blood flowing into the mouth, unless the hæmorrhage be free, is safely carried down into the stomach. Were it otherwise, we should have to refuse chloroform in many cases in which we now employ it. Nor is it true that chloroform "excites swallowing." So far, at least, as I am able to judge, what it does excite is a free flow of saliva, and the secretion is either got rid of by swallowing, or, if the patient be an adult male, accustomed to another sialogogue, tobacco, he causes inconvenience to the attendants by ejecting the liquid in the manner usual with smokers. It would be as rational to say that chloroform excites spitting, as that it excites swallowing. That the obstruction to the breathing has nothing whatever to do with deglutition is plain enough from other considerations. In my article on anæsthetics, the obstruction to the respiration under chloroform is shown to be of two totally distinct kinds, one of which is removed by drawing forward the chin or turning the head to one side; while the other refuses to yield to such treatment. The former obviously depends on relaxation of the lingual muscles. I lately had occasion to remove a tumour affecting the central part of the lower jaw, dividing, of course, the attachments of the muscles by which the tongue is protruded; and the condition of the patient during the first few days after the operation reminded me exactly of the state of a person with the tongue relaxed by chloroform. He was threatened with suffocation if he lay back with the occiput towards the pillow, but breathed freely when the face was turned well to one side, or when the tongue was drawn forward in the gentlest manner by a string attached to it. An experiment that may be made on any patient affected with this variety of obstruction from chloroform is of itself conclusive. Supposing the obstacle to have been removed by the gentle traction on the tongue, effected through the medium of its muscles by pulling forward the maxilla by the beard, it will at once return if the chin is allowed to recede, and the same thing will recur time after time as often as you please. To imagine that a fresh act of semi-deglutition takes place every time you relax your hold would be absurd.

The same argument applies to the other kind of obstruction to the breathing under chloroform. This requires firm traction upon the tongue to dispel it, and it recurs whenever the traction is suspended in a manner obviously unconnected with any act of deglutition. Mr. Clover, indeed, seems never to have witnessed this variety. But before expressing an opinion upon the nature of "the obstruction Mr. Lister dwells upon," he was surely bound to read the account I gave of it. If he will turn to either the article in the first edition of Holmes's *Surgery* or its present revised form, he will find it stated that "I have more than once seen a person holding the end of the organ considerably beyond the lips without any good effect, and, placing my hand on his, have given an additional pull that has re-established the respiration." It was this observation that first attracted my attention to the subject. It struck me as something very remarkable that when the tongue was already carried to the extreme degree of extension, additional traction, though it did not alter the position of the organ, should clear away the obstruction. This seemed quite irreconcilable with the prevalent idea that mere falling back of the tongue was the only thing at fault, and I

felt anxious to know more of the true nature of the phenomenon. I found that I could imitate in my own person the profound stertor which commonly precedes and passes into the obstruction in a patient under chloroform, and that I could still produce it when my tongue was protruded beyond the range of the teeth; but that if I seized its tip with a handkerchief and pulled it forward sufficiently strongly to cause a painful sensation in the frænum linguæ, the snoring became impossible. The effects of drawing forward the tongue being thus exactly the same upon the artificial stertor as upon that under chloroform, I could not doubt that the two were identical, so that I had the opportunity for further investigation in my own throat. By digital examination I ascertained that the epiglottis was not folded back in this stertor as it is in swallowing, but that the seat of the vibrations was more deeply placed, somewhere about the orifice of the larynx. I next made an attempt to see its exact mechanism in an animal under chloroform. The experiment was performed upon a sheep in a slaughter-house in Glasgow; and though it was abruptly cut short by the advent of an official who threatened to have me up before the Provost and magistrates if I persisted in such cruelty to animals, I saw enough to interest me greatly. The animal having been brought deeply under the influence of the anæsthetic, I made a free transverse incision in the throat so as to enable me to look fairly down upon the orifice of the larynx. But, to my surprise, instead of seeing the vocal cords, I saw only a pair of vascular valves flapping with great rapidity, and concealing entirely the true vocal apparatus. I then availed myself of the laryngoscope for further observation in my own person, and at once ascertained what the valves I had seen in the sheep really were, viz., the thick, pulpy, vascular folds of mucous membrane surmounting the apices of the arytenoid cartilages; and I saw that if I coughed, these folds were brought into contact in the middle line, and, at the same time, were carried forwards to the base of the epiglottis, so as to obstruct the exit of air till the expiratory effort had continued sufficiently long to produce a due outburst, when the obstruction was removed. Thus the strain in coughing is not allowed to fall upon the delicate mechanism of the vocal cords, but is borne by these valves of mucous membrane. When anything irritating is present in the air inhaled, these valves guard the inlet to the larynx and render it as small as possible, as I had seen in the sheep during the inhalation of chloroform; and they constitute the mechanism of what I have termed true laryngeal stertor. On producing this stertor while examining my throat with the laryngoscope, I saw these pulpy folds vibrating at the base of the epiglottis; and on increasing the stertor to complete obstruction, I observed them closely applied and motionless. Then, on drawing forward the tip of my tongue with one hand, while the other held the laryngoscopic mirror, as soon as the traction was carried so far as to become painful to the frænum linguæ, while the epiglottis was not moved forward in the slightest degree, the arytenoid folds receded from its base in spite of the effort of my will to the contrary, rendering the obstruction and the stertor alike impossible. Thus the view to which I had been previously led became established, viz., that the firm traction on the tongue operates not mechanically, but in a reflex manner through the nervous system. And this conclusion has since received confirmation from a remarkable case (to which I have drawn attention in the revised article) where, the chest continuing to heave, the obstruction to the respiration remained in spite of firm traction on the tongue, but yielded at once to a dash of cold water, which could only operate through the nerves.

I cannot but regard these facts as of vital interest to the administrator of chloroform; and my apology for bringing them at such length before your readers must be that, though they are duly recorded in the article which Mr. Clover criticises, he does not appear to have noticed them, but confuses together the lingual and laryngeal obstruction in his very crude theory of imperfect deglutition.

Long as this communication already is, I must crave your indulgence while I add some remarks on Mr. Clover's statements regarding the influence of chloroform on the circulation. He is "convinced that the chief cause of danger is the effect of chloroform upon the heart;" and he alludes to fatal cases which have been reported by others where the pulse is said to have failed before the breathing; and he also mentions some experience of his own tending in the same direction. On Mr. Clover's own observations in this respect, I place implicit reliance; and to these I shall have occasion to refer again. But I confess to feeling little confidence, as a general rule, in the reports of deaths under chloroform. I know from experience how insidiously the laryngeal obstruction may supervene, and how readily the heaving of the chest under such circumstances may be mistaken for efficient respiration; and I have described in detail in my revised article, a case illustrating very strikingly how a fatal event commencing with asphyxia might be mistaken for a death from the heart. (See *Holmes's Surgery*, 2nd Edition, vol. 5, p. 497.) I know, also, how conflicting the evidence of bystanders com-

monly is with regard to the precise succession of the highly important events that are crowded together in the brief period of excitement immediately preceding the patient's dissolution; and we know, further, the strong tendency that exists in the mind of any one in whose hands such a case has occurred to twist the evidence unconsciously to himself in favour of inevitable syncope, rather than preventable asphyxia; and when we bear in mind how liable the attention of the administrator is to be distracted by the interesting circumstances of the operation, to suppose, as some appear to do who write upon this subject, that no such thing as death from chloroform through negligence ever occurs, and that all the whitewashings of coroners' inquests are strictly accurate, is to carry charity far beyond the bounds of probability. It must also be borne in mind that death must sometimes occur under chloroform as a pure coincidence; and, indeed, it is remarkable how many cases of this sort have been substantiated by indisputable evidence (*Vide op. cit.*, p. 484). In one or other of these ways, I believe the great majority of alleged instances of death from chloroform by syncope may be accounted for.

But to return to Mr. Clover. He remarks that, "supposing the larynx to be obstructed at a time when the heart is acting well, and when not more than four or five per cent. of chloroform-vapour is in the chest, the narcotism will diminish" through diffusion of the chloroform among the tissues. But he forgets that meanwhile the narcotism from asphyxia will be rapidly increasing and that asphyxia, together with a full dose of chloroform is an exceedingly formidable combination. That my dread of it is no groundless apprehension, is sufficiently proved by the case lately referred to, as detailed in my revised article. In that instance, the breathing being obstructed, but the chest still heaving, the face passed through the condition of asphyxial lividity into what was physiologically identical with *post mortem* pallor; and although the heart had not yet failed, it was obvious that death was imminent, when traction upon the tongue happily restored the patient to life. But I cannot believe it to be really needful to convince Mr. Clover that asphyxia under chloroform is dangerous. His own practice of raising the chin, which he has "never known to fail" in relieving the obstructed breathing, seems sufficient evidence that he is in reality quite alive to the risk.

Mr. Clover proceeds to contrast what is observed when a patient holds his breath while inhaling air containing only four per cent. of chloroform, with what would be likely to occur if the proportion of the narcotic vapour were as high as ten or twelve per cent. I am compelled to enter an earnest protest against the idea here conveyed, that anything approaching such high percentage is likely to occur when a folded towel is used. To suppose such a thing is not only to make a purely gratuitous assumption, but to ignore entirely a very careful set of experiments which I made several years ago and published in the article referred to (*vide op. cit.*, p. 486), in order to ascertain the amount of chloroform really given off by the towel. The circumstances which led me to enter upon those experiments were not very dissimilar from those which have now arisen. Dr. Snow had ascertained, by observations upon the lower animals, that in chloroform-poisoning, if more than about five per cent. of the vapour existed in the air, the creature died from primary failure of the heart; but, if the percentage were kept below that figure, the respiration failed before the circulation. And with respect to the latter fact I beg leave to refresh Mr. Clover's memory. Having come to this conclusion, Dr. Snow invented an inhaler, as Mr. Clover has done, to regulate the proportion of chloroform to the atmosphere; and, finding it answer well on a very extensive trial, and forgetting, like Mr. Clover, how largely his success might be dependent on care in the administration, he jumped to the conclusion that fatal events in the hands of others were due to primary failure of the heart, in consequence of too large a proportion of chloroform assumed to be present when the folded towel was employed. Meanwhile the folded towel had long been used in Edinburgh with a success even greater than that attained by Dr. Snow; and, when anything indicated an overdose, it was not failure of the heart, but an obstructed state of the respiration. How was this inconsistency to be explained? Were Dr. Snow's experiments fallacious? or was he wrong in assuming that the cloth involved a risk of too great percentage of chloroform? In the hope of clearing up this difficulty, I resorted to experiments; and, carefully avoiding all apparent sources of fallacy, I ascertained that, if a drachm and a half of chloroform were used, the whole amount given off by the under-surface of the cloth at the temperature of 70 deg. F. during the first half-minute after the liquid was poured upon it, was only such as to produce a percentage of 4.5 to the air inhaled by an average adult, supposing all to enter the lungs. But in reality a considerable quantity is not inhaled at all, part of the heavy vapour falling down beside the patient's face, and part being blown away by every act of expiration. It would be difficult to estimate the

precise amount of this loss ; but that it must be very great is evident from another consideration to which I directed attention—viz., the safety with which chloroform is given to infants by means of the towel, without any precaution to adapt the quantity of liquid used to the small capacity of their lungs. If anything near the whole of the chloroform that comes off were inhaled by children, its proportion would be enormously high and necessarily deadly. Their immunity from danger proves, therefore, the greatness of the waste of the anæsthetic.

From these facts it seems probable that, even when the chloroform has just been poured upon the towel, the amount actually inhaled does not exceed that which Mr. Clover uses as a constant quantity throughout the administration. And, considering how rapidly the rate of evaporation from the cloth diminishes, it is manifest that the average quantity taken into the lungs when this method is employed is very greatly below that supplied by Mr. Clover's apparatus. Mr. Clover may perhaps reply that this is impossible, seeing that patients cough more with the towel than with his apparatus, implying that what they breathe is more pungent, and therefore stronger. But greater pungency of the inhaled air does not necessarily imply a larger proportion of the irritating material. Any one who has watched the clear blue Rhone flowing side by side with the milky Arve, far below their place of confluence near Geneva, will readily understand this. When the chloroform has just been poured on the middle of the cloth, its vapour falls in very large proportion from the moistened part upon the mouth and nose ; but from the sides of the towel, and from beneath its edges, pure air rushes in simultaneously, and the two fluids pass imperfectly mixed into the fauces and trachea. On the other hand, the atmospheric gases and the chloroform are perfectly blended in Mr. Clover's balloon ; and just as a glass of spirits and water well stirred tastes milder than the same ingredients unmingled, so the gases inhaled from Mr. Clover's apparatus appear more bland, though in truth more potent, than the unmixed gases beneath the towel.

I have been accustomed to regard Mr. Clover's apparatus as in his hands a harmless luxury ; but when I find him at the outset of his article denying broadly that in deaths from chloroform the respiration is affected before the circulation, and when he relates in illustration a case "out of many which tend to show that the pulse must be watched", where during tranquil inhalation the pulse gradually failed and became imperceptible while the breathing continued free, though this also afterwards ceased, in spite of discontinuance of the inhalation, so that the patient seemed for a while really dead, I am led to doubt whether experience so entirely contrary to ours with the towel may not be due to the larger proportion of chloroform given. These statements of Mr. Clover make me more than ever satisfied that the cloth, though a rough and ready and somewhat wasteful means of administering chloroform, is the safest of any yet devised.

But even if Mr. Clover should reduce his percentage of chloroform, so as to ensure primary failure of the respiration rather than of the heart, it would not follow that his apparatus would be a desirable thing for general adoption. Its only advantage is the avoidance of irritation of the air-passages by the pungent vapour ; and this, after all, is but a trifling inconvenience, and patients seldom complain of it. On the other hand, not only are Mr. Clover's bag and mouthpiece a cumbrous means of effecting the object, but, though perfectly safe in his hands, they might not always prove so in those of others. I lately heard of a case in which this apparatus being employed, and the patient showing no signs of being influenced by the anæsthetic, it was found on investigation that the introduction of chloroform into the balloon had been omitted. Now, it is certainly full as likely to happen that too large a supply might be introduced through ignorance or hurry, in which case a more efficient means of quietly destroying human life could hardly be devised. For an agent adapted, like chloroform, for universal employment by medical men, it is of the utmost importance that the means of administering it should be as simple and uncomplicated as possible.

Before concluding, it may not be deemed out of place for me to advert shortly to Mr. Syme's experience with chloroform, more especially as my practice is simply that which I learnt from him. Though I may hope that I have done something to elucidate its theory, I have added nothing to it. It remains as it was at the outset, except that, instead of the tongue being drawn forward on every occurrence of obstruction to the breathing, it has of late years been found that the slight puncture inflicted by the artery-forceps may often be avoided by the means before referred to. With Mr. Syme, from first to last, a cloth on which the chloroform was freely poured was the only means employed. The breathing was taken as the only guide, while no inquiries were made into the state of the heart ; and the administration was conducted by junior officials of the hospital. Yet in a surgical career which has been estimated as involving the giving of chloroform

upwards of seven thousand five hundred times, he did not meet with a single death from the anæsthetic.

I venture to hope that this discussion, though I fear it has been on my side carried to a tedious length, may tend to increase the confidence of the profession in this safe and simple practice. Should this prove to be the case, I shall not have abused the patience of the reader.

INTESTINAL OBSTRUCTION FROM A KNOT ON THE LOWER PART OF THE ILEUM.*

By MICHAEL W. TAYLOR, M.D., Penrith.

MRS. S., aged 40, the wife of a small farmer, was a full-sized, finely made, robust woman ; she had been the mother of several healthy children, the youngest of whom, aged fifteen months, she had suckled until quite recently. She had led an active and regular life, and possessed all the attributes, and indeed had been in the enjoyment, of perfect health, and had never been subject to more than the most trivial derangement of the bowels. On Thursday, November 17th, 1870, whilst engaged in baking, on lifting a heavy pan from the ground, she was sensible of having strained herself on the left side of the abdomen, but the pain passed off directly and she ceased to regard it. Another circumstance which ought to be mentioned in this place as a possible cause of the intestinal entanglement, the results of which were soon to be developed, was, that on this evening at supper, and also on the following morning, she feasted very freely on boiled cockles, which to her were a very unusual kind of regalement. I have no evidence to show whether the slight "overreach" or this indigestible meal was the cause of her illness ; but on the evening of Friday she was seized with a cramp and twisting pain in the abdomen, recurring acutely for a time, and abating for intervals of twenty or thirty minutes. During the night she vomited frequently : what was rejected was not food that had been taken, but a yellow bitter fluid, having the colour and appearance of bile. A dose of castor-oil which was given to her was speedily vomited.

She was first visited in the forenoon of Saturday, November 19th. Her expression wore an anxious appearance, as of a person suffering from abdominal distress. The griping pain was referred chiefly to the epigastrium ; it was intermittent, and there were periods of tolerable ease ; at other times she turned from side to side, as if suffering severely. There was but little tenderness or distension over any part of the abdomen—indeed, pressure somewhat relieved her. There was no increase of temperature, nor of rapidity of pulse beyond 80. The tongue was coated white. The last motion which passed from her bowels was on Wednesday. There was no abdominal protrusion, nor abdominal enlargement, nor thickening to be felt in any situation. On viewing the case at this period, the symptoms accorded with the presumption that the attack might turn out merely as one of colic, from the irritation of indigestible matter, and might pass off with the removal of the offending cause. To effect this, blue pill and colocynth were given, with alkaline and sedative draughts ; and frequent hot linseed-meal poultices were ordered. These pills and a portion of the medicine were retained, and it seemed that during the remainder of the day she felt herself easier and thought herself better, although no evacuation from the bowels had been procured. The night, however, was one of great suffering, from the frequent and violent recurrences of the pain and vomiting, so that a summons came to visit her at five on the morning of Sunday, the 20th. The matter vomited was green bilious fluid ; it was rejected from the stomach with considerable force. The pain was still referred to the epigastrium, over which she acknowledged a slight amount of tenderness, from which, however, the rest of the abdomen was free, although it was now becoming slightly rounded in contour and tympanitic on percussion. An enema of one pint of warm water and eight ounces of olive oil was injected, which had the effect of relieving the lower bowel of a considerable quantity of fecal matter in the form of scybala and pellets, but not of a loose nor fluid motion. Two pills, with a quarter of a grain of morphia in each, were left for administration every two hours. Shortly afterwards she obtained ease ; she was able to take a little beef-tea ; the paroxysms of pain and sickness ceased, and she obtained some sleep. On visiting her in the evening, the pain in the epigastrium, though not so severe, had become more constant, and more aggravated by pressure ; there was more general distress and restlessness, and great thirst, dry skin, dry tongue ; pulse 64, hard. She had vomited recently, from time to time, a quantity amounting to a washhand-basin full of brownish-yellow fluid, with a distinct fecal odour. There had been no further evacuation from

* Read before the Cumberland and Westmorland Branch, May 3rd.

the bowels. It became certain now, that physical occlusion existed in the intestinal tract. The question of the first importance was to define the site and locality of the obstruction; and, in the second place, from among the multiform and diversified, and sometimes anomalous, pathological causes of ileus, to differentiate to which the present symptoms might be more precisely referred. The parietes of the abdomen seemed to contain a considerable thickness of muscle and fat, but not to such a degree as to depreciate the results of an exploratory examination by palpation and percussion. There were no coil-like markings over the abdomen; the bulging there was to a moderate extent only; the regions presenting the fulness were the epigastrium, the umbilical, and the hypogastrium: the percussion resonance over this superficies was drum-like and amphoric. There was no fulness nor distension of the sides above the *criste ilii*, in the localities occupied by the ascending and descending colon, nor was there dulness over these spaces—the signs which generally supervene in strictures at the sigmoid flexure. Viewing these indications, and moreover the fact that this morning the injection had penetrated a portion of the colon and cleared it of its contents, there was already ground for the presumption that the obstruction was not in the large intestine, but at some point at or above the cæcum.

To consolidate the diagnosis thus far, and also as a remedial measure of the first importance, it was determined to use O'Beirne's long tube. A flexible tube was passed up carefully into the colon to the extent of twenty-two inches, and the presence of its extremity in the neighbourhood of the transverse arch was rendered unequivocal by auscultating the passage of the injection as it flowed at that spot. A pint of linseed-oil suspended in a quart of warm milk was thrown in. The injection flowed readily; it caused pain, and it was discharged in a few minutes without having contracted any faecal odour, or having any faecal admixture of any consequence.

When it became apparent that this aid, often so useful, but useful chiefly in cases of impaction in the larger bowel, had failed, I resolved to try a method which in two desperate cases of ileus I have used with immediate and unmistakable success; viz., the inflation of air charged with the vapour of chloroform.

The method by insufflation is as old as Hippocrates; for, after antiphlogistic and emollient measures and clysters had no effect, he then ordered "wind to be thrown into the belly by a pair of smith's bellows, that both the abdomen and cramped muscles might be distended, and then, withdrawing the bellows, a clyster to be injected—not prepared of things very warm or heating, but of such as dissolve or mollify the fæces; then the patient was to sit on a perforated chair over a sponge of hot water charged with the ingredients of a clyster". Alexander of Tralles, or Trallian, as he came to be called, in treating of the cure of the present malady, gives us the following express caution and sound advice regarding inflation. "If it be a cold colic, or an iliac affection without any preceding inflammation, in that case it might be of use to practise the cure by inflation; but if the bowels are locked up by an inflammation antecedent, the method of cure by inflation will be not only useless but even prejudicial."

The method by which I cause the air to be charged with chloroform is by an apparatus fixed between the hand-bellows and the flexible rectum-tube, consisting of a circular wooden-box containing a sponge; the box is pierced with an aperture fitted with a plug or screw, through which the chloroform may be dropped when required. The air, on being forced through the sponge by the bellows, becomes highly charged with the chloroform-vapour. This method was used in the present case: air and chloroform-vapour were blown into the bowels for some minutes slowly and gradually, until great distension, apparently of the whole abdomen, was produced. It was attended, however, with no immediate benefit nor satisfactory result; no stool nor flatus were passed. As she seemed much exhausted and faint from the pain of the procedure, nothing further was then attempted. A pill with half a grain of opium and a quarter of a grain of belladonna was ordered every three hours, to be alternated with small doses of sulphate of magnesia and sulphuric acid and tincture of belladonna.

On the morning of the 21st, it was found that she had passed a better night, and had slept for two or three hours at a time. There had been no vomiting, and but little tormina. She had not been sensible of the voidance of the air injected on the previous day, nor of any movement or rumbling in the bowels. In the course of the day, however, the attacks of tormina returned, and she twice discharged, with a jerky action of the stomach, several mouthfuls of greenish-yellow fluid without faecal odour; there were some hiccough and thirst; pulse 80. The long tube was again introduced, and an injection of six ounces of milk, in which ten minims of croton-oil were suspended, was thrown into the colon. This had the effect of setting up energetic peristaltic action of the bowels; in half-an-hour the injection was returned, but without faecal

admixture, though still with a faecal smell; a vast quantity of flatus also came away, but without characteristic odour. She stated that for the first time she now felt a stir and rumbling in her bowels, whereas hitherto all had been fast and torpid, noiseless and without movement. At this stage a hope was entertained, from the slightly more favourable indications presented by a return of peristaltic action, that some passage might be effected. So far there had been an absence of the general or local symptoms of inflammation either of the peritoneum or of the bowel itself. The case was judged to be one of simple ileus, with distension and paralysis of the muscular coat of the bowel, without inflammation, as described by Abercrombie; and it was certain from the results of the exploratory injections that the site of the mischief was above the cæcum.

Early on the morning of the 22nd, the retchings, which had abated after the enema, returned. There had been several attempts, but no evacuation. The abdomen was not altogether free from pain, and there was a very slight amount of tenderness; pulse quiet. An enema of warm water and a dose of two ounces of spirit of turpentine was administered; shortly afterwards the injection was returned, mixed with a small quantity of faecal matter. The whole surface of the abdomen was kneaded with oil, and emollient poultices were applied, and pills with compound tincture of colocynth and one minim of croton oil given.

In the evening it was found that the purgative pills had been speedily vomited; the nausea and retching were more aggravated; hiccough frequent; no stool. She stated that she recognised the taste of turpentine distinctly in the fluid rejected from the stomach to-day; and the discharges which had been preserved certainly gave out the smell of turpentine, showing apparently that some of the injection had ascended to and penetrated the constriction, and mingled with the retained intestinal contents above—a fact most noteworthy, as showing that the occlusion was not thorough nor complete. The abdomen was rubbed with equal parts of belladonna and glycerine. The pills of opium and belladonna, which had been taken up to this time, were stopped, as they were frequently rejected, and their physiological effects was not discerned.

November 23rd. The vomiting and hiccough continued, but with longer intervals; beef-tea and effervescing drinks having been sometimes retained for two or three hours. There had been great thirst; pulse 86. Half an ounce of spirit of turpentine was given by mouth, and an enema containing the same was administered, and stupes of turpentine were applied to the abdomen. The turpentine draught was retained for three or four hours, and she passed several times a quantity of flatus. Urine had all along been passed in large quantity, containing abundance of urates. She was ordered to continue the turpentine applications.

November 24th. She passed an uneasy night, with no sleep. She vomited twice during the night a quantity of yellowish green fluid; pulse 104. There was no increase of tension nor of pain in the abdomen. An ounce of castor-oil was given and retained. *Vespere*: There had been no more retching; she continued to pass wind in small quantity; pulse 98; tongue red and dry. A large injection of oil and soap and water was given; on its return it brought away a large quantity of wind, after which she expressed herself much relieved.

November 25th. About 3 A.M. an attack of vomiting occurred, which brought up the castor-oil which had been swallowed fourteen hours before. At 7 A.M., having felt a desire to go to stool, she rose up, unaided, and passed flatus with great force, and with a strong faecal odour, and also a small quantity of thin fluid of a faecal nature; she passed at the same time a quantity of urine. At 9 A.M., stercoraceous vomiting occurred, and again at 12 noon. She broke out in a profuse clammy perspiration, and expressed herself as being relieved afterwards. The pulse was more frequent, 104, weak and constricted.

November 26th. Occasional retchings occurred during the night, without faecal admixture. There was no passage from the bowels; the general condition was much the same. One-twelfth of a grain of strychnia and a quarter of a grain of belladonna was ordered to be given every three hours. The abdomen was rubbed and kneaded with camphorated oil.

November 27th. There was no material change; four pills had been taken. She stated that, after having swallowed any food or fluid, she felt an impulse downwards to the lower part of the bowels, where the action stopped and became inverted, and was by and by followed by vomiting.

As is often the case in this malady, we had arrived at a point in the treatment at which we were brought completely to a stand, at which it was in vain to affect the repetition of measures which had failed, and when it was becoming evident that it was too late to cast about for fresh principles of treatment. It had so happened that this morning, on the persuasion of a friend, she had been induced to take a large quantity of

fresh brewer's yeast—the intention of which remedy I suppose to have been that it might evolve in the bowels a quantity of fixed air, and so extricate any unnatural twist or convulsion that might have been formed. She was desired to continue it along with treacle-beer.

November 28th. There had been no vomiting since yesterday. There had been sensations of movement and peristaltic action in the bowels, and offensive flatus had been passed repeatedly. She had felt more relieved and easier than for several days, and she was even hopeful. This result she attributed to the yeast which she had taken. It was a delusion, however, created probably by that mental perverseness, not unusual, which is apt to bias sense in favour of nostrums and advice derived from unorthodox or spurious sources, for in material respects no improvement could be substantiated—indeed, on the 29th, fæcal vomiting had recommenced, with much hiccough and general anxiety and distress. The abdomen had become decidedly tympanitic and painful on pressure; pulse more frequent, very feeble and compressible. Enemata of beef-tea were ordered every three hours.

November 30th. Fæcal vomiting occurred; she had hiccough, eructations, great prostration; the exposed parts were cold and clammy; she was nearly pulseless; the tongue was red, and there were sordes about the gums; the mental condition was drowsy and semi-stupid. Diffusible stimuli were ordered.

December 1st. Death took place at 3 A.M. She had passed nothing from the bowels, and had vomited fæcal matter to the last. The mind was conscious. The duration of the disease was fourteen days.

Necropsy Eight Hours after Death.—The body was plump, with a considerable layer of fat in the parietes of the abdomen, which was greatly distended, and had a drum-like resonance. The peritoneal covering was smooth and glistening, and disclosed no inflammatory appearances nor products. The small intestines were much distended, and concealed from view all other organs; their parietes were thin and transparent, without rupture, and not remarkably changed in colour, until approaching the right iliac region, where a livid mass of strangulated bowel indicated the site of the obstruction. The lower portion of ileum along with the cæcum was removed for examination; and the cast now exhibited was taken from the preparation. A portion of the ileum, about



a. Ileum. b. Colon. c. Cæcum. d. Inclosed loop of Ileum. e. Knot.

twenty-two inches in length, was found tied in a running knot about two inches above the cæcum. The entanglement must have taken place in this wise: about twelve or fifteen inches of the lowest part of the ileum must have become coiled in a circular loop; the portion of the intestine directly above must have twined round from behind to the front of this coil; a knuckle or rather elbow of this portion of the bowel must then have accidentally slipped through the loop, and, having become embraced by it, on the tightening of the noose, have been caught in a slip-knot, or the same knot as that by which sailors hang their neck-tie. This included portion formed a sort of *cul-de-sac*, being bulged out into a globose form, with a semilunar outline, like a bag or pouch, measuring five inches by three, and marked on the surface with the depressions of six or eight sacculi or folds. It was drawn into puckers at the neck, but the little finger could be passed freely under the point of constriction; it contained fluid, and was not immoderately distended, and the colour was heightened only and not livid. It was the cæcal or distal end of the ileum which constituted the knot, which was in one place of a dark brick-dust or brown colour, and in another coil of a livid purple, and in parts black, soft, and gangrenous. This was the point at which the constriction was greatest. Below the knot the distension and dark colour terminated abruptly. The cæcum and colon were white and collapsed. The stomach was empty; the gall-bladder full. No disease was found elsewhere.

REMARKS.—It is the disclosure of the pathological cause that attaches to this case of ileus an interest and importance; and the value of it depends on the circumstance, that it affords a perfect example of an exceeding rare form of intestinal lesion—viz., true knotting of the bowel. Amongst the various causes of intestinal obstruction seated in the bowel itself, as distinguished from those which proceed from constrictive agencies external to the intestine, we may arrange under the one head of *volvulus*, two subdivisions—viz., (a) twists or folds of the intestine on its own axis; and (b) twists around another piece of bowel, or knots. *Volvulus*, even strictly in its generic sense, as including both these two forms of entanglement, is a comparatively unfrequent cause of ileus; and species *b*, or knotting of the bowel, is a lesion of the extreme degree of rarity. Dr. Hilton Fagge (*Guy's Hospital Reports*, 1868) has given the records of all the cases of intestinal obstruction which have occurred at Guy's Hospital for fifteen years, from 1854 to 1868 inclusive. The necropsies were fifty-four in number; and only seven died from twists or folds of the intestine, or *volvuli*; and I do not find one case amongst them from knotting of the bowels. The most elaborate essay on intestinal obstruction is that of Duchaussoy, published in 1860 (*Mem. de l'Académie de Médecine*, 1860, xxiv). It is founded on the results of five hundred and eighteen observations, in which the anatomical changes are accurately described. Out of these five hundred and eighteen fatal cases of ileus, twenty-one were caused by "strangulation of the intestine by the intestine", and are tabulated by him under head No. 2, under which he includes various forms of displacement and compression, as well as twists and *volvuli*. On examination of the causes of the strangulation in these twenty-one cases, as set forth by Duchaussoy, I find that thirteen were caused by twisting of the bowel on its own axis in various ways; that four were from *enroulement*, or from a piece of bowel being wrapped or rolled around another; and amongst these only one case of the bowel being knotted. The case is reported from Parker, and the facts are given in a note. Like the case just related, the entanglement was formed on the lower ileum, near the cæcum, by two loops, one passing within the other, and drawn tight into a knot an inch and a half long. In one of the loops was a cherry-stone. The case was operated on by enterotomy. The knot could not be unravelled, but was cut off. The case recovered in four and a half months.

I have examined the volumes of our British medical periodicals for half a century. They furnish many reports of cases of ileus, the more numerous being cases of intussusception. Cases arising from twisting of the bowel, are related by Abercrombie, Oudney, and one or two others; but I have found no reference to any case of knotting of the bowel.

I have no remark to make about the diagnosis, as there are no means by which to distinguish this from some of the other forms of internal strangulation.

A consideration of the condition of the parts, as shown by the cast, will make it manifest that no medical remedies could have been of service; and that the only available chance, would have been enterotomy and untwisting and reducing the loop by the hand, which would have been feasible in this instance.

EXCISION OF THE ELBOW-JOINT: PRESERVATION OF EXTENSION OF THE FOREARM.

By C. F. MAUNDER, Esq.,

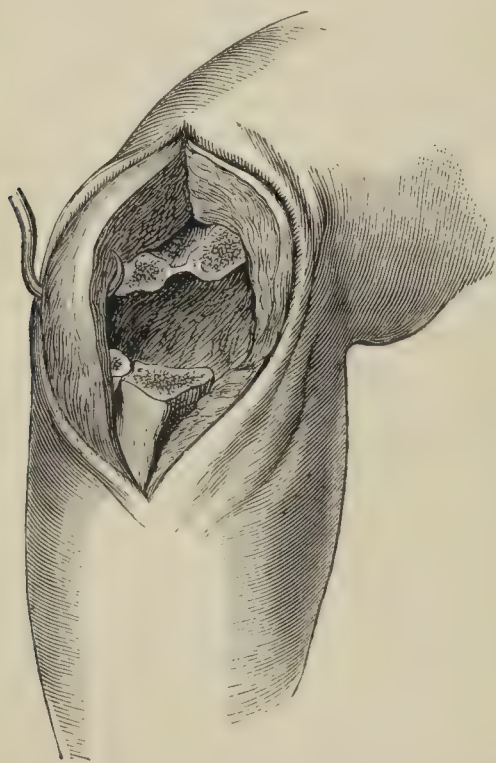
Surgeon to the London Hospital.

OF the major operations, probably no one is more successful in saving life and securing an useful limb than excision of the elbow-joint. The articulation is reached, and the ends of the bones are exposed and removed with comparative ease, by a posterior longitudinal incision, with or without the addition of a short transverse cut—the latter through the skin only. By complying with the general principles of surgery applicable to resections, few important structures are injured by the knife, and as a result we have a most useful limb—one, it is said, generally capable of performing to a large extent *all* the functions and movements of the healthy member.

It is from this latter statement that I venture to differ. Flexion shall be good, supination and pronation tolerably good; but *extension* of the forearm is generally impossible. For the latter defect, the mode of operating is responsible; but the remedy is easy, and our knowledge of anatomy will supply it. Although probably the majority of surgeons now employ the longitudinal incision, yet a certain structure to be alluded to is often severed to facilitate the operation, because its value is unknown. It is possible that the reader will be surprised when I say that the power of extension is rarely preserved; and when

it is, the means is probably not understood. On testing the movements retained by the forearm of a patient who has undergone excision of the elbow, extension appears perfect, while in reality it may be, and often is, altogether absent. A patient is desired to bend and then to straighten the forearm. He complies with the former request; but, when the limb becomes again straight, it is purely by the force of gravity: the hand and forearm fall, but are in no way extended by the triceps. The triceps muscle has no longer an attachment to the forearm. It will be remembered that the triceps muscle, while being firmly attached to the olecranon, also sends some of its tendinous fibres beyond that process to blend with the fascia of the forearm, especially with that portion of the fascia overlying the anconeus muscle; and by these fibres it is that extension may be *always* insured after excision. It is, however, probable that in exceptional instances the cut triceps acquires attachment to the end of the ulna, through the medium of fibrous tissue formed during repair. By this means, some amount of extension is secured; but it is accidental, and cannot be foretold in an individual case.

Operation.—In speaking of this operation, I must be understood to refer to that method by which the articular ends of the bones are cut away to the extent to which they are normally covered by cartilage—the one now generally adopted. I commence by a longitudinal incision at the back of the limb, in length three or four fingers' breadth both above and below and crossing the point of the olecranon. Then, if there be a wound in the adjacent integument, conveniently situated, I generally lay it open into the longitudinal incision, and am able to expose the bone-ends with greater facility. I next let the knife sink into the triceps muscle, and divide it also longitudinally into two portions, the inner one of which is the more firmly attached to the ulna, while the outer portion is continuous with the anconeus muscle, and sends some tendinous fibres to blend with the fascia of the forearm. It is these latter fibres that are to be scrupulously preserved. Thus, in conducting the early steps of the operation, two chief points have to be



remembered, instead of one (care for the ulnar nerve) as hitherto advised. The ulnar nerve, often unseen, must be lifted from its bed, and be carried over the internal condyle to a safe place; and then the outer portion of the triceps muscle, with its tendinous prolongation, the fascia of the forearm and the anconeus muscle, must be dissected up, as it were, in one piece, sufficiently to allow of its being temporarily carried out over the external condyle of the humerus. This done, the operator may proceed in the usual way; but it is not my intention to follow him further in this paper. I will add, that I have exhibited at meetings of the Hunterian and Medical Society of London three patients, adult males, who had undergone excision of the elbow-joint; and all who saw them were surprised by the degree of active extension of the forearm by the triceps muscle which each possessed.

The drawing shows the state of parts after primary excision has been performed, by the usual longitudinal incision, upon a left extremity. The tenaculum sustains the band of fibres which is to be preserved uncut.

CLINICAL MEMORANDA.

HERPES ZOSTER, GIVING RISE TO CONTAGIOUS (?) ERYSIPELAS.

AFTER reading Dr. Broadbent's interesting case of herpes frontalis giving rise to contagious erysipelas, which appeared in the JOURNAL of July 22nd, I am induced to refer to the following case, at present under my care.

A man aged 63, an out-patient in the Hulme Dispensary, suffered on June 27th from severe pain extending round the trunk on the right side. There were no abnormal physical signs, and no swelling nor redness of the skin. Temperature 98.4 deg. F. On July 4th, there was a well marked belt, composed of groups of herpetic vesicles, distributed over the whole of the right side of the thorax between the fifth and ninth ribs. These groups were perfectly defined, and appeared in several successive crops. On July 8th, erysipelatous inflammation of the affected side had appeared, which speedily spread so as to invade the left side also. At this stage, the swelling and redness were so marked and of such a diffuse character, that it would have been difficult for one seeing the patient for the first time to say what was the true nature of the case. By the 13th, these symptoms had nearly disappeared, leaving characteristic light brown scabs, some of which have now become detached, exposing small scars or pits, indicating that it was a true case of zoster, followed by erysipelas. The treatment consisted of saline purgatives, followed by thirty-minim doses of tincture of perchloride of iron, to which was afterwards added five minims of liquor arsenicalis, three times a day.

A son of my patient, who had been on a visit to his father, and had slept with him for some nights, was said to have returned home with a "red rash on his skin" exactly like his father's, which disappeared at the end of five days without medical aid. Viewed in the light of Dr. Broadbent's case, it is not improbable that it may have been an erysipelatous attack, communicated by the father to the son; but, be that as it may, it is interesting to note the occurrence of herpes zoster, a neurotic affection, with erysipelas, apparently in the relation of cause and effect.

C. CURRIE RITCHIE, M.D.,

Physician to the Hulme Dispensary, Manchester.

REMOVAL OF THE PITTING OF SMALL-POX BY ERYSIPELAS.

DURING the time that I held the post of Medical Inspector to the Privy Council, I saw at Chesterfield an elderly woman who told me that in her youth she had suffered severely from small-pox, and that for several years she had been disfigured by the pitting which resulted from it; but that, after a sharp attack of erysipelas, accompanied by much swelling of the face, the pitting had disappeared, with the exception of a few spots between the eyebrows. When one's attention was drawn to the woman's face, one could see that she had had small-pox by the few remaining marks just mentioned; but otherwise there was no indication of it, for her skin was smooth, and in an excellent condition for a person at her time of life. Have any similar cases been observed?

ALFRED WILTSHIRE, M.D., M.R.C.P.,

Physician for Diseases of Women to the West London Hospital.

ROYAL COLLEGE OF SURGEONS.—At the examinations for the diploma of membership which were commenced on Friday last, and brought to a close this day (Friday), 114 candidates offered themselves. Of these, 43 had previously obtained a recognised medical diploma; 54 were examined in medicine by the College examiners; and the remainder preferred obtaining licenses in medicine elsewhere.

TREATMENT OF DIVIDED TENDONS.—In the case of a young man who had received a wound from a billhook on the back of his hand, dividing the extensor tendon of the middle finger, Dr. Bessières had two splints made, curved on the flat: one, the palmar splint, was large enough for the hand; while the dorsal one was two finger-breadths wide. The wound was united by a suture passing through the skin only; the concave surface of the palmar splint was then applied to the hand, and the convex surface of the dorsal splint to the middle finger which was kept thus (with the aid of diachylon plaster) in a state of extension. At the end of three weeks, a little stiffness in flexion remained; and six weeks after the injury the man had complete use of his finger.—*Annales de la Société Méd.-Chir. de Liège*; and *Journal de Méd. et de Chir. Pratiques*, Février 1871.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.NOTES ON THE TREATMENT OF GANGLION IN THE
DUBLIN HOSPITALS.

RICHMOND HOSPITAL.

THE following is a *resumé* of Dr. R. ADAMS' treatment.

The most simple form of ganglion, and that which is most frequently met with, appears in the shape of a small fluctuating tumour on the back of the wrist and carpus. This he always treats by passing through and through the tumour a curved surgical needle, at the same time pressing forcibly with both thumbs the swelling, so as to expel completely the glairy contents of the tumour through the two orifices made by the traversing needle. Thus the opposed surfaces of the interior of the ganglion are made perfectly to confront each other: but this is not enough; a small compress must be immediately placed over the space which had been occupied by the ganglion, and the hand and fore-arm of the patient is to be placed on a support, such as that which Burton's American hand-splint forms, and should be retained there for at least fourteen days. There is a fluctuating bursal swelling (classed by some under the head of ganglion) formed sometimes in the bursæ of the tendons of the flexor muscles of the fingers, and which is remarkable for presenting a prominence not only in the palm of the hand below the annular ligament of the wrist, but also an oblong prominence above the narrowing of the wrist in the site of the annular ligament. This species of bursal swelling (denominated by the French *en bissac*) appears to Dr. Adams to be, on the one hand, very amenable to anti-phlogistic treatment and rest; on the other hand, he has known active surgical treatment, consisting in punctures and incisions made into such bursal tumours, productive of very sad results. He has, for example, a distinct recollection of three cases of this form of bursal tumour, which to his knowledge had been treated by incisions into the bursal swellings, and in these three cases it became necessary to amputate the fore-arm above the elbow-joint. Dr. Adams informs us that, in the forthcoming second edition of his treatise on *Chronic Rheumatic Arthritis*, he will find it necessary to produce an engraving of the hand and fore-arm of a patient (see woodcut) in whom an oblong swelling



had formed in the bursæ of the tendons of the flexor muscles of the fingers; and in this case the bursal swelling was treated actively by an incision made above the annular ligament. Acute inflammation, attended with what Baron Dupuytren denominated "internal strangulation" and gangrene, supervened, and amputation became necessary.

Mr. JOHN HAMILTON believes that, when the ganglion on the back of the wrist is of medium size, with thin walls, it is best treated by the common proceeding of breaking it with a smart blow with the flat of a book, while the wrist is kept at the utmost degree of flexion, making the parts tense. The neglect of the latter proceeding often causes failure. When the sac is ruptured and the contents effused into the surrounding cellular tissue, the application of a compress, formed of a piece of money or sheet-lead, wrapt in lint, and kept on for a few days, usually ensures a perfect cure. If it fail, or that it cannot be broken, he has succeeded in this way: he draws the skin aside, and passes a narrow tenotomy-knife into the sac, endeavouring to make the wound in the sac irregular and lacerated by knocking with the edge of knife in different directions, to prevent its union. A compress, as in the previous method, is then applied. He thinks the ganglion is more liable to a

return after this plan of treatment than after breaking it. Another, and Mr. Hamilton believes a preferable plan, is shown in the following case. Miss B., aged 12, had a ganglion of the size of a chestnut on the back of the right hand near the wrist, over the carpal end of the metacarpal bone of the index finger, freely fluctuating, and the integument moving over it readily. But, though it could be moved from side to side, it evidently was connected with the extensor tendons. It had been blistered; pressure had been perseveringly applied; and an attempt made to break it with a book. This last he tried, but unsuccessfully. He therefore punctured it with Weiss's grooved needle, and a perfectly limpid fluid, of the consistence of white of egg, but purer-looking, came out, till about one-third of the contents had escaped, when, from the smallness of the opening, it ceased to flow. The integuments, which had been pulled aside, were then let fall back into their place, and covered the opening. The hand was put on a splint, and a compress of sheet-lead and lint firmly applied. This was kept on, with occasional removals, for a month. It was then removed, after which, though at first there was a little fulness at the part, it entirely disappeared, and never returned. Mr. Hamilton does not like the seton; it is very hard to limit the amount of inflammation caused by it. He prefers to open the ganglion freely, and insert a piece of lint into the cavity. This excites inflammation and suppuration, and effects a radical cure. The suppuration gets free vent; and on this account the irritation is less than where matter is formed in the sac from the irritation of a seton. When there are foreign bodies in the ganglion, either like melon-seeds or irregular-shaped bodies of cartilaginous texture, pain, absent in the ordinary ganglion, is usually felt. He makes a free valvular opening, through which the foreign bodies are extracted. This proceeding has always been followed by inflammation of a troublesome character. Mr. Hamilton thinks that we should not forget that ganglions cannot always be opened without some apprehension, and that the general health should be carefully considered before anything of the kind should be done. Monro and Sir B. Brodie both relate cases of death from this cause. Sir Philip Crampton had mentioned to him a similar case. Mr. Hamilton had seen an instance where such violent inflammation and suppuration followed opening the ganglion in the front of the wrist beneath the annular ligament, that finally amputation above the elbow had to be performed.

JERVIS STREET HOSPITAL.

Dr. AUSTIN MELDON finds ganglion one of the most common affections in the dispensary of Jervis Street Hospital. The following mode of treatment he seldom finds to fail. If the cyst do not yield to firm pressure, a tenotomy-knife is introduced subcutaneously. This is made to travel through to the opposite wall of the cyst. This latter is scarified freely, and the knife withdrawn. A small piece of thick pasteboard or the like, about the size of a halfpenny, is next placed over the ganglion and fixed by means of several pieces of sticking-plaster, arranged as in cases of anthrax. This is left on for twenty-four hours and then restrapped, and generally in the course of a short time all sign of the affection has disappeared.

STEEVENS'S HOSPITAL.

Mr. W. COLLES and Dr. R. McDONNELL think that the treatment of ganglion varies considerably with the exact nature of the case; but their experience has led them to form a favourable opinion of evacuating the contents and injecting tincture of iodine. This they find on the whole a satisfactory mode of treatment.

The treatment which Dr. HAMILTON usually adopts for ganglion consists in rupturing the cyst either by the steady pressure of both thumbs or by sudden percussion, so as to discharge the contents into the surrounding areolar tissue, and to promote by firm pressure the adhesion of the walls, so as to obliterate the sac; this may be effected by a compress of cork, hemispherical in shape, and adapted in size to each case. It should be covered with chamois leather and firmly secured by a bandage, so as to bring the walls of the cyst into as close and accurate contact as possible. In cases where the cyst is too thick and strong to resist this mode of evacuation, it would also more than probably resist the after-treatment by simple pressure. Dr. Hamilton then adopts the following method of dealing with the disease. A hypodermic syringe, charged with tincture of iodine, is introduced into the cyst and intrusted to the care of an assistant at the opposite side; a grooved needle is inserted, and the contents evacuated along the groove. The needle is now withdrawn, and pressure made for a few seconds on the puncture; the tincture of iodine is then discharged from the syringe into the sac; moderate pressure is made with a compress and bandage. He had not seen inflammation reach a troublesome degree, although the pain is in some cases severe.

ADELAIDE HOSPITAL.

Dr. BARTON's experience is that, when a ganglion is situated upon

the back of the wrist, and when it is small and circumscribed, the old treatment of rupturing the sac by a smart blow, and then putting on pad and bandages, does very well; but when it is situated on the anterior aspect of the limb—particularly when occurring, as it generally does, in weakly young persons, then this treatment is not satisfactory. A case occurred to Dr. Barton some years ago, in which the ganglion was on the back of the wrist, rather large, and not distinctly circumscribed. It had been ineffectually struck before he saw it. He was obliged in this case to pass a silver wire through the sac, and in a few days sufficient inflammation was set up to obliterate it. Another case he treated a few months ago—a weakly girl of fourteen. It was on the front of the wrist. He struck it first without hurting it; and, seeing he would have to use too much force in this way of treating it, Dr. Barton punctured it with a grooved needle. He cleared out the contents and put on pad and bandage; but it gathered again, and he was obliged to pass a silk thread through the sac. When the contents became turbid and the tumour swollen and tender, he withdrew the ligature, and it was permanently cured.

Mr. B. WILLS RICHARDSON, when the cyst is tough, and when practicable, opens it subcutaneously with a fine tenotomy-knife, so as to discharge the contents into the surrounding areolar tissue; he then scratches or scores the inside of the cyst-wall, and, having withdrawn the knife, applies a firm pad (such as a penny-piece covered with chamois leather) over the collapsed cyst, and secures it in position with a roller. Some ganglion-walls are so thin, that they may be ruptured by firm pressure made with the thumbs. When ganglia have been in situations to render the knife unadvisable, Mr. Richardson has treated them successfully by bursting them with a book. A few years ago he saw a tolerably large ganglion under the ball of the thumb and greater part of the palm of the hand. It was ruptured with a book. Firm pressure was made over the broken sac for some time, and it did not refill. Should the surgeon be inclined to inject the ganglion, say with tincture of iodine, he must first endeavour to ascertain if it communicate with a joint. A ganglion that opened into a joint has been injected before now, and the joint destroyed. If, before operating, it be necessary to discover whether an ordinary ganglion communicates with a joint, this is much more imperative as regards some of the synovial cysts near large joints. This, however, cannot be always ascertained; for in some cases the contents of the cyst are so thick, and the communication between the cyst and the joint so narrow, that it is impossible to squeeze the semifluid contents from the sac into the joint.

ROYAL INFIRMARY, ABERDEEN.

DEATH OF A PATIENT WHILE UNDER THE INFLUENCE OF CHLOROFORM.

(Under the care of Dr. PIRRIE.)

DR. PIRRIE has kindly forwarded the notes of this interesting case for publication.

Peter Urquhart, aged 37, a moderately stout man, but said to have been of intemperate habits, was brought into the theatre of the Aberdeen Royal Infirmary, at twelve o'clock on Wednesday, the 19th of July, for the purpose of having Wood's operation for the radical cure of hernia performed on him. Chloroform having been administered by one of the clinical clerks, in the presence of Dr. Kerr, Dr. Fiddes, and myself, the means employed being a single fold of a towel held over the face, I had just made the preliminary incision, and was in the act of performing denudation of a small portion of skin from the subjacent parts, when my attention was called, by one of my colleagues, to the alarming appearance of the patient, whose pulse and breathing had suddenly ceased. His trunk, head, and neck were immediately rendered straight; his tongue drawn out; artificial respiration, by Sylvester's method, commenced and vigorously carried on; ammonia was applied to his nostrils; galvanism energetically used; water dashed on his face and chest; and a vein at the bend of the arm and the external jugular vein opened: from the latter a small quantity of blood flowed. The treatment was continued for half-an-hour, but without any return of the signs of life. It may be mentioned that, though the patient was exceedingly anxious for an operation, he was greatly alarmed at the prospect of it, and expressed a decided wish that chloroform should be administered.

Post Mortem Appearances.—The examination took place on Friday, July 21st, and was conducted by Dr. Beveridge in the presence of Dr. Ogston, Professor of Medical Jurisprudence, Dr. Kerr, Dr. Fiddes, and myself, when the following appearances were observed.

Externally, there were diffuse lividities of the surface over the sides of the face and neck, fronts of both shoulders, outsides of the arms, insides of the thighs, and the dependent parts of the head, trunk, and lower limbs. The joints of the upper extremities were flaccid, those of

the lower rigid; the pupils were pretty widely dilated; the features placid. The scalp was bloody on removal; the vessels of the pericranium minutely injected; the dura mater, at a point corresponding with the upper edge of the frontal bone over a space of about an inch in breadth, had lost its usual smooth glittering appearance, and its vessels there and generally were congested. Bloody points were perceptible here and there in the grey matter of the convolutions of the brain. The cerebral ventricles were filled with clear fluid, the right lateral one to distension. The choroid plexus was loaded with fluid blood; the cortical part of the cerebellum throughout was darker than usual, and of a marked purplish hue; the blood within the head was fluid and dark, in rather greater quantity than usual, the excess of blood chiefly confined to the sinuses. The brain weighed fifty ounces. The walls of the heart were slightly flaccid; there were three ounces of fluid blood in the right cavities of the heart, four and a half drachms in the left; blood thinner than natural and frothy. The walls of the left ventricle and the septum cordis were in an advanced state of fatty degeneration; the walls of the right ventricle appeared, to two of the examiners, to be thinner than usual. The lungs, particularly at their dependent parts, were deeply loaded with dark fluid blood, but otherwise healthy. There was partial fatty degeneration of the kidneys. The blood throughout the cavities of the body, on exposure to the air, became brighter than usual. The blood and a large portion of the liver were examined on the following day in the laboratory of the university by Professors Brazier and Ogston; but the usual process of passing the vapour from those substances through a red-hot tube did not yield any of the usual indications of the presence of chloroform.

My colleagues and myself are of opinion that death was the result of mixed causes, viz.: chloroform inhalation, dread of operation, and diseased condition of heart, the last being the most influential.

TAUNTON AND SOMERSET HOSPITAL.*

LOOSE CARTILAGES IN THE KNEE-JOINT.

(Under the care of Mr. H. J. ALFORD, M.B.)

THE following case is reported by Mr. G. W. Rigden, house-surgeon.

S. W., aged 39, a labourer of Somerton, was admitted into the Taunton and Somerset Hospital on April 22nd, 1871. He had noticed for some months that he could not bend his right knee so easily as his left; but, as he was able to walk about and do his work, he took but little notice of it. About three months before his admission, he first found a lump on the outer side of his right knee-joint, and had noticed that it was not always there.

On admission, it was found that there was no pain in the joint, and no effusion. Two loose cartilages were most distinctly felt at the outer and upper edge of the patella. His knee could be flexed or straightened without pain. He could bear pressure on any part of the joint, and the cartilages could be easily manipulated without causing pain. A pad of lint was fixed between the patella and the cartilages by means of a figure-of-eight bandage, in order to prevent them from slipping back into the joint; and the limb placed in a McIntyre splint.

On May 1st, Mr. Alford entered a tenotomy-knife about two inches above the cartilages, while an assistant was pressing them upwards; and, after a few sweeps of the knife, the cartilages were pushed up out of the joint into a bed prepared for them under the skin of the thigh. A strip of strapping was then firmly fixed between them and the joint, and the bandage and splint were reapplied. The patient was ordered to lie perfectly still, and to be kept on low diet for a week. No inflammation followed the operation.

On May 20th, Mr. Alford removed the cartilage by means of a simple incision. The wound was dressed with carbolic acid dressing, and the figure-of-eight bandage was firmly applied, as also the McIntyre splint.

It was not until June 8th, when the wound was quite healed, that the strapping above the joint was removed, together with the splint. A figure-of-eight bandage was applied, and the patient advised, for safety, to remain in bed a few days longer. This he did not do, and on June 10th he left the hospital.

The cartilages were found to present the appearance of ossifying cartilage. They were flattened and oval in shape. One weighed 106 grains, and the other 90 grains.

The case is interesting, not only as showing how two such large bodies can exist in the knee-joint without much inconvenience, and can be removed from it, but because the disease is rare. The last case seen in the Taunton Hospital was in 1862, and was reported by my predecessor, the late Dr. Gibson, in the BRITISH MEDICAL JOURNAL for that year. In that case there was but one cartilage, weighing 160 grains; and it was removed by Mr. Alford in the same way.

* Read before the West Somerset Branch.

THE ANNUAL MEETING, 1871.

TICKETS OF ADMISSION are being issued to members, the presentation of which will be necessary in order to obtain the privileges granted by the Railway Companies with whom arrangements for the journey to and from Plymouth have been made. (See page 132.) Gentlemen intending to be present at the meeting, should at once send their names to Dr. Littleton, 1, Lansdowne Place, Plymouth.

BRITISH MEDICAL JOURNAL.

SATURDAY, JULY 22ND, 1871.

DYNAMICS OF NERVE AND MUSCLE.

I.

AN interesting book on the *Dynamics of Nerve and Muscle*, by Dr. C. B. Radcliffe (Macmillan and Co., 1871), tempts us to make some observations on the subject, not only because the theme is one of surpassing interest, but also because Dr. Radcliffe—one of the busiest practitioners in this distracting metropolis—has for years been able to find time to labour at a subject which is one of the most recondite in the whole range of physiology. We cannot agree with all that Dr. Radcliffe says on this subject; but, although we dissent from some of his views, we would none the less cordially congratulate him on this effort, and we trust that he will continue his researches with the unflagging zeal which characterises him.

We cannot here follow Dr. Radcliffe in the discussion of all the points on which he dwells in his treatise, but we shall take up a few of the more salient. As the starting point of his doctrines regarding nerve and muscle action is to be found in his views regarding the electrical phenomena of these tissues, we shall refer first of all to this subject.

There is scarcely any portion of scientific history which has more fascination for the physicist or for the physiologist than that concerning animal electricity. A century all but a year has elapsed since Walsh, by his discovery that the shock of the torpedo is due to electricity, laid the foundation-stone regarding animal electricity. Fourteen years later (1786), Galvani made the celebrated observation which ushered in a new era in the history of electricity, and stamped his name with immortality. Most fortunate is it for us that in Galvani's household were to be found those whose delicate palates enabled them to appreciate the exquisite flavour of frog-flesh. But for this, the ranine legs, all ready for the cook, might never have lain in Galvani's kitchen, and would, therefore, in all probability have escaped the convulsions into which they were thrown when brought under the influence of an electric machine. When Galvani found out that frogs' limbs were so easily thrown into convulsions by electricity, he employed them as electroscopes. He found that, during a thunder-storm, they were convulsed when it lightened; but, greatly to his surprise, he, by experimenting further, observed that even in a stormless state of the sky the legs, under certain conditions, became convulsed just as if they had been affected by lightning. This discovery was made by Galvani in this manner. Having decapitated and denuded a frog, he thrust a copper hook through the spine, and suspended it to the iron trellis work on a terrace in his garden. It was a fine September evening; the sky was stormless; but, notwithstanding this, when the evening breeze caused the frog's legs to dangle against the iron bars, the legs, greatly to Galvani's astonishment, were thrown into contractions the moment they touched the iron. Dismissing the idea that the electricity which thus convulsed them could be in the atmosphere, he, after finding that the legs were convulsed whenever he connected the muscles to their nerves by an arc of copper and iron, concluded that the electricity which caused the twitchings was produced in the tissues themselves. The excitement that Galvani's discovery produced was intense. Our invaluable friends the frogs were nearly exterminated by the terrible massacre which was made in

order to satisfy the scientific world of the truth of Galvani's discovery. The vulgar fancied, as indeed it is to be feared the quacks get them to fancy nowadays, that "Electricity is Life", and so they believed that all ailments might be cured by simply putting electricity into the body. Volta, however, soon put a spoke in the wheel of the Galvanists. He was professor of physics in Bologna at the time when his colleague Galvani was dazzling the world. He found that he failed to get Galvani's contractions unless he connected the muscles with heterogeneous metals such as copper and iron, and he in consequence considered these to be the source of the electricity. But Galvani found that the twitchings ensued when the nerves and muscles were connected by only one metal—*e.g.*, copper or mercury. To this Volta replied that, as it is scarcely possible to get any two parts of the same metal in precisely the same condition, there is always more or less heterogeneity, and that in consequence of this two parts of the same metal might give rise to currents just as if they had been dissimilar metals. Galvani was for a time silenced by this; but at length he found that he could get these contractions without any metals at all, by simply letting the sciatic nerve fall upon the gastrocnemius. Volta was irrepressible: he had caught the idea that heterogeneity of substance was the cause of the electricity; and so now he silenced Galvani by saying that, although he had got rid of heterogeneous metals, he had still to get rid of heterogeneous tissues. The contact of the sciatic nerve with the surface of the gastrocnemius was, after all, just the contact of heterogeneous tissues, and this contact was the source of the electricity. To crown all, Volta, proceeding from this idea of heterogeneous metals, constructed the battery which has ever since been called the Voltaic pile, and thereby gave such force to all that he had said that Galvani's views fell into total disrepute. In 1827, Nobili, by means of the galvanometer, demonstrated the existence of electricity in the frog, and thus showed that Galvani, although he was wrong in disregarding the contact of heterogeneous metals as a source of electricity, was nevertheless right in maintaining the existence of electricity in the muscles of this animal. Since Nobili's time our knowledge of the subject has been vastly extended by many workers, but more especially by Matteucci and Du Bois Reymond. According to Du Bois Reymond, *living* nerve and muscle are *continually* generating electrical currents. The longitudinal surface of the fibres is positive, while the ends of the fibres are negative. The electricity generated in the nerve or muscle is generally supposed to be of low tension—in short, it is believed to be that kind of electricity termed galvanovoltaic, or dynamical. When muscle and nerve are thrown into action, the electrical current obtainable from them is greatly diminished. This diminution is generally regarded as indicative that less electricity passes towards the surfaces of the muscle or nerve fibres. Du Bois Reymond endeavours to explain the electrical phenomena of muscle and nerve by supposing that these tissues contain a number of minute moveable particles, each one of which has two negative poles and a positive equator. While the tissue is at rest, the negative poles point to the ends of the fibres and the positive equator to the longitudinal surfaces. During action he supposed that a partial rotation of particles takes place, whereby the positive equator of one particle is brought against the negative pole of a neighbouring particle. The electrical currents, instead of then passing towards the surfaces of the fibres, are, as it were, short circuited, and kept almost entirely within the substance of the fibre. A model constructed by Du Bois Reymond on this hypothesis serves, as we have often convinced ourselves, to demonstrate experimentally the chief electrical phenomena of muscle and nerve. Some, indeed, have smiled at Du Bois Reymond's hypothesis of these mobile peripolar particles; but the greatest living physicist—Helmholtz—regards it as one of the most valuable ideas which we owe to the distinguished Berlin physiologist.

In the opinion of Radcliffe, however, there are no *currents* in muscle or nerve, unless the longitudinal surfaces of the fibres be artificially connected with their ends. He believes that the electricity is *static*, and that, as Galvani long ago imagined, the fibres resemble Leyden jars. These living "jars" are, according to our author, charged with elec-

tricity when they are living and at rest, and when they pass into action they discharge their electricity. As the statical nature of the electricity, the state of *charge* during the inaction of the muscle and nerve, and the *discharge* of electricity during action, are fundamental points with Radcliffe, it becomes us to examine them somewhat closely. He supposes that by oxidation or some other cause positive electricity is evolved outside the sarcolemma—to speak of muscle only, for convenience—and that this by induction causes the substance within the sarcolemma to become negative. In this way the fibre resembles a Leyden jar, the glass or dielectric of which is represented by the sarcolemma. Radcliffe has constructed a model of muscle on this hypothesis, and, according to him, this model suffices to illustrate all the facts. If this be true, then, we have two schemes constructed on two very different ideas which illustrate the facts that may be observed. Were Radcliffe's view the correct one—we may say in passing—that we fail to see why it is that he will have the electric state of the sarcous substance determined by the evolution of electricity outside the sarcolemma—the converse might be just as probable, perhaps rather more so. But there are difficulties which hinder the acceptance of Radcliffe's Leyden jar hypothesis. It involves the existence of a bad conductor—a dielectric—such as the sarcolemma is supposed to be, around the substance of the fibre, which shall answer the purpose of the glass in the Leyden jar. True, in voluntary striped muscle we may say that we have this. In nerve, the white substance of Schwann, or the nerve-sheath, might be made to do service in support of the view; but in the striped muscle of the heart, and in unstriped muscle generally, where is the dielectric membrane to come from? It would, we think, be simple imagination to put a membrane round these fibres. If Radcliffe cannot show the existence of such a membrane, or of a structure that will serve instead of it, his Leyden jar view seems to us untenable. But Du Bois Reymond's view needs no such membrane. It harmonises with, so far as we know, all the facts of our case, and therefore we cannot as yet consent to lay it aside.

As is well known, when a torpedo or other electrical fish is irritated, a discharge of electricity ensues. According to Matteucci and Radcliffe, a similar discharge takes place when a muscle or a nerve is irritated: this is termed by them the "torpedo-like discharge". The existence of this discharge is absolutely essential to support Radcliffe's views regarding muscle and nerve action—indeed, he seems to us to base every thing upon it. Where is the evidence of the discharge? Two facts are adduced. 1. If we place a muscle or a nerve on the electrodes of a galvanometer, wait until the needle deflected by the current from the tissue comes to rest (at say 30 or 40 deg. from zero, in the case of a muscle), and then throw the tissue into action, we find that the needle returns towards zero, and that if the active state of the tissue be kept up the needle rests near zero, or even at it. In the case of nerve, indeed, it sometimes happens that the needle goes to the other side of zero, indicating a reversal of the poles of the nerve. This, says Du Bois Reymond, is due to a partial rotation of the peripolar particles of the tissue leading to a diminution of the electric tension at the free surfaces of the tissue, and, it may be, to a positive reversal of the poles of the tissue. On the other hand, Radcliffe maintains that the return of the needle to zero is evidence of discharge or escape of the electricity from the tissue. Unless we can in some way catch the going guest we decline to believe in his departure. 2. It was thought by Matteucci—and Radcliffe is of the same opinion—that the following experiment is evidence of the departure of the electricity in the case under discussion. If we take the legs of two frogs having the sciatic nerves dissected out, and left in connection with the gastrocnemii; let us call the one leg A and the other B. Lay the nerve of the leg A upon the gastrocnemius of the leg B, and then irritate the nerve of the leg B. Most curious it is to see that when the gastrocnemius of B contracts the gastrocnemius of A contracts too. The nerve of A is irritated by something which takes place when the muscle B contracts. What is that something? The torpedo-like discharge of electricity, say Matteucci and Radcliffe; the mere diminution of electricity at the surface of the muscle B as it passes into

the state of action, says Du Bois Reymond. According to Du Bois Reymond, when the nerve is laid on the surface of the muscle, the electricity at the surface of the latter necessarily passes into the nerve. The contraction of the muscle causes a diminution of this electricity, and in consequence of the partial or complete disappearance of the electricity, the nerve is irritated just as when a continuous current of electricity passing through the nerve causes irritation by its sudden arrest. Which view is correct? Du Bois Reymond's view explains the fact just as well as Matteucci's; and, seeing that it harmonises with the view that the electricity in question is dynamical, we prefer it, because, as we have seen, the theory that the electricity is statical is defective, inasmuch as the conditions necessary for the truth of the idea have not been shown to exist, while we see no reason for refusing to believe in the dynamical or current nature of the electricity. We therefore hold that the statical nature of the electricity in muscle and nerve, and the "torpedo-like" discharge of electricity from these tissues when they are thrown into action, have not been proven; nay, more, we are unable to find sufficient evidence to show that Radcliffe's views regarding these two points are even probable.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND.

THE annual meeting was not very numerously attended. Dr. J. Rogers, the President, stated that the financial position of the Association was good, and so were the prospects of legislation next year. Dr. Rogers expressed an opinion that it would be well that a member of the House of Commons, such as Mr. Corrance, should be elected President for the ensuing year. On the motion of Mr. Milward of Cardiff, seconded by Dr. Dudfield, Dr. Rogers was unanimously re-elected. Dr. Dudfield, Dr. E. Jones, Dr. J. Dixon, Dr. C. Welch, Dr. Brett (Watford), Dr. Clarke (Leicester), Mr. Mathews (Horsham), and Dr. Sheen (Cardiff), were elected Vice-Presidents. The officers were re-elected.

Dr. Rogers delivered an address. He was unable to say why Dr. Brady had not carried out his announced intention, unless from ill-health. Mr. W. H. Smith had gallantly striven for a Royal Commission on Metropolitan Pauperism, but before a house which might at any time have been counted out. He referred to the formation of the Poor-law Committee of the British Medical Association, and their joint deputations to Mr. Göschen on the subject of the reorganisation of the Poor-law medical service, and the institution of sickness-returns, and to the medical officer of the Privy Council on the vaccination laws and regulations. He regretted that the Sanitary Commission had not recommended the employment of Poor-law medical officers in a sanitary capacity in London as well as the country. Poor-law inquiries should be conducted by medical men, not by "barristers who owed their favours exclusively to court favouritism or intrigue." The highest offices in the Poor-law medical service should be given to district officers, and thus a path of promotion would be open, as in the church and at the bar. He summed up the arguments against the present consolidation of vaccination offices. His address to the Central Chamber of Agriculture had converted to his views a number of influential noblemen and gentlemen, whose attitude was at first one of hostility, but subsequently of adhesion. He referred at length to Mr. Corrance's intended motion.

A discussion followed, in which Mr. Lord, Mr. Benson Baker, Dr. Stallard, and Mr. Wickham Barnes expressed their concurrence in the views of the President.

THE annual dinner of the Middlesex Hospital Club took place at Willis's Rooms on Friday; G. A. Makins, Esq., in the chair. There was a considerable attendance of old Middlesex men. The meeting passed off successfully.

THE Edinburgh University Club quarterly dinner will be held at St. James's Hall on August 1st; Dr. Lyon Playfair, M.P., in the chair.

ACCORDING to the *Impartial de l'Est*, the celebrated Zouave Jacob, whose supposed cures of paralysis excited much attention in Paris at one time, has come to a miserable end. This journal alleges that he belonged to the 20th Corps in the Army of the Loire, and was shot as a traitor and spy. He kept the Prussians daily informed of the position of the French Army during three months' time.

THE WESTMINSTER HOSPITAL.

MR. THOMAS COOKE and Mr. C. Roberts are candidates for the vacant appointment of assistant-surgeon to the hospital. Mr. Cooke is the author of an excellent work on *Operative Anatomy*, and has lengthened and responsible hospital experience. Mr. Roberts, who has had also considerable public experience, is favourably known to the profession by his contributions to its literature. Mr. Pearse, the senior assistant-surgeon, will be promoted to the office of full surgeon.

VACCINATION OF FACTORY-WORKERS.

WE have received a copy of a circular letter, drawn up, we believe, by Mr. Robert Baker, Medical Inspector of Factories, addressed to the certifying surgeons under the Factory Act. These gentlemen have, and deserve to have, a very powerful influence over the numerous workpeople who look up to them as advisers and friends, as well as protectors; and it was a wise and kind thought of Mr. Baker to employ this influence to ensure the adoption of vaccination wherever it had been neglected amongst the great number brought under observation. We are assured, and readily believe, that the certifying surgeons have cordially and zealously exerted themselves to discover instances of neglected vaccination, and to get the precaution adopted without delay. Members of our profession are always ready to do any good service in their power, without waiting to secure remuneration for its performance; and as yet no remuneration for this particular service is forthcoming. This is, however, unfair. Some mode of rewarding the extra work asked for and given should be discovered, and we trust that it will be. A grateful acknowledgment of the certifying surgeons' aid is their due; but they deserve substantial recompense as well, and it is alike just and politic to give it.

A DESCENDANT OF JENNER.

MR. STEPHEN JENNER, grandnephew of the illustrious author of vaccination, and stated to be almost the only living relative bearing that honoured name, is living, at the age of seventy-five, in bad health, in a poor cottage at Heathfield, in the parish of Berkeley. As a lad, he lived much with Dr. Jenner, and was in course of education for the medical profession, when Dr. Jenner was struck with apoplexy at the breakfast-table (he being the only person present), and died. The loss of his protector arrested his medical training. He has lived a blameless life, eking out slender allowances from parish work by natural and acquired artistic gifts. He has brought up a large family, and is now, in his old age, suffering uncomplainingly from infirmities and necessity. The first claim of such a man is on the gratitude of his country to that splendid benefactor of humanity of whom he is the collateral descendant. We trust that the Civil List may be available for his modest wants; and that whatever that provision may lack in rapidity or generosity of allowance, will, we trust, be forthwith anticipated by the gifts of individuals. There are few in this nation who are not under an immediate and personal obligation to Jenner for the preservation of themselves and their families from a loathsome pestilence, or, at the worst, for its mitigation. Those who do not owe this debt are the few who prefer small-pox to vaccination, who are regardless of their chances of life, or heedless of the personal disfigurement and constitutional deterioration which follow an attack of small-pox unmodified by vaccination. The saving of life from the practice of vaccination—imperfectly as it is still adopted—amounts in this country alone to above fifty-five thousand annually; those rescued from loathsome disease, to between

two and three hundred thousand. If the living population of Great Britain were to show common gratitude, how magnificently would the wants of this descendant of Jenner be supplied, and how few hours would pass before he would be lifted out of want! We do not recognise any particular obligation as incumbent upon our own profession in this matter: it is the great people of these kingdoms who owe a debt to Jenner in their individual and national capacities. We believe, however, that members of the medical profession will sympathise with the nephew of their illustrious colleague; and we shall with much pleasure take care that any sums which may be forwarded to this office shall be made available for the purpose indicated.

A NICE COUNTRY VILLAGE.

DR. HENRY STEVENS, one of the Medical Inspectors attached to the Medical Department of the Privy Council Office, has just been making a sanitary inspection of the village or township of Malpas in Cheshire, "It may be stated shortly that, in every conceivable variety of sanitary defect, Malpas village emulates the most neglected inhabited spot that has ever been reported on." The village has the usual amount of bad arrangements for dealing with the disposal of excrement and filth of other descriptions; and in this it is perhaps not so very different from many other places; but in one matter—that of a portion of the water-supply—the arrangement is so novel that it is worth calling attention to. "The scheme," says Dr. Stevens, "for raising the water to the reservoir for distribution is original. An over-shot water-wheel is attached to the pump, with the view that water from the neighbouring sewage-pool would afford sufficient power to raise the purer water to the height ~~and~~ the following is his brief account of it in a sanitary point of view. ~~required.~~" This water-wheel is within two feet of the open tank out of which the water for the village supply is pumped; the result being, as he afterwards says, self-evident, "that the splashing of the wheel throws the sewage to a not inconsiderable extent into the tank that collects the spring-water." The consequence of all these arrangements, ingenious and otherwise, is, that in about five months *one-tenth of the whole population has been stricken down with enteric disease.* Surely something practical should be done to awaken the authority of such a place to a sense of its duties.

MEDICAL EXPERTS IN COURTS OF LAW.

MR. LAWSON TAIT writes to us as follows.

The growing evils of expert evidence verily need such reproofs as you reprinted from the *Standard* in your last issue. In a trial for murder, it is perhaps allowable for the defence to make use of any scheme which may be likely to be successful; so that there really may be some excuse for Mrs. Newington's medical witnesses "speaking less with reference to the ascertained circumstances of the case than to frame a theory of their own which might justify a verdict of acquittal." In the matter of actions for damages, however, I differ from the writer in the *Standard*, believing, as I do, that there is no such excuse, and that the conduct of experts in many instances is a scandal to science, and more especially to medicine. A short time ago, I was engaged at Guildhall in a trial for malapraxis on the part of a dentist, the brief narration of the facts of which may prove of interest to your readers. The plaintiff came to me many months ago, sent by a physician, with a fracture of the alveolar process of the left upper jaw at a spot where the second molar tooth was missing. The alveolar process had necrosed as far as the central incisor; and I removed the sequestrum, along with the corresponding teeth. The patient had no other ailment, and never had had, except an attack of fever and ague. I swore to a most careful investigation for syphilis at the time I first saw him, and to the utter absence of any indication of it. He was under my care for many months, and was seen daily; and yet no indication of syphilis ever presented itself to me. The plaintiff swore he had never contracted any venereal disease; and though he was a sailor—a point on which great stress was laid by the defence—the fact that at twenty-nine he had worked himself from before the mast to be first mate of a first-class trader, and the high character he held from his superiors, were enough to show good grounds for believing him. He also swore to extremely violent measures on behalf of the dentist. Though pressed by the judge, I declined to give any opinion as to the sequence of injury and the disease. I merely swore to the facts of the case as they came before me: that I had never seen any disease produce such

results; that, if produced by violence, it must have been excessive; and that the plaintiff had certainly not had syphilis. My surprise was not, then, small when I heard two well known London hospital surgeons, who followed me in the box, declare that such results were frequently the result of syphilis, without any violence; that disease of the alveolar processes, without any other supporting condition in the palate or elsewhere, was frequently caused by tertiary syphilis; and that, although they had only seen the plaintiff on the morning of the trial for a few seconds, and had no knowledge whatever of his history or his case save what fell from me, they believed that syphilis was the cause of all the mischief. I think I need scarcely say that the jury, almost without consultation, found most substantial damages for the plaintiff, discarding altogether this unfair attempt by the defence not only to damage the cause of a poor man, but to damage his character; for what could be meaner than to throw the stigma of syphilis on a man because he was only a sailor?

THE SMALL-POX EPIDEMIC IN ST. PETERSBURG.

FROM June 14th to 25th, both days inclusive, there occurred 440 new cases and 210 deaths. The total numbers since the commencement of the epidemic (Aug. 17th, 1870) to June 26th, 1871, are as follows.

| | Cases. | Recoveries. | Deaths. |
|--------------|--------|-------------|---------|
| Male | 5,566 | 1,823 | 1,515 |
| Female | 1,764 | 972 | 663 |
| Total | 5,330 | 2,795 | 2,178 |

HOSPITAL FINANCE.

THERE is, we believe, a general conviction among those who have devoted their attention to the statistics of hospitals, that the reconciliation of the discrepancies in the rates of income, and especially of expenditure, of these institutions, is among the most perplexing problems the solution of which could be offered to the ingenuity of any one. Our readers will call to mind that, in the JOURNAL of October 17th, 1868, there was published a tabulated statement, which presented the great variations which existed in the cost of maintenance of patients in the different hospitals. The subject has been ably investigated by Mr. Charles Kemble, President of the Bath Royal United Hospital; and he has just published the result of his examination. The way of escape from the difficulty lies, he suggests, not only in an uniform system of account-keeping, but in "an accurate classification of the several items of hospital expenditure". "The simple, natural, and common-sense aspect of the statement", he says, "almost forbids its enunciation; and he only ventures to commit it to print, because as yet it seems to have been practically overlooked." We place Mr. Kemble's suggestions before our readers; remarking merely that we have no doubt, if carried out, they would remove much of the perplexity in which hospital finance has been hitherto involved.

"There are obviously two general heads under which hospital expenditure should be distributed: I. The collection of its income; II. The application of that income. Take these in order, and causes for variation of cost of beds or patients will multiply as we advance.

"I. The collection of income makes the first claim upon income; and this will vary with the sources from whence income is derived. 1. An income drawn from funded property will entail no cost beyond a power enabling the banker or treasurer to receive the dividends. 2. An income derived from voluntary contributions and subscriptions will involve an outlay of from five to ten per cent. for collecting. 3. An income derived from lands and houses will involve a much higher charge. Professional assistance has to be obtained, and charges for the management as well as repairs of estates form a considerable item of expenditure in such cases. It is obviously unfair and delusive to compare the cost of hospitals supported by these different methods, unless in the first instance the cost of collection is deducted from income in each case.

"II. The second general head of expenditure is the application of income to the purposes of the hospital. Here a triple division is necessary. 1. The first liability incurred is for the building. This may be (a) freehold, involving no annual outlay for rent; or (b) held on condition of a yearly payment. To make a comparison between two hospitals differently placed in this respect, we must either add in the one case interest for the value of site and cost of the building, or subtract the rent from the yearly outlay of the other. 2. The second head will

comprise establishment charges, permanent and unvarying; *i.e.*, such expenditure as must be entailed upon a hospital before any patient can be received. These will be—*a.* Rates and taxes; *b.* Officers' salaries and board; *c.* Nurses' wages and board; *d.* Servants' wages and board; *e.* Fuel and lights. These expenses must be incurred upon an estimate of the probable number of patients to be expected. Experience alone can show if the preparations are on a suitable scale, or are too large or too small. 3. The third head will be the personal expenses of the patients, who should be divided into two groups.

"A. *In-Patients.* These consist of—*a.* Male medical; *b.* Male surgical; *c.* Female medical; *d.* Female surgical; *e.* Children medical; *f.* Children surgical; *g.* Special cases admitted to some hospitals, excluded from others. The personal expenses of patients in these several groups are—*a.* Medicine and surgical appliances; *b.* Food; *c.* Washing; *d.* Printing; *e.* Wear and tear of furniture; *f.* Repair and cleansing of premises. The age and character of the buildings of necessity very considerably affect the charges under this last head.

"B. *Out-Patients.* *a.* Visited at home; *b.* Relieved at hospital.

"The cost of out-patients arises not only from the medicine dispensed, but medical attendance, dispenser, porters, printing, and wear of furniture, so that the out-patient department absorbs a much larger proportion of revenue than is frequently attributed to it.

"The cost of out-patients is more affected by numbers than at first sight may appear. If the number be small, the staff required to attend to the in-patients can without difficulty undertake the additional duty, and the charge upon the hospital is little more than the medicine given away. But when the numbers become such as to demand more time than the in-patient staff can afford, the out-patient department becomes at once chargeable with salaries for dispenser, porter, and assistants.

"There are also other expenses incurred in some hospitals, which should be set out separately. These are, a medical school; a museum and library; an incurable department; special funds; *e.g.*, Samaritan Fund, Nurses' Pension Fund, Flannel Charity, and the like. These heads of expenditure should be kept distinct, and shown in the balance-sheet. In some cases it may not be practicable to keep a minute account of every particular here suggested; but the general outline may be usefully adopted, and the more fully it can be filled up the more useful will the account be found."

AN IMPERIAL SAVANT.

AT the visit of the Emperor of Brazil to the Museum of the Royal College of Surgeons of England, on the 21st instant, His Majesty displayed a remarkable familiarity with the principal subjects illustrated in the museum, and considerable acquaintance with recent English scientific literature; showing by his remarks, and the thoughtful interest which he took in various specimens in the collection, that comparative anatomy and zoology are included among the numerous branches of knowledge in which he is versed. He particularly wished to see the skeleton of the *Ornithorynchus* and the allied monotreme the *Echidna*, and placed them side by side to observe their distinguishing characteristics. He was also much interested in the young hippopotamus. In the pathological department, Professor Wilson's dermatological collection and the extensive series of calculi particularly attracted His Majesty's attention. On leaving, he expressed himself highly gratified with the arrangement of the collection and the facilities which it afforded for study. On the same morning he paid an early visit to Dr. Hooker, F.R.S., at Kew, to Professor Owen, F.R.S., at Sheen Lodge, and to Earl Russell in Richmond Park. In the afternoon, accompanied by the Empress, he met a select party of men eminent in various branches of science at the house of Mr. W. Spottiswoode, treasurer of the Royal Society, the following being among those present: Lord Houghton, the Dean of Westminster, Professor Huxley, Sir Philip de M. Grey Egerton, Dr. Hooker, Dr. Sharpey, Dr. Sibson, Mr. Bowman, Professor Ramsay, Dr. Carpenter, Dr. A. Farre, Professor Flower, Dr. Gull, Mr. Lassell, Sir Charles Wheatstone, Mr. Sylvester, Dr. Gueneau de Mussy, Captain Galton, etc. His Majesty appeared much pleased with the opportunity of becoming personally acquainted with men, with many of whose names he had long been familiar, and said that he should, on his return to Brazil, follow the course of English scientific investigation with still greater interest than before. On the following day the Emperor visited Oxford, and is now engaged making a tour of the provinces.

SMALL-POX IN SOUTH AMERICA.

THE small-pox, which was so terribly epidemic in Buenos Ayres, has, it appears, broken out in Monte Video in an epidemic form. For some months, it is reported, the mortality has been greatly raised by small-pox deaths; and now a very bad type of it is raging. The deaths are stated to be as many as fifteen daily; and the epidemic appears, from latest advices, to be increasing.

THE SANITARY STATE OF LEEDS.

THE Lords of Her Majesty's Council have just issued a report on the sanitary state of Leeds. It relates to a matter of very great importance (the town authorities of Leeds having an injunction against them for turning their sewage into the river Aire), and is an examination of the health-status of a very large manufacturing town exceptionally circumstanced. The report is by Mr. J. Netten Radcliffe, and consists of thirty-five pages of closely printed foolscap, besides an appendix of tables.

THE CONTAGIOUS DISEASES ACTS.

A VERY excited deputation waited last week upon the Home Secretary, urged the immediate repeal of the Acts, and threatened a renewal of the repulsive flood of literature which has already been let loose by the Society in only too broad and frequent rivulets, into decent homes and amongst unpolluted Englishwomen. Energetic protests have been made on behalf of public decency and morality against the forced publicity which it is proposed to give to a class of literature open to most of the objections which insured the suppression of the *Confessional Unmasked*. But there is reason to fear that the moderate, sensible, and deliberate report of the Royal Commission has tended rather to increase than to abate the *furia francese* of the feminine opponents of the Acts and their allies.

THE ROYAL INSTITUTION OF CORNWALL.

WE have received the programme of the annual excursion of the Royal Institution of Cornwall. It will take place on the 14th and 15th of August; in the week, therefore, following that in which the meeting of the British Medical Association will be held in Plymouth. The district visited will be that lying west of Penzance—one rich in objects of antiquarian, geological, mining, and picturesque interest; and those of our Associates who may be able to remain after the annual meeting and join the excursion will, we doubt not, meet with a cordial reception, and find much mental gratification. The price of a ticket for the ten days—not including railway fare or hotel accommodation—is sixteen shillings. Dr. C. Barham of Truro has kindly consented to act as the medium for receiving applications, which should be made not later than August 5th, and be accompanied with the price of the ticket. The presentation of the excursion-ticket at any station on the Cornwall or West Cornwall Railways will entitle the holder to a return ticket at single fare, available for August 12th to 15th, inclusive.

SANITARY LEGISLATION.

IN the House of Commons, on Tuesday last, Sir C. Adderley obtained leave to bring in a Bill to consolidate and amend the laws relating to public health and local governments. He explained that the measure was simply the report of the Sanitary Commission in the form of a Bill. Having pointed out the necessity for the consolidation of the sanitary laws and sanitary authorities, and of removing the anomaly that the carrying out of the sanitary laws was entirely optional, he said that the first part of his Bill proposed to repeal all sanitary acts; and, though the Bill consisted of 450 clauses, nine-tenths of them would be inserted merely for the purpose of re-enactment. The second part of the Bill divided the whole of the kingdom into sanitary districts, so that each should have its sanitary authority; and there would be no place without its sanitary authority, and only one such authority in every place. The next thing which the Bill professed to do was to simplify the area

of jurisdiction; in fact, to follow the example which had been set in Hampshire by Lord Eversley. The next part of the Bill gave powers for water companies, sewerage, street, highways, guardians, and all kinds of local improvements, among which would be included markets, burial bills, and other things in the same category. The rest of the Bill would provide for the purpose of audit. If the house would allow him to introduce the Bill he did not wish to carry it any further at present; but it could be circulated throughout the country during the recess, and he hoped to be able to carry it into law during the next session.

THE GERMAN LOSSES BY SICKNESS IN THE WAR.

THE *Pall Mall Gazette* states, on German authority, that there is an unwillingness in influential circles to allow the full extent of the German losses in the late war to transpire. The list of killed and wounded was made public as it could not be avoided, although in a very inaccurate and incomplete manner. On the other hand, there has been a determined objection to giving statements of figures with regard to the devastation brought about by sickness. Vague forms of speech were reckoned satisfactory, and it was boldly asserted on several occasions that the health of the army was excellent, "better than in times of peace," although the endless convoys of sick, as well as thousands of soldiers' letters, gave the lie to such statements. A semi-official corroboration now suddenly appears of the worst rumours which were circulated in process of time. The Central Bureau of Information in Berlin, under the inspection of the highest military authorities, has published a report of its work, with interesting statistical figures. It appears from this report that the institution has within the space of twelve months authenticated 633,000 sick and wounded cases, and that of these only 78,000 belonged to the French, the remaining 555,000 to the German army. The circumstance that only 46,000 of these were South Germans, and that nearly 508,000 were north Germans, shows by the disproportion of the numbers, that the bureau had really been occupied with the North German army. The frightful figures, which besides make no claim to completeness, are, according to this, far below the truth. And if we reckon the wounded at a hundred thousand in round numbers, we shall certainly still be within the truth if we estimate the number of the unwounded sick at half a million. How many of these have died or drag about an incurable sickly body is more than we can say, failing the necessary information. The figure must, however, be a terrible one.

ASIATIC CHOLERA.

THE Registrar-General points out that Asiatic cholera, as it was a painful duty to announce early last June, is entering Western Europe through Russia, where, Dr. Zuelzer says, it is fast advancing on the German frontiers. In the second week of this month it broke out in Wilkowszki (a town of Poland, on the road to Königsberg, west of the Niemen), where thirty-four deaths occurred in a few days. The epidemic has prevailed in Wilna for four weeks, and from ten to fifteen deaths are reported daily. At its present rate of progress it may reach Germany in two or three weeks. The *Journal de St. Petersburg* of the 21st instant says:—The *Police Gazette* of St. Petersburg published on the 18th instant the following return of cholera cases—patients, 518; new cases, 67; cured, 33; dead, 27. The same newspaper stated that on the 19th instant there were still under medical treatment 525 persons. Since the appearance of cholera on the 29th of August, 1870, to the 19th of July, 1871, there have been 6,072 cases, 3,040 cures, 2,485 deaths. The *Caucasus* newspaper says it is known from reliable sources that the cholera which has this year broken out in Persia originated at Arbil, on the route from Taurida to Sirab and Zandrak. Surgeon-Major Atchison, in the sonorous sentences which have before secured for him the public ear on similar topics, points out the immediate connexion of epidemic cholera with water-poisoning and defective sanitation of air and soil. Many other correspondents follow him, and an anticipatory cholera-panic is setting in, which will probably

have beneficial sanitary results in quickening the long-delayed legislation. There is still, however, room to anticipate that the fears entertained may not be realised. We have for some months kept our readers provided with the materials of forecast.

ALLEGED OUTBREAK OF PLAGUE IN PERSIA.

It is reported that a disease supposed to be plague has broken out in a Persian town close to the Turkish frontier, and that the Ottoman authorities are taking stringent measures to prevent communication between their own country and the affected place.

VACCINATION AT THE CAPE OF GOOD HOPE.

VACCINATION and revaccination have recently been receiving attention on the part of the colonial authorities at the Cape of Good Hope; for the Government has been urging the public there to avail themselves of the protection which the operation affords against the sad results of small-pox. We hear that many thousands of persons have profited by the advice, though there appear to be some who are of the same mind with the opposers of vaccination here.

QUARANTINE IN PERSIA.

SOME alteration has recently been made in the quarantine regulations in Turkey, so far as they regard the passage of vessels through the Dardanelles. Ships with foul bills of health are in future to be allowed to pass through on condition that, when they enter the Bosphorus, they take on board health-officers, and are towed right through, without stopping, into the Sea of Marmora. By this course there will be a saving of the time (we think ten days) during which, under the old regulations, the vessels would have to wait in quarantine before passing through the Straits.

SCOTLAND.

DEATH WHILE UNDER THE INFLUENCE OF CHLOROFORM.

IN our Hospital Reports we publish the details of another death from chloroform. The unfortunate occurrence took place at the Royal Infirmary, Aberdeen. Death appears to have resulted, as Dr. Pirrie and his colleagues believe, from mixed causes, the advanced conditions of muscular disease of the heart being most influential. The presence of so large a quantity of blood in the right side of the heart compared with that in the left does not, according to the best authorities, lend probability to the view that death resulted from gradual asphyxia.

IRELAND.

THE Irish Poor-law Officers' Association has issued an admirable report and statement of its objects. This Society is conducted with great vigour and judgment; and a continually larger number of dispensary physicians manifest their approval of its vigorous and patriotic efforts, which are solely directed to improvements in the administration of medical relief and the status of medical officers.

OUR IRISH COLLEAGUES.

WE are glad to hear that the Rev. Dr. Haughton, Dr. Beatty, and Mr. Macnamara (President of the College of Surgeons of Ireland), will be among the associates of Ireland who will join in the annual meeting of the Association at Plymouth on August 7th. The direct route from Dublin to Plymouth is by sea; and this route will have many attractions for those who possess the *robur et æs triplex* which will enable them to brave with impunity the dangers, and enjoy with keenness the pleasures, of a short sea-trip. We can promise them a warm welcome at the end of their journey.

THE LIMERICK UNION AND ITS MEDICAL OFFICERS.

AT a meeting of the Board of Guardians of the Limerick Union on the 19th instant, it was proposed to raise the salaries of the dispensary medical officers. This proposal was, however, met by an amendment,

which its proposer, Mr. Enright, supported by remarking that, "wherever those young gentlemen (the dispensary doctors) may have been manufactured, their appointments under the Poor-law Board tended more to the advancement and the remunerative results of the profession than anything else, in procuring employment, and in bringing them into contact with the people of the neighbourhood in which they are located; and, further, he could assure the Board that, if the situations of the medical doctors were put up for competition, they would find many candidates." He proposed an amendment, that the salaries of the medical officers remain as they are. Mr. Frend seconded the amendment, which was carried by a large majority, and the resolution declared lost. After the disposal of some routine business, the Board adjourned.

THE CASE OF CONSTABLE TALBOT.

THE investigation into the death of Constable Talbot, which is at present going on in Dublin, has some special interest in a medico-legal point of view. The man was shot through the head, the bullet fracturing the atlas. He died four or five days after the receipt of the injury; and, at the necropsy, as described by Mr. Vesey and Mr. William Stokes, there was found inflammation of the spinal cord and its membranes at the seat of fracture. A sharp discussion arose at the inquest as to the possibility of death having been the result of hæmorrhage from a wound of the occipital artery inflicted in an attempt to remove the bullet. The injury at the base of the skull was, however, of an inevitably fatal character; and there seemed to be nothing to justify the hypothesis to which we have referred above. It is not surprising that Mr. Stokes warmly resented its suggestion.

LECTURES ON UTERINE DISPLACEMENTS.

DR. PROTHEROE SMITH has delivered a course of lectures at the Hospital for Women on "Flexions, Torsions, and Displacements of the Uterus"; in the course of which he reviewed the literature of twenty-five years on uterine dislocations. After giving the opinions, diagnosis, modes and means of treatment, advocated by various writers on the subject, he stated the grounds for his disapproving of intravaginal and intrauterine instruments as a rule. He accounted for the frequency of such displacements not as being only consequent upon the ordinary causes assigned for such abnormal conditions, but, after some novel views of the physiology of menstruation, he affirmed his belief that both proximate and exciting cause might be legitimately looked for in the incessant and excessive efforts of menstruation of the unmarried and of the sterile, contrary to the primeval law given to women to "increase and multiply", which provided for an interruption of the catamenia by utero-gestation and lactation. Thus injurious results ensue as in other organs of the body when used beyond the limits imposed by Nature, as much as in other instances from dystocia and non-lactation. Dr. Protheroe Smith observed also that flexions and other uterine derangements were not unfrequently caused by loss of the angle of 140° , which in a normal state exists between the spinal axis and that of the pelvis. This he proposed to remedy, after the removal of any organic or inflammatory disease of the uterus and its adjuncts, by the restoration of the natural lumbopelvic angle of 140° , by means of his pelvic band. In a word, he had experienced the greatest success in the treatment of uterine deflexions since he had adopted this mechanical aid *externally*, and had relinquished, as far as possible, the vaginal and uterine appliances which formerly he, as well as others, had used more generally. Dr. Protheroe Smith terminated his course of lectures by offering as "*ultima* of belief" fifteen practical conclusions, from which we quote "that spino-pelvic deformity is a frequent cause of derangement of the contained viscera; that their frequency is in keeping with the advance of civilisation, and that they are, with few exceptions, *menstrual* as to the period of their occurrence; that the primary condition of the uterus itself, forming a predisposing, and, at times, the exciting cause of flexions, is hyperæmia or inflammatory engorgement, the frequent result of excessive irritation and uninterrupted menstrual efforts, etc.; that in cases requiring intravaginal or intrauterine treatment, all inflammatory and other organic affections of the uterus and neighbouring viscera should *first* be removed, and *extreme* care and gentleness observed, and all pain avoided; that instrumental aid, by means of the 'pelvic band', should be employed *externally* whenever indicated by spino-pelvic deformity; and, *as a rule*, all intravaginal and intrauterine instruments, especially when metallic, should, as far as possible, be avoided in treatment."

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
ANNUAL MEETING.

THE Thirty-ninth Annual Meeting of the British Medical Association will be held in Plymouth, on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th of August next.

President—E. CHARLTON, M.D., D.C.L., Physician to the Newcastle-upon-Tyne Infirmary.

President-elect—JOHN WHIPPLE, Esq., F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital.

An *Address in Medicine* will be delivered by GEORGE JOHNSON, M.D., F.R.C.P., Professor of Medicine in King's College, London.

An *Address in Surgery* will be delivered by JOSEPH LISTER, Esq., F.R.S., Professor of Clinical Surgery in the University of Edinburgh.

The business of the meeting will be conducted under four Sections.

SECTION A. MEDICINE.—*President*, Dr. Barham, Truro. *Vice-Presidents*—Dr. Quain, F.R.S., London; Inspector-General Smart, M.D., C.B., R.N., Penge, Surrey. *Secretaries*—Dr. Clay, Windsor Villas, Plymouth; Dr. Wade, Temple Row, Birmingham.

SECTION B. SURGERY.—*President*—Joseph May, Esq., Stoke, Devonport. *Vice-Presidents*—P. C. De la Garde, Esq., Exeter; Deputy-Inspector-General Longmore, C.B., Netley. *Secretaries*—W. P. Swain, Esq., Ker Street, Devonport; C. Steele, Esq., Meridian Place, Clifton, Bristol.

SECTION C. MIDWIFERY.—*President*—Dr. Beatty, Dublin. *Vice-Presidents*—Dr. Swayne, Clifton, Bristol; Dr. Alfred Meadows, London. *Secretaries*—Dr. John Rolston, Stoke, Devonport; Dr. Phillips, 26, Finsbury Square, London, E.C.

SECTION D. PUBLIC MEDICINE.—*President*—Dr. A. P. Stewart, London. *Vice-Presidents*—P. W. Swain, Esq., Stoke, Devonport; Dr. Beddoe, Clifton, Bristol. *Secretaries*—Dr. Row, Ker Street, Devonport; David Davies, Esq., 2, Queen Square, Bristol.

TUESDAY, August 8th.

The meetings this day will be held at the Royal Hotel, PLYMOUTH.

1 P.M.—MEETING OF COMMITTEE OF COUNCIL.

3 P.M.—MEETING OF GENERAL COUNCIL.

8 P.M.—FIRST GENERAL MEETING. *Business*: a. Reception of Congratulatory Address from Plymouth Corporation; b. President's Address; c. Vote of thanks to the President; d. Report of Council, and Discussion thereon; e. Election of General Secretary; f. Election of Auditors; g. Report of Medical Benevolent Fund; h. Presentation of Hastings Medal.

WEDNESDAY, August 9th.

8.30 A.M.—PUBLIC BREAKFAST—Royal Hotel, DEVONPORT.

9.30 A.M.—MEETING OF NEW COUNCIL—Royal Hotel, DEVONPORT.

11 A.M.—SECOND GENERAL MEETING—Town Hall, DEVONPORT. *Business*: a. Reception of Congratulatory Address from Devonport Corporation; b. To appoint place of meeting for 1872, and President-elect; c. Address in Medicine by Dr. GEORGE JOHNSON.

1 P.M.—Adjourn.

2 P.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

9 P.M.—PRESIDENT'S SOIRÉE—Assembly Rooms, Royal Hotel, PLYMOUTH.

THURSDAY, August 10th.

9.30 A.M.—MEETING OF COMMITTEE ON REGISTRATION OF DISEASE—Public Dispensary, Catherine Street, PLYMOUTH.

10 A.M.—THIRD GENERAL MEETING. *Business*: Reports of Committees—Royal Hotel, PLYMOUTH.

11 A.M.—ADDRESS IN SURGERY, by Professor LISTER, F.R.S.—Royal Hotel, PLYMOUTH.

2 P.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

6.30 P.M.—PUBLIC DINNER—St. George's Hall, STONEHOUSE. For Dinner Tickets, an early application (enclosing One Guinea) should be made to P. W. Swain, Esq., F.R.C.S., Stoke, Devonport. The services of the far-famed Band of the Royal Marines have been engaged for this occasion.

FRIDAY, August 11th.

10 A.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

2 P.M.—CONCLUDING GENERAL MEETING—Royal Hotel, PLYMOUTH.

A RECEPTION ROOM will be opened at the Royal Eye Infirmary,

close by the Plymouth Railway Station. Members and others who require information with respect to the meeting are requested to make application in this room. Information as to Lodgings will be furnished there.

Members are requested to proceed to the Reception-Room immediately on their arrival, to enter their names and addresses, and to obtain the tickets necessary to secure admission to all the proceedings.

HOTELS.—The principal hotels are, at PLYMOUTH, the Royal Hotel, the Duke of Cornwall, the Globe, the Albion, Chubb's Hotel, Farley's Hotel, Harvey's Hotel; at DEVONPORT, the Royal Hotel, Thomas's Hotel, and the Crown Hotel.

The GUIDE-BOOKS FOR DEVON AND CORNWALL are: Murray's *Handbook of Devon and Cornwall*; Black's *Guide to Devon and Cornwall*; Blight's *Week at the Land's End*; Rev. — John's *Week at the Lizard*; and, for Plymouth and the neighbourhood, Brendon's and Luke's Guide-books—both by Ll. Jewitt, F.S.A.

* * * GENTLEMEN INTENDING TO VISIT PLYMOUTH during the meeting are requested to send their names to Dr. Littleton, the Local Secretary, 1, Lansdowne Place, Plymouth.

NOTICES OF MOTION.—The following notices have been given.

The PRESIDENT OF THE COUNCIL: Rule 4. To insert "President-elect", and to omit "Secretary".—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting."—Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary".—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District", and to erase the words "the Secretary of the Association".—Rule 9. To omit the words between "The President of the Council" and "shall be elected"—Rule 10. To omit the words between "The Treasurer" and "shall be elected".—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office". To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting".—Rule 13. To erase the words "Secretary shall call", and to substitute "President of Council shall direct to be called".—Rule 14. Between "shall" and "be recommended", to insert "express his desire in writing, and shall be".—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea". To erase the words after "such member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding".—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association".—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and".

Dr. STEELE (Liverpool): Election of Committee of Council. Every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: "I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed) ———." Together with a nomination-paper signed by six members of the Association, in the following terms: "We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association." The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the BRITISH MEDICAL JOURNAL not later than months prior to the Annual Meeting of the Association.

Mr. NICHOLSON (Hull): To alter Law 16, line 2. For "three", insert "two".

Dr. WADE (Birmingham): In Law 8, Paragraph No. 3, of the duties of Council, to alter "ten" into "twenty-five"; and to omit the words "and one Secretary from each Branch".

INVITATION TO TORQUAY.—The members of the medical profession at Torquay request the pleasure of the company at luncheon, on Saturday, August 12th, at 3 o'clock, of any member of the British Medical Association residing beyond fifty miles from the place. Their object in this limitation as to distance is that of furnishing an opportunity to strangers unfamiliar with Devonshire to become acquainted with Torquay and its immediate neighbourhood. Any member who may wish to favour them with his presence, will oblige by notifying the same at

his early convenience—and not later than on the Wednesday of the Plymouth meeting—to the Honorary Secretary, Dr. Powell, Infirmary, Torquay.

SPECIAL RAILWAY ARRANGEMENTS.—First and second class ordinary and express return tickets issued at any Station on the Bristol and Exeter Railway, or on the South Devon, Cornwall, or West Cornwall Railways, on August 7th and following days, will be available for the return journey to and from Plymouth any day up to and including Monday, Aug. 21st. First and second class return tickets, at single fare for the double journey, available as above, may be issued from any Station on these lines to Plymouth, or from Plymouth to any South Devon, Cornwall, or West Cornwall station, on August 7th and following days to August 21st inclusive, to the members of the *British Medical Association* producing a certificate or the Association card of membership. Unless such documents be produced, return tickets at ordinary or express fares must be issued. When tickets at single fare for the double journey are issued, the booking clerks must write "return" upon them, and place their initials below the word "return". Ordinary tickets endorsed "return" will be available by express trains without payment of the difference of fare. The South Devon, Cornwall, and West Cornwall Railways have also promised to convey any instruments, medical and surgical appliances, etc., for the Annual Museum, at *half the usual fares*, at the owner's risk.

EXCURSIONS, ETC.—The Local Committee appointed by "The Three Towns", Plymouth, Devonport, and Stonehouse, to prepare for the annual meeting of the British Medical Association in 1871, have much pleasure in acquainting the members that they have succeeded in obtaining the cordial cooperation and assistance of the civil and military authorities; so that every facility will be furnished them for inspecting this naval and military arsenal; Her Majesty's ships of war in the Hamoaze and Plymouth Sound; Her Majesty's dockyards at Devonport and Keyham; the Royal William Victualling Yard and the naval and military hospitals in Stonehouse; the Breakwater and its lighthouse; the Eddystone Lighthouse; the Plymouth Citadel, the Hoe, and the forts recently erected within a radius of five miles.

By the kind permission of His Grace the Duke of Bedford, the Right Honourables the Earl of Mount Edgcumbe, the Earl of St. Germans, and the Earl of Morley, and other gentlemen, opportunities will be offered to the members of surveying the grounds and the extensive views commanded in the parks attached to their mansions on the banks of the Tamar and Plym; whereby they will be enabled to pass in review the objects before-named, as well as the magazines at Bull Point; Antony House, the seat of W. H. Pole-Carew, Esq., whereat is preserved Holbein's portrait of Dr. Butts, Physician to Henry VIII; Ince Castle, the residence (*temp.* Charles II) of the Wit of Cornwall, Killegrew; St. German's Church, the site of Cornwall's ancient Cathedral, and Port Eliot (the ancient Priory); Trematon Castle, the residence of the Norman Earls of Cornwall; the late Brunel's master-piece, the Royal Albert Bridge at Saltash; Landulph Church; Buckland Abbey, the seat of Drake, the great circumnavigator; Maristowe; Cothele House; Pentillie Castle; Morwell Rocks; Harewood, the scene of the fair Elfreda's treachery; and other objects of interest in a trip of twenty miles by steamboat.

A steamer will be engaged to make short trips daily, and at stated hours, during the visit of the Association, thus enabling those members who may not be desirous of hearing the delivery of certain papers, to spend their time agreeably in viewing the rich scenery of the port of Plymouth.

Other excursions will be arranged, with the sanction of the Directors, etc., of the Railways—to Launceston Castle, the Ancient Cornish stronghold; to the Saxon Abbey at Tavistock; to Endsleigh Cottage; and to the wild and romantic scenery of Dartmoor.

ANNUAL MUSEUM.—The "Annual Museum" of this Association will be open during the four days of the meeting, for the exhibition of:

1. The latest inventions in medical and surgical instruments and appliances of every kind. Also, for the special exhibition of ancient and modern fracture apparatus, or diagrams of such, thus setting forth the history of the treatment of fractures from the earliest records down to the present day.
2. New drugs and their preparations.
3. New articles of diet for invalids.
4. Pathological Specimens; also photographs, casts, etc., illustrating disease.
5. New works on medicine, surgery, etc.
6. Models or drawings of any object of professional interest not included in the above list.

Notice to Exhibitors.—Application should be made as soon as possible; at the same time giving a list of the objects to be exhibited, and mentioning the space required. All objects sent must have a de-

scription attached. Parcels for the Museum should be addressed—"British Medical Association, the Assembly Rooms, Royal Hotel, Plymouth; care of H. Greenway, Esq." They must be delivered on or before July 31st, and be removed within three days after the termination of the meeting. Expenses of carriage and all risk must be borne by the exhibitors. All instruments and other articles intended for the Local Museum will be conveyed at owners' risks for *half the usual fares* on the Bristol and Exeter, South Devon, and Cornwall lines of railway. A card, bearing the name and address of the exhibitor, must be enclosed in each package, ready to be fixed on the outside. All communications respecting the Museum to be addressed to "Henry Greenway, Esq., Surgeon, Plymouth", the Secretary for that department.

PAPERS.—The following papers have been promised.

C. Barham, M.D. 1. Diseases of Plymouth during the Second Quarter of last Century (1725-1750). 2. Diseases of Cornish Miners. Tilbury Fox, M.D. 1. Hydroa. 2. A Note on Phtheiriasis, erroneously styled Prurigo.

J. Crichton Browne, M.D. Syphilis and Insanity.

J. Althaus, M.D. Paralysis of the Bladder, and its Treatment by the constant Galvanic Current.

T. J. Austin, M.R.C.S. Medical Electrification.

Thomas Littleton, M.B. The Effects of Submarine Descent on Man, and the Limits of his Capability.

William Roberts, M.D. Intemperance as a Cause of Chronic Bright's Disease.

W. H. O. Sankey, M.D. The Relation and Diagnosis between General Paresis and Locomotor Ataxy.

D. De Berdt Hovell, F.R.C.S. 1. The different Therapeutic Indications of Rheumatism and Neuralgia: with Remarks on Rheumatism as a Sequela of Diphtheria. 2. Uterine Truss or Support for *Post Partum* Hæmorrhage.

George Southam, F.R.C.S. Excision of the Tongue.

T. H. Bartleet, M.B., F.R.C.S. Splint for Excision.

Edward Lund, F.R.C.S. Antisepticity in Surgery.

Furneaux Jordan, F.R.C.S. The Extension of Inflammation from the Epididymis to the Urethra: with Cases.

Thomas Beatty, M.D. 1. Fibro-cystic Disease of the Uterus. 2. The Radical Cure of Retroflexion of the Uterus.

Robert Barnes, M.D. Hypertrophic Elongation of the Cervix Uteri.

J. Braxton Hicks, M.D., F.R.S. 1. A Rare Form of *Post Partum* Hæmorrhage. 2. The Reduction of Inversion of the Uterus: illustrated by six Cases.

E. J. Tilt, M.D. Hystæria, and the various ways in which it has been viewed by Pathologists.

A. Meadows, M.D. The Treatment of Fibrous Tumours of the Uterus.

J. G. Swayne, M.D. Treatment of Hæmorrhage arising from Retention of the Secundines after Abortion.

Thomas Underhill, M.D. The Treatment of certain Cases of Placenta Prævia and of *Post Partum* Hæmorrhage.

Lawson Tait, F.R.C.S. Obscure Effects of Tertiary Syphilis.

J. G. Davey, M.D. Jenner and his Teachings.

Dr. Merrifield, Ph.D. The Meteorology of Plymouth for the last six years.

Cornelius Fox, M.D. The Estimation of Atmospheric Ozone by means of Aspirators and Acids.

J. W. Eastwood, M.D. Alcohol in Health and Disease.

R. Elliot, M.D. Life-Insurance Offices and Medical Fees.

William Ogle, M.D. Medical Reform personal, not parliamentary.

V. Jagielski, M.D. Koumiss: a Dietetic Remedy.

T. Clifford Allbutt, M.D. The Lesions of Enteric Fever as the Occasional Cause of a Permanent Injury to Nutrition.

C. B. Nankivell, M.D. The Provision of Medical Attendance on Independent Poor by Provident Dispensaries.

Arthur Ransome, M.D. The Respiratory Movements in Health and Disease.

D. T. T. Maunsell, M.B. Poor-law Medical Relief.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Sections in which the paper is to be read. All papers should be forwarded to one of the above named officers on or before the 1st of August.

No paper must exceed *twenty* minutes in reading; and *all* subsequent speakers must not exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary*.
13, Newhall Street, Birmingham, July 15th, 1871.

THE PROPOSED ALTERATIONS IN THE LAWS.

IN order that the members of the Association may be enabled to perceive the bearings of the alterations in the laws proposed by the Committee of Council, we subjoin in parallel two columns the laws as they now exist, and as they will appear if altered in the way proposed.

PRESENT LAWS.

4. *Council and Officers.*—The Association shall be governed by a Council. The officers of the Association shall be: 1. A President; 2. Vice-Presidents; 3. President of the Council; 4. Treasurer; 5. Secretary.

6. *Vice-Presidents.*—The Vice-Presidents of the Association, who have been appointed after fulfilling the office of President, shall continue to enjoy the office for life; and the office of Vice-President shall be hereafter conferred, as an honorary distinction for life, on the retiring President, by a vote of the Members at the Annual Meeting.

7. *Council.*—The Council shall consist of the President, the President-elect, the President of Council, the Treasurer, and the Secretary of the Association, together with those members who shall be elected annually, according to Law 8. Its meetings shall be held at the time and place of the Annual Meeting, and at other times and places, if summoned by the President of the Council, or by the Committee of Council, or by a requisition signed by twenty members of Council.

8. *Election and Duties of Council.*—Each District Branch shall, in such manner as they think fit, before the General Annual Meeting, elect members who shall represent the Branch in the Council for the ensuing year, according to the following scheme: In a Branch consisting of not less than twenty members, one member shall be elected as representative, in addition to the Honorary Secretary. If the members amount to more than twenty, for every number of twenty additional members, each Branch shall be entitled to choose one additional representative. A complete list of the Members thus chosen shall be sent to the Secretary at least a fortnight before the Annual Meeting, and they shall continue in office till the close of the official year, when they may be either re-appointed or superseded. The duties of the Council shall be: 1. To agree upon a Report to be presented to the Annual General Meeting of the Association; 2. To nominate a President, to be submitted for election to the Annual Meeting; 3. To elect by voting papers ten members of the Council, who, together with the President of the Association for the year, the Vice-Presidents, the President-elect, the President of Council, the Treasurer, the Secretary of the Association, and one Secretary from

LAWS WITH THE PROPOSED ALTERATIONS.

4. *Council and Officers.*—The Association shall be governed by a Council. The officers of the Association shall be: 1. A President; 2. A President-elect; 3. Vice-Presidents; 4. President of the Council; 5. Treasurer.

6. *Vice-Presidents.*—Each retiring President of the Association and President of Council shall be appointed a Vice-President for life, by a vote of the Members at the Annual Meeting.

7. *Council.*—The Council shall consist of the President, the President-elect, the Vice-Presidents, the President of the Council, and the Treasurer, together with those members who shall be elected annually, according to Law 8. Its meetings shall be held at the time and place of the Annual Meeting, and at other times and places, if summoned by the President of the Council, or by the Committee of Council, or by a requisition signed by twenty members of Council.

8. *Election and Duties of Council.*—Each Branch shall, in such manner as they think fit, before the General Annual Meeting, elect members who shall represent the Branch in the Council for the ensuing year, according to the following scheme: In a Branch consisting of not less than twenty members, one member shall be elected as representative, in addition to the Honorary Secretary. If the members amount to more than twenty, for every number of twenty additional members, each Branch shall be entitled to choose one additional representative. A complete list of the Members thus chosen shall be sent to the Secretary at least a fortnight before the Annual meeting, and they shall continue in office till the close of the official year, when they may be either re-appointed or superseded. The duties of the Council shall be: 1. To agree upon a Report to be presented to the Annual General Meeting of the Association; 2. To nominate a President, to be submitted for election to the Annual meeting; 3. To elect by voting papers ten members of the Council, who, together with the President of the Association for the year, Vice-Presidents, the President-elect, the President of Council, the Treasurer, and one Secretary from each Branch, shall constitute the

Committee of Council for the ensuing year; 4. To propose the place of meeting of the Association for the ensuing year; 5. To nominate gentlemen to read such addresses as may be deemed expedient at the Annual Meeting of the ensuing year; 6. To determine the order of business of the General Meeting, so far as that is not determined by the laws relating to General Meetings.

9. *President of the Council.*—The President of the Council shall be, in the first instance, Sir C. Hastings, permanently; and on any vacancy occurring, the President shall be elected by the Council, at the Annual Meeting, for a term of three years.

10. *Treasurer.*—The Treasurer shall be, in the first instance, Sir Charles Hastings, permanently; and on any vacancy occurring, the Treasurer shall be elected at a General Meeting of the Association, and shall hold his office during pleasure.

11. *Secretary.*—There shall be one paid Secretary, resident in some convenient locality, so as to communicate readily with the President of the Council and the Committee of Council. His duties shall be to be present at the meetings of the Association, of the Council, and of the Committee of Council; to record their minutes; to conduct the correspondence of the Association; to superintend the collection of subscriptions, and the enforcement of the laws as regards those in arrear; and otherwise to obey the directions of the Council and Committee of Council. The Secretary shall be elected at an Annual or Special Meeting of the Association. The offices of Secretary and Editor of the JOURNAL shall not be held by the same person.

13. *Committee of Council.*—The Committee of Council shall manage the affairs of the Association in the intervals between the General Meetings; they shall meet not less than twice in the year, and shall be presided over by the President of the Council; or, in his absence, by a Chairman appointed by the Meeting. The Committee of Council shall appoint the Editor of the JOURNAL, who shall be responsible to them for its management: they shall direct any other publications of the Association, and shall take cognisance of any matter which may require immediate decision. Five members to be a quorum. The Secretary shall call a meeting of the Committee at any time on receiving a requisition from five of its members, the object for which the meeting is called being specified.

stitute the Committee of Council for the ensuing year;* 4. To propose the place of meeting of the Association for the ensuing year; 5. To nominate gentlemen to read such addresses as may be deemed expedient at the Annual Meeting of the ensuing year; 6. To determine the order of business of the General Meeting, so far as that is not determined by the laws relating to General Meetings.

9. *President of the Council.*—The President of the Council shall be elected by the Council, at the Annual Meeting, for a term of three years.

10. *Treasurer.*—The Treasurer shall be elected at a General Meeting of the Association, and shall hold his office during pleasure.

11. *Secretary.*—There shall be one paid Secretary, who shall reside in London and devote his whole time to the business management of the Association and the JOURNAL Office. His duties shall be to be present at the meetings of the Association, of the Council, and of the Committee of Council; to record their minutes; to conduct the correspondence of the Association; to superintend the collection of subscriptions, and the enforcement of the laws as regards those in arrear; and to obey the directions of the Council and Committee of Council. The Secretary shall be elected at each Annual Meeting of the Association. The offices of Secretary and Editor of the JOURNAL shall not be held by the same person.

13. *Committee of Council.*—The Committee of Council shall manage the affairs of the Association in the intervals between the General Meetings; they shall meet not less than twice in the year, and shall be presided over by the President of the Council; or, in his absence, by a Chairman appointed by the Meeting. The Committee of Council shall appoint the Editor of the JOURNAL, who shall be responsible to them for its management: they shall direct any other publications of the Association, and shall take cognisance of any matter which may require immediate decision. Five members to be a quorum. The President of Council shall direct a meeting of the Committee to be called at any time on receiving a requisition from five of its members, the object for which the meeting is called being specified.

* In this section, Dr. Wade proposes to alter "ten members" to "twenty-five" members, and to omit the Secretaries of Branches. Dr. Steele's notice of motion (see p. 131) must also be read in connection with this section.

14. Admission of Members.—Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch; provided he shall have the Votes of three-fourths of those present.

15. Subscription.—The Subscription to the Association shall be One Guinea annually; and each member on paying his subscription shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary, *on or before the 1st of December* previous. If any member's subscription remain unpaid twelve months after it shall have become due, the publications of the Society shall be withheld from such member until his arrears be paid.

16. The name of no member shall remain on the books of the Association, whose arrears extend over three years; but the omission of the name from the list of members shall not be deemed, either in honour or equity, to relieve any member from his liability for the subscriptions due for the period during which he has availed himself of the privileges of membership.

24. Publications.—The Journal under the title of the "BRITISH MEDICAL JOURNAL: BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION", shall be published weekly in London, and shall be conducted by a paid Editor, who shall be responsible for all that appears in its pages, except such matter as may be printed by direction of the Council or Committee of Council. The JOURNAL shall contain papers on medical science; and shall be considered the medium of communication between the members of the Association. In it shall be inserted all intimations of places and times of meetings, whether of the Association or the Branches; notices of motions, etc.; at least once in each year a list of the members of the Association; and any other Association business that the Council or Committee of Council may direct. *Transactions* shall be published occasionally, if the funds of the Association permit.

14. Admission of Members.—Any qualified medical practitioner, not disqualified by any bye-law, who shall express his desire in writing and shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch; provided he shall have the Votes of three-fourths of those present.

15. Subscription.—The Subscription to the Association shall be One Guinea annually; and each member on paying his subscription shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary, *on or before the 1st of December* previous. If any member's subscription remain unpaid twelve months after it shall have become due, the publications of the Society shall be withheld from such member so long as his subscription remains unpaid, provided due notice shall have been given of such withholding. Members may be admitted on and after July 1st in each year; and the subscription for such part of a year shall be half a guinea.

16. The name of no member shall remain on the books of the Association whose arrears extend over three years;* but the omission of the name from the list of members shall not be deemed, either in honour or equity, to relieve any member from his liabilities to the Association.

24. Publications.—The Journal under the title of the "BRITISH MEDICAL JOURNAL: BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION", shall be published weekly in London, and shall be conducted by a paid Editor, who shall be responsible for all that appears in its pages, except such matter as may be printed by direction of the Council or Committee of Council. The JOURNAL shall contain papers on medical science; and shall be considered the medium of communication between the members of the Association. In it shall be inserted all intimations of places and times of meetings, whether of the Association or the Branches; notices of motions, etc.; at least once in each year a list of the members of the Association and a copy of the Laws; and any other Association business that the Council or Committee of Council may direct. *Transactions* shall be published occasionally, if the funds of the Association permit.

25. District Branches.—For the purposes of self-government, and for the wider diffusion of the benefits of the Association, the members shall be united into District Branches. Any number of members meeting together may form themselves into a Branch of the Association; but no Branch consisting of less than *twenty* members shall have the privilege of sending a representative to the Council.

26. The District Branches shall be free to govern themselves as their respective members shall think fit; but no Branch Law shall be valid which in the opinion of the Committee of Council shall contravene any fundamental law of the Association.

27. The District Branches shall each pay their own expenses.

25. Branches.—For the purposes of self-government, and for wider diffusion of the benefits of the Association, the members shall be united into Branches. Any number of members meeting together may form themselves into a Branch of the Association; but no Branch consisting of less than *twenty* members shall have the privilege of sending a representative to the Council.

26. The Branches shall be free to govern themselves as their respective members shall think fit; but no Branch Law shall be valid which in the opinion of the Committee of Council shall contravene any fundamental law of the Association.

27. The Branches shall each pay their own expenses.

COMMITTEE ON PARLIAMENTARY BILLS.

At a meeting of the Parliamentary Bills Committee of the British Medical Association held on Wednesday, July 19th, at 37, Soho Square, Mr. Corrance, M.P., attended and explained the scope and purpose of his motion on Poor-law Reform; and the following resolutions were unanimously passed.

It was moved by Dr. STEWART, and seconded by Mr. CURGENVEN—"That this Committee, having heard Mr. Corrance's statement on the subject of medical relief to the poor through the dispensary system, similar to that carried out in Ireland, provided the distribution of tickets for medical attendance be restricted to the relieving officers, subject to confirmation by the guardians at their next meeting, are of opinion that his proposed measure will be beneficial to the poor, the ratepayers, and the public."

Proposed by Mr. CURGENVEN, and seconded by Dr. STEWART—"That the Parliamentary Committee, having considered the Local Government Bill, are of opinion that the measure is calculated to add greatly to the facilities for carrying out the various Acts relating to public health; and that they most cordially approve of the Bill."

Moved by Mr. ERNEST HART, seconded by Mr. CURGENVEN—"That this Committee, having considered the Lunacy Regulation Bill for Ireland introduced by Sir Dominic Corrigan, fully approve of the terms of the Bill; and that the Secretary be instructed to communicate with Sir Dominic Corrigan, in order to take steps to aid in passing this measure."

A Subcommittee was appointed to consider the amendments of the Pharmacy Bill, and also to draw up certain regulations which it was considered desirable to introduce into the Bill.

WEST SOMERSET BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Royal Clarence Hotel, Bridgwater, on Tuesday, July 4th, 1871; W. H. AXFORD, Esq., M.B., in the Chair. There were present ten members and one visitor.

Mr. CORNWALL, the retiring President, after some remarks on his past year of office, introduced the President-elect, Mr. W. H. Axford.

Mr. AXFORD proposed a vote of thanks to Mr. Cornwall for the efficient and hearty manner in which he had performed his duties. The vote was carried by acclamation.

The Secretary laid before the meeting the replies he had received to his circular notice of the meeting, and remarked that twenty members had not answered it. The Minutes of the last annual meeting and of the special meeting held on April 29th last, were read and confirmed.

Report of Council.—The following report was read by the Secretary.

1. The Council are pleased in reporting that the Branch is in a very satisfactory condition, and that, as regards the number of members, it compares favourably with former years. There are now fifty names on the list; but it is hoped that a number of our medical brethren in the district, who are not yet members, may be induced to join the Association.

2. The accounts which will be presented show that a balance of £6:12:6 is in the hands of the Treasurer, to the credit of the Branch, after paying all expenses.

* Mr. Nicholson proposes to substitute the word "two" for "three".

3. Two very interesting meetings have been held—one in October at Bridgwater, the other in March at Taunton—besides the annual meeting at Weston-super-Mare. At the latter the members were invited by Dr. Horace Swete and Mr. Charles Pooley to the Sanatorium, where they were most hospitably received and entertained. After inspecting that establishment and the Infirmary, they visited other places of interest, thus spending a very pleasant day.

4. A special meeting of the Branch was held on April 29th, to take into consideration the sending a member to represent the Branch in the Parliamentary Bills Committee of the British Medical Association. The number of members who attended being only five, and divided in opinion, no election took place.

5. A movement has been made at Bridgwater and other places for the purpose of instituting "Provident Dispensaries" which your Council thinks deserving of encouragement and support, as being calculated to make the lower orders more independent, and also to prove remunerative to the profession.

6. At a meeting of the Council on June 10th, held at Taunton, it was proposed by Dr. Cordwent, and seconded by Mr. Gillett, and resolved—"That the Council suggests, at the next general meeting, the desirableness of the following mode of obtaining from each member of the Branch his opinion, and, to this extent, authority, on special points of interest; and that Dr. Kelly, the Honorary Secretary, be asked to kindly enclose with each announcement of a general meeting of the Branch a question on a medical or allied subject proposed by the Council, on which each member will be expected to express his opinion; but, having regard to the number of opinions sought to elicit, no argument in supporting an opinion shall exceed three minutes in delivering, whether read by the writer, or deputed, or spoken extemporaneously. Should the opinion on a question appear not to require support by argument, an affirmative or negative answer will, of course, be sufficient."

A discussion on the last (No. 6) paragraph having taken place, it was moved by Mr. W. H. AXFORD, seconded by Mr. WINTERBOTHAM, and resolved—"That the following words be added before 'enclose with each announcement,' etc.; viz., 'Send at least one month before, and enclose with each announcement,' etc.; and that the words 'five minutes,' etc., be substituted for 'three minutes,' etc."

The Report, as amended, was then received and adopted.

It was moved by Mr. RIGDEN, seconded by Dr. BENT, and resolved—"That the best thanks of the meeting be given to the Council for their Report, and for their services during the past year."

The Treasurer's Report and Accounts, audited by Mr. Robinson, were laid before the meeting; and on the motion of Mr. W. H. AXFORD, seconded by Mr. CORNWALL, thanks were voted to him for the same.

Council.—It was proposed by Mr. LIDDON, seconded by Dr. KELLY, and carried unanimously—"That Mr. Alford, Mr. S. Farrant, and Dr. Farmer be members of Council in the places of Mr. Randolph, Mr. Liddon, and Dr. Cordwent, who go out by rotation."

It was proposed by Mr. ROBINSON, seconded by Mr. CORNWALL, and resolved—"That the representatives of the Branch in the General Council for the ensuing year be Mr. W. H. Axford and Mr. Winterbotham."

Dr. Kelly was re-elected Secretary and Treasurer.

Next Annual Meeting: President-elect.—A letter from Mr. Garland, of Yeovil, dated July 3rd, 1871, was read; and a discussion on the suggestion made in his letter of holding some of the meetings nearer Yeovil having taken place, it was proposed by Mr. CORNWALL, seconded by Mr. ROBINSON, and resolved—"That the next annual meeting of the Branch be held at Langport, and that Mr. E. C. Garland be President-elect."

Intermediate Meetings.—It was proposed by Dr. BENT, seconded by Mr. WINTERBOTHAM, and resolved—"That intermediate autumnal and spring meetings be held as usual under the direction of the Council."

Papers, etc.—The PRESIDENT (Mr. W. H. Axford) read a carefully prepared paper on Vaccination. After referring to the prevalence of small-pox at the present time, as a reason for choosing vaccination as the subject of his address, the author referred to the probability that vaccination was known in very ancient times. He gave a quotation from an old Indian physician, which in his opinion referred to the operation. After briefly touching on Jenner's labours, he passed on to consider whether vaccinia and variola were one and the same disease. Various extracts and experiments were quoted to show that vaccinia is really identical with variola, but deprived of the "accidents" which, as Jenner held, have in the lapse of time become connected with it in the human subject, and which alone render it dangerous. In speaking of vaccination, the author strongly recommended the mixing of glycerine with the vaccine lymph in cases where there is a short supply, and also

where points on which lymph has been allowed to dry, have to be used. Lymph diluted with seven or eight parts of glycerine, he said, is perfectly efficacious. He also spoke of vaccinating with the scab which has fallen off an old vesicle, recommending it on the ground of the ease with which the active principle can thus be preserved unimpaired for years. In connection with the subject of the dilution of the lymph, it was shown that the leucocytes and the liquid portion of the lymph were inert, but that the granules which, with the leucocytes, are visible under the microscope, contain the active principle. The constitutional effects of vaccination were discussed, and the author then passed on to the good which it has effected, dwelling on the fact that it is not from the failure of vaccination, but from the inefficient performance of vaccination and of revaccination that small-pox has not entirely disappeared. He expressed his belief that, although a primary vaccination was most effectual, if not in all cases entirely to protect from the contagion, yet considerably to modify the disease; yet, from the changes which occur in the system at puberty, revaccination should after this period be always performed. No Vaccination Act could be perfect which did not render such revaccination compulsory. The wearing out of the effects of vaccination, from lapse of time, he considered not to be proved, believing the necessity for revaccination to be due entirely to the disturbing influence of puberty. The circumstances which influence the protective power of vaccination were considered under the four heads of Quality of the Vaccination; Age of the Person; Personal, hereditary, or family susceptibility; and Change of Climate. Under the first head the production of at least four perfect vesicles was insisted on; statistics shewing that, whilst the deaths in persons with only one cicatrix were 7.73 per cent., of those with four cicatrices only 0.55 per cent. of those attacked died. The author then went over the various objections which had been urged against the operation; and, in conclusion, briefly referred to the various Vaccination Acts. He disapproved of the present arrangements by which only one public vaccinator is appointed to a district, and warmly advocated that all registered medical practitioners should be able to obtain payment from the State for all successful vaccinations and revaccinations, and that such vaccinations and revaccinations should be compulsory.

Mr. RIGDEN read a short paper on two cases of Loose Cartilages in the Knee-joint operated on at the Taunton and Somerset Hospital by Mr. H. J. Alford, and exhibited the cartilages.

Several microscopes and interesting prints, photographs, and Mr. Haviland's Map of Heart-Disease, etc., were arranged by the President for inspection.

Dinner.—Nine members of the Branch and two visitors sat down to an excellent dinner at half-past five o'clock, and afterwards spent a very pleasant evening together.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE first anniversary meeting of this Branch was held at the Swansea Hospital on the 5th instant; GEORGE PADLEY, Esq., President, in the Chair. Between thirty-five and forty members were present.

The PRESIDENT opened the proceedings by bidding all present—on behalf of the profession—a hearty welcome to Swansea. He was happy to see them assembled in such numbers at the first annual meeting, and thought it augured well for the success of the Society.

Report.—Mr. ANDREW DAVIES, one of the secretaries, read the Report of Council, which dwelt upon the success of the Branch so far, there being ninety members, and ten fresh nominations.

Mr. J. G. HALL moved, and Mr. T. D. GRIFFITHS seconded, the adoption of the report, and of the recommendation of the Council as to the following modification of the second rule. "Any gentleman wishing to join the Branch shall be nominated by three members—such nomination to be forwarded to one of the honorary secretaries. The circular announcing the meeting next ensuing, provided it does not occur within twenty-one days of the receipt of such communication, shall contain the names and addresses of such candidate and his nominators, and shall be distributed not less than fourteen days before the date of such meeting. If no notice, etc."

Officers, etc.—It was resolved, on the motion of Mr. WATHEN, seconded by Mr. PROBERT, that the President, Council, and Secretaries elected at the inaugural meeting in January last be re-elected for the current year.

Mr. RUSSELL proposed as President-elect, T. J. Dyke, Esq., of Merthyr Tydfil. Mr. Dyke was a gentleman holding a very high professional position in the county, whose scientific attainments were well known, and who, he felt sure, would fulfil the duties of his office most ably.

Dr. YELLOWLEES seconded the motion, and it was carried unanimously.

Mr. DYKE briefly returned thanks.

Representatives in the General Council.—The following were elected:—T. J. Dyke, Esq., Merthyr; J. G. Hall, Esq., Swansea; W. Taylor, M.D., Cardiff; Dr. Yellowlees, M.D., Bridgend; Andrew Davies, Esq., Honorary Secretary, *ex officio*.

Address.—The President gave an address on Habitual Drunkenness, and the means to be taken to remedy it.

On the motion of Mr. RUSSELL, a cordial vote of thanks was passed to the President for his excellent address.

Papers, etc.—Some interesting papers were then read.

1. Mr. T. D. GRIFFITHS described a case of Wounded Intestines. The action of the longitudinal and circular muscular fibres was explained, and the conclusion was arrived at that it was unnecessary to apply sutures in cases of wounded intestines where the wound was small, unless the wound were in such a direction as to divide both sets of fibres.

2. Dr. WILLIAMS of Swansea showed specimens of a Vegetable Parasite attacking the Whiskers, and giving each hair the resemblance of having small nits upon it at equal distances. It was first described by Dr. Tilbury Fox about two years ago.

3. Dr. WILLIAMS showed a specimen of Aneurism of the Aorta. The third and fourth ribs were absorbed. In the process of dissection a valve was detected in the external carotid artery.

4. A case was shown by Mr. HALL (Swansea) of extraordinary Hypertrophy of the Skin of the Thigh and Leg as far as the ankle. It was said to disappear entirely after three or four months' rest in bed.

5. Mr. T. D. GRIFFITHS showed a case of Rodent Ulcer of the Lower Eyelid, to remedy which, after removing the diseased parts, he had removed the healthy eye, and closed the space by bringing down the upper eyelid and uniting it to the cheek.

6. Mr. HALL showed a case of Skin-grafting; and a case of Popliteal Aneurism cured by pressure.

7. Mr. GRIFFITHS showed a case of Rickets in a boy aged 15, first showing itself at the age of 13. The boy was a collier.

8. Mr. WATHEN read notes of a case of Puncture of the Colon to relieve Tympanitis. He also showed a new Starched Bandage Scissors, and a convenient method of fastening leather splints.

9. A paper by Mr. BROWN (Haverfordwest), on Death from Chloroform, was read by Mr. A. DAVIES.

10. Dr. YELLOWLEES read some practical notes on the Treatment of Insanity in Private Houses.

11. Mr. LLOYD read notes of a case of Ruptured Bladder, and showed the specimen.

Dinner.—In the evening, the members dined together at the Mackworth Hotel. The President occupied the Chair, and Mr. A. Davies, Secretary, the Vice-chair.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JUNE 27TH, 1871.

T. B. CURLING, ESQ., F.R.S., PRESIDENT, IN THE CHAIR.

THE Report from the Committee appointed to examine Mr. Hutchinson's cases of Vaccino-Syphilis was read.

ON DEXTRAL PRE-EMINENCE. BY WILLIAM OGLE, M.D.

After a brief account of the chief explanations which have been given of right-handedness, the author advanced numerous arguments against the most generally accepted doctrine that it is based solely on conventional agreement, enforced by educational influence, and not on a natural foundation. Among these arguments were the following. The preferential use of one side is not limited to the arm, but extends to the leg, which is not subjected to education as the arm. The tendency to use one side preferentially manifests itself before education begins, and often persists in spite of the efforts made to overcome it. Left-handedness resembles many physical malformations in being hereditary, in running in families, and in attaching itself rather to the male sex than to the female. Men are not the only animals with a tendency to use one side preferentially; the author had observed the same tendency in monkeys and in parrots. There must hence be some structural foundation for right-handedness. In right-handed persons the left hemisphere is pre-eminent over the right; and in left-handed persons the left hemisphere has a similar superiority. This latter statement, the probability of which was suggested by Dr. OGLE several years ago

(*St. George's Hospital Reports*, vol. ii, 1867), was supported by three cases of aphasia in left-handed persons, accompanied by left hemiplegia, which the author had himself seen, and a fourth recorded by Dr. Jackson. Hence right and left-handedness would seem to depend on a natural predominance of the left and of the right hemispheres respectively. The author stated that, while the left hemisphere is the more complex in right-handed persons, and the right in left-handed individuals. This latter statement was based on the examination of the brain in two left-handed subjects. The specimens and also tracings of them by Dr. Broadbent were exhibited. The greater development, as a rule, of the left hemisphere depended probably, it was argued, on the left hemisphere receiving a freer supply of blood than the right one. The results of the author's observations as to the relative sizes of the arteries on the two sides of the neck were given; from which it appeared that the left arteries are, as a rule, slightly larger than the right ones; and that, independently of the size of the vessels, the stream of blood is less hindered on the left side than on the right. Lastly, it was stated that this explanation was consistent with, and corroborated by, the peculiarities of the cerebral blood-supply in those other animals which, like man, manifest a tendency to use one side preferentially to the other.

ON THE INDICATIONS FOR OPERATIVE TREATMENT, AND ON A NEW OPERATION, "KERATECTOMY," AFTER SEVERE INJURIES OF THE EYEBALL; WITH CASES. BY W. SPENCER WATSON, F.R.C.S.

In the case of penetrating wounds, the occurrence of glaucomatous symptoms was stated to be the most urgent indication for operative treatment—viz., either linear extraction, or iridectomy. At a later stage, after the subsidence of the acute symptoms, iridectomy might be required, or the removal of the cataract indicated; and these operations were most likely to be successful after the disappearance of all signs of active congestion. Cases in illustration were given. The prospect of the complication of sympathetic ophthalmia was always possible when the stage of congestion, with pain and photophobia, was much prolonged, and whenever a foreign body was left in the injured eye. In these circumstances, the removal of the injured eye was sometimes necessary; but if constitutional treatment could be properly carried out, the removal of the injured eye might be postponed or altogether averted. A case in illustration was given. In traumatic and idiopathic cases of suppurative ophthalmitis the operation of keratectomy was proposed; in one case it had been performed successfully by Mr. Watson. Its object was to establish a fistulous opening in the cornea, through which the morbid products of the inflammation might escape. It was suggested that in some cases of threatened suppurative ophthalmitis, keratectomy might prevent the anticipated mischief.

MODIFICATIONS PRODUCED ON THE TEMPERATURE OF THE BODY BY THE LOCAL APPLICATION OF COLD AND HEAT.

BY FREDERICK BARHAM NUNNELEY, M.D.

Experiments detailed in the paper had yielded the following results. 1. Immersion of one extremity in iced water did not cause any alteration in the temperature of the other extremities or the body generally, unless the subject of experiment were in a state of more or less nervous exhaustion or there were decided coolness of the surrounding air, when a fall of temperature occurred. 2. A slight rise of temperature in the body generally, and a more considerable one in the extremities, followed immersion of a hand or foot in water hotter than the blood, amounting under the tongue to about one deg. Fahr., and in the extremities from one to three deg. Fahr., above the normal standard. 3. If at this time any one of the extremities were put into cold water, a fall of temperature below the normal, slightly marked in the body generally, and much more so in the extremities, very shortly commenced. If the hand or foot were now withdrawn from the water, reaction became established, and the natural temperature was slowly attained. Such results would appear to show that, for cold to act locally, a disturbance of the conditions which maintain the normal balance of temperature was necessary first of all—such as might be caused by undue heat; and they suggested the idea that these variations of temperature be regarded, in many respects, as parallel to those attending a slight rigor, and that they were not always the result of reflex agency.

A SIMPLE METHOD OF REMOVING SILVER WIRE WHEN EMPLOYED IN CASES OF UNUNITED FRACTURE. BY FRANCIS MASON, F.R.C.S.

The object of the paper was to describe a plan of fastening the broken fragments with a needle and a loop of wire so arranged that in withdrawing the needle the loop of wire was released, and thus might be removed without pain to the patient and without injuring the bone or soft parts.

At the conclusion of the meeting, the President drew the attention of the Fellows to the change in the times of assembling which had been

adopted, and which would commence with the next session—namely, that the first meeting of the Society would be on the second Tuesday in October instead of in November. He further mentioned that, to allow the alterations connected with the Society's meeting-room to be previously carried out, the library would be closed during the months of August and September.

CORRESPONDENCE.

BRITISH MEDICAL ASSOCIATION.

SIR,—The very great importance of some of the proposed changes in the laws of the Association which are to be submitted to the members assembled at the Annual Meeting at Plymouth next month, more especially of those relating to the General Secretary, makes me feel that it may be well for the Association, or, at the least, may much conduce to the dispatch of business on that occasion, if the members generally can be made acquainted *beforehand* with the circumstances which have led to these proposals being made; and with that view, I venture to send for publication the following observations on the subject, which (it is right I should not omit to say) I have not submitted to any other member of the Committee of Council, but merely offer for what they may be worth as the result of my individual acquaintance with the subject.

In my capacity as the local secretary of a large Branch, a knowledge of facts connected with the working of the Association gradually accumulated with me during the last two or three years, of a kind, and to such an extent, as to convince me that either reform or financial disaster must soon ensue. A representation of some of these to the Committee of Council last Autumn, induced them to appoint a Subcommittee on "the financial condition and organisation of the Association." That Subcommittee had two lengthened meetings, and matters of such gravity were there revealed, that the Committee of Council itself afterwards bodily took up the subject, and investigated it in all its bearings. Altogether, nearly the whole of five days were occupied thereby; and the following were some of the facts and conclusions arrived at.

1. That the General Secretary did not keep any minutes of the annual meetings.

2. That a number of important business-resolutions passed at the last Annual Meeting (at Newcastle) had not been acted upon at all by him; and that still more important business-resolutions of the Journal Committee had been either altogether omitted from the minute-book, or had been imperfectly and incorrectly acted upon.

3. That the General Secretary had not considered it his business to perform such duties (notwithstanding Law II of the Association).*

4. That he had not acted on a resolution of the Journal Committee ordering that the "Clerk and Collector" at the office should find security; and that such officer having defaulted to the amount of several hundred pounds, and absconded, the loss would fall upon the Association.

5. That the General Secretary did not admit himself to be responsible for the business-management of the office (where a very large part of the financial business of the Association is being continually carried on); and that there was no one else who was so responsible. Consequently, that in the period intervening between March 1868 and October 1870, it had fallen into great confusion, which led to the subsequent loss, and to great annoyance to members.

6. That, owing to the Secretary being resident in the country, and the JOURNAL published in the metropolis, lists of the members had to be kept and corrected incessantly, according to changes, in two places at once; viz., Birmingham and London. That this entailed delay at all times, and often great delay, which multiplied correspondence, expense, errors, trouble, and annoyance to all persons concerned, including the Branch Secretaries and the members, and consequently injury to the Association generally. A mass of letters from members, full of complaints, was laid before the Committee, proving the above.

7. It transpired clearly at one of the first meetings, that the great mass of the large arrears of subscriptions existing at the beginning of this year lay amongst those members of the Association from whom it

* II. There shall be one paid Secretary, resident in some convenient locality, so as to communicate readily with the President of the Council and the Committee of Council. His duties shall be to be present at the meetings of the Association, of the Council, and of the Committee of Council; to record their minutes; to conduct the correspondence of the Association; to superintend the collection of subscriptions, and the enforcement of the laws as regards those in arrear; and otherwise to obey the directions of the Council and Committee of Council. The Secretary shall be elected at an Annual or Special Meeting of the Association. The offices of Secretary and Editor of the JOURNAL shall not be held by the same person.

was the special province of the General Secretary to collect them; and a subsequent examination and careful analysis of his books by Mr. Clayton of Birmingham, not only confirmed this to an astonishing extent, but also showed some very puzzling discrepancies to exist in some of his returns.

So great has the loss been from this source that, whereas among the members of large branches from whom the Honorary Local Secretaries collected, there were only from 3 to 8 per cent. of arrears for the year; amongst those (not members of Branches) from whom the paid General Secretary should collect, the arrears amounted to 30 and even 50 per cent.

Finally, the Committee, which I may state consisted, with one exception, of provincial members, came to the conclusion that it is essential for the well-being and doing of the Association that its business should be simplified and consolidated, and that the General Secretary should be formally and responsibly charged with the management of it; and to this end, they resolved (at a large meeting, and *nem. con.*) to recommend the members, at the Annual Meeting at Plymouth, to alter the laws so as to require the General Secretary to be a gentleman who shall reside in London, and who can devote his whole time to the duties. And this resolution, I have good reason to believe, the Committee of Council are extremely anxious, in the best interests of the Association and with the approval of the members, to carry out.

A notion expressed by some that this course will "unprovincialise" the Association, I have not the least apprehension of beyond what already is the case; for now it is neither *provincial* nor *metropolitan*, but *both*, or, rather, it is *national*; and national it must continue to be, if it continue at all.

I believe, sir, that once placed on a sound financial basis, and its business conducted properly, the Association will prosper rapidly, and soon so pervade the country that it will be exceptional for any respectable medical man not to be a member of it. The change of name from Provincial to British was, I believe, suggested by a provincial member—Mr. Trustram, of Tunbridge Wells; and, so far as I know, the metropolitan members have never manifested any desire to centralise the Association in London.

To conclude, I may express a conviction that, instead of the fact of the two officers (Editor and Secretary) both resident in London being likely to lead to difficulties, as has been suggested, it is likely to prove quite the reverse, as their positions and their duties will be perfectly distinct and independent of each other.

Apologising for the length of this communication, which duty and not-pleasure has led me to make, I am, etc.,
Brighton, July 25th, 1871. G. F. HODGSON,

Honorary Secretary of the South Eastern Branch.

FLEXIBLE PROBE.

SIR,—In drawing the attention of the profession to a flexible probe which I have lately devised, I do not for a moment dispute the question of priority with Dr. Sayre. His has been made many months before mine; but it is gratifying to feel that the necessity for such an instrument has been felt on both sides of the Atlantic at about the same time, and that instruments have been planned with the same object.

About two months ago I designed a very simple flexible probe, and requested Messrs. Maw, Son, and Thompson, of Aldersgate Street, to make it. About three weeks ago I received one fully carrying out my wishes, and was carefully testing its merits when my attention was drawn to a notice of Dr. Sayre's instrument. The requirements I perceived to be, an ordinary probe end connected to an ordinary probe handle by a perfectly pliable yet elastic metal stem. With this view I suggested the two extremities of an ordinary eyed probe to be connected together by silver suture-wire, coated with gum-elastic. The simple instrument so made I find to be thoroughly efficacious, very sensitive, and remarkably painless. It has not the advantage which Dr. Sayre's possesses, of being rendered stiff; but this in practice I do not find necessary, while it has the advantage of being cleaned as simply and quickly as any other probe. For examining bullets, a porcelain end may be affixed instead of the silver. I have one of the ordinary probe length, another about twice as long, but they may be made longer if needful: in fact, I have been wishing for a case of psoas abscess to try if I could not feel the carious lumbar vertebræ. The makers have applied a handle of small size on the plan of the handle of Sir H. Thompson's hollow sound, which may intensify sensibility.

I am, etc., CHARLES STEELE, F.R.C.S.
Clifton, July 22nd, 1871.

THE late Earl of Kingston left £500 in his will to his medical attendant, Dr. O'Farrell, of Boyle, County Roscommon.

OBITUARY.

JOSEPH G. LANSDOWN, F.R.C.S., BRISTOL.

JOSEPH GOODALE LANSDOWN was born at Bristol in 1804. He was educated at the Tiverton Grammar School, and was afterwards apprenticed to the late Mr. H. Daniel, Surgeon to the Bristol Royal Infirmary, at which institution he commenced his professional career. He then studied at St. Bartholomew's Hospital and the Aldersgate Street School; and obtained his diplomas in 1827 and 1828. After visiting the continental hospitals, he settled in Bristol, and was elected one of the first Surgeons to the Bristol General Hospital in 1832. This office he held until 1861, when he was appointed Honorary and Consulting Surgeon. He was a skilful operator, and one of the first to use anæsthetics in surgery, and in midwifery he used chloroform extensively. He was devoted to his profession, and worked unceasingly at a large practice, rarely taking a holiday. He made some short commentations on anæsthesia in its early days to some of the journals; but his time was so fully occupied that he seldom put his thoughts on paper. He was obliged to retire from practice at the end of 1870, owing to the encroachments of a large thyroid tumour, which so compressed his trachea as ultimately, on July 6th, to cause his death. He was a man of genial disposition, beloved by a large circle of patients and friends.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At an extraordinary meeting of the College, on Monday, July 24th, the following gentleman was duly admitted a member of the College.

Yeo, J. Burney, M.B.Lond., St. James's Street

The following gentlemen, having conformed to the by-laws and regulations, and passed the required examinations, were granted Licences to practise Physic, including therein the practice of Medicine, Surgery, and Midwifery.

Bayley, Robert L., M.D., 86, High Street, Stourbridge
Cottle, Ernest W., B.A.Oxon., M.R.C.S., Southampton
Curling, William, Guildford Street, Russell Square
Deeping, George Davidson, Castle Terrace, Newark
Ellis, William Hodgson, M.B.Toronto, Toronto
Ewart, John Henry, M.R.C.S., Gipsy Hill
Goddard, Eugene, M.R.C.S., Pentonville Road
Lewis, Lewis, M.R.C.S., Argyll Square
Lycett, John Allan, M.R.C.S., Middlesex Hospital
Moore, Edward W., M.R.C.S., Grove Park, Chiswick
Noakes, Samuel S., M.R.C.S., Charing Cross Hospital
Parrott, Edward John, M.R.C.S., Buckland, near Tring
Power, Thomas, Stepney Green
Ransom, Frederick P. F., King's College Hospital
Strafford, Thomas, M.R.C.S., Ripley, Derby
Waller, Walter A. E., M.R.C.S., Guy's Hospital
Waterhouse, Frederick, M.R.C.S., Pontypridd
Yarrow, George E., M.D.Heidel, M.R.C.S., Old Street

The following candidates, having passed in Medicine and Midwifery, will receive the College Licence on their obtaining qualifications in Surgery recognised by the College.

Coltart, William W., St. George's Hospital
Duke, Douglas W., Belvedere Place, Upper Norwood

At the ordinary quarterly meeting on July 27th, the following gentlemen, having passed the required examinations, were duly admitted as members.

Carter, William, M.B.Lond., Elizabeth Street, Liverpool
Clarke, Jacob Augustus Lockhart, M.D.St. Andrew's, Warwick Street
Eastwood, Joseph William, M.D.Edin., Dinsdale Park, Darlington
Evans, George Henry, M.D.Camb., St. Thomas's Hospital
May, Emanuel, Bedford Place, Russell Square

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on July 25th.

Barrow, Frank Edward, Woolwich Common (Guy's)
Brabant, Thomas Hughes, Chippenham (St. George's)
Bryan, Francis Charles, Northampton (St. Mary's)
Canton, Frederick, Great Marlborough Street (St. George's)
Clarke, Frederick Howard, Devonport (Guy's)
Conolly, Stephen Fullom, Kilburn, North Wales (Charing Cross)
Curling, William, Ramsgate (London)
Domville, Edward James, Exeter (Guy's)
Eardley-Wilmot, Robert, Chandos Street (King's College)
Edginton, Robert William, Stow-on-the-Wold (Birmingham School)
Edis, John Butler, Peterborough (London)
Fitt, Samuel Weekes, Trinidad, West Indies (King's College)
Hannay, Robert Strickland, Belfast (Dublin School)
Heygate, Wm. Harris, West Haddon, Northamptonshire (University College)

Holden, Alfred Fletcher, Cape of Good Hope (University College)
Hopkins, Frederick Fraser, Henley-in-Arden (Birmingham School)
Hughes, Evan Thomas, Kirkby Stephen, Westmorland (Glasgow School)
Hughes, Hugh Robert Greig, Bangor, North Wales (Edinburgh School)
Hutson, Charles, Barbadoes (St. Bartholomew's)
Johnson, Charles Hargitt, Hull (Guy's)
Kiddle, John Nelson, Adelaide Road (Guy's)
Lammiman, Cleland, Commercial Road (St. Bartholomew's)
Ledyard, William Edward, Toronto, Canada (St. Thomas's)
Lyons, Isidor Isaac, Alexandria Road, St. John's Wood (St. Bartholomew's)
McDonald, Wallis, Teignmouth, Devon (St. George's)
Smith, Gilbert, Blackrock, co. Dublin (Dublin School)
Southee, Henry Edward, Ely, Cambridgeshire (Guy's)
Spencer, Francis Henry, Chippenham (King's College)
Thurland, Francis Edward, Thurstaston, Cheshire (St. Bartholomew's)
Walter, Clement Cuthbert, Dover (St. George's)
Watson, William George, Sydney, Australia (University College)
Willcocks, Isaac, West Looe, Cornwall (St. Bartholomew's)
Williams, Edward, Aberbank, Llandysil (University College)
Wybrants, Robert Bath, Shepton Mallett (Dublin School)
Younger, Edward George, Blackheath Hill (Guy's)

Admitted members on July 26th.

Bishop, Edward Stanmore, Manchester (Manchester School)
Briggs, George Chapman, Horncastle (King's College)
Cheyne, George Edward, Thornton Heath (St. Bartholomew's)
Clarke, John Clelland, Coleraine, Ireland (Edinburgh School)
Fendick, Thomas Roving, Mylne Street, Clerkenwell (St. Bartholomew's)
Garton, William, St. Helens, Lancashire (St. Thomas's)
Hugman, William, Guildford Street (St. Bartholomew's)
Morison, Bentham Paynter, Portclew, Pembroke (Guy's)
Newman, Ashwin Conway, Winchcombe, near Cheltenham (Guy's)
Norman, Joseph Clement, Colchester (St. Bartholomew's)
Pratt, Charles William, Plymouth (St. Mary's)
Pye-Smith, Rutherford John, Hackney (Guy's)
Read, Charles, Guildford Place, Russell Square (St. Bartholomew's)
Reed, James, Stoke, Devonport (Guy's)
Rogers, Charles Claude, Cork Street, Bond Street (Middlesex)
Scully, John, Wimpole Street (Middlesex)

Ten candidates having failed in the two days' examination to acquit themselves to the satisfaction of the Court of Examiners, were referred to their hospital studies for six months.

Arts Examinations.—At the last preliminary examination of the Royal College of Surgeons, which was conducted by the College of Preceptors, 313 candidates presented themselves, viz., 82 for the preliminary examination for the fellowship, and 231 for the membership. Of the total number, 155 passed, viz., 100 for membership, and 55 for fellowship; 15 will have to be re-examined in some subjects, having previously passed examinations for membership; and 143 were altogether rejected.—The following gentlemen are reported to have passed for the fellowship, viz. :—

Messrs. T. O. F. Alsop, W. H. Briggs, A. Boswell, W. H. Bull, B. Bubb, W. F. Boase, H. M. Baker, J. S. N. Boyd, E. Chambers, F. de B. Collenette, W. E. Cant, R. T. P. Collyns, C. A. Currie, E. J. D'Gruyther, T. Davies, T. D. F. Evans, S. H. Fisher, B. F. Giles, J. T. Graham, H. Green, H. B. Guppy, W. C. Haley, T. M. Hovell, J. A. Kempe, P. Phelps, W. S. Johns, S. J. J. Kirby, G. T. Kellie, R. W. Leftwick, R. P. Musgrave, L. Mackenzie, A. S. Norman, C. H. Newby, W. Phelps, G. F. Poynder, C. F. Pickering, H. N. Pendleton, J. Scully, W. Stericker, T. Smith, C. J. W. Stocker, F. G. Stewart, W. A. Stephenson, A. L. Tate, W. H. White, R. B. Wilkins, R. F. Woodcock, and A. S. W. Young. The following gentlemen who entered for the membership examination reached the standard required for the fellowship, viz., Messrs. J. W. Allen, W. P. Blackley, J. M. Cotterill, H. T. A. B. Fellows, C. J. Ellam, M. H. H. Vernon, and W. H. Walker.

The following passed for membership, viz. :—

Messrs. R. K. Archer, W. T. Angove, H. C. Allinson, H. A. Angelo, de B. Birch, C. J. D. Astley, R. G. Batley, J. W. Bond, J. U. Bickers, A. H. Boys, P. Cree, E. Carcenac, H. E. F. Cross, H. Cane, W. Cock, S. D. Clippingdale, H. J. Capon, W. T. Davey, A. J. W. Pettigrew, E. R. Da Costa, R. Edmunds, C. F. Diggle, C. A. Danberry, H. W. Ewen, W. M. Evans, W. M. Froisher, F. Carter, F. B. Fisher, J. Greensill, J. Davies, J. F. Grayling, E. B. Howell, G. H. Hornsby, F. G. Harvey, W. A. Hay, F. E. Heubeck, W. Hodgson, R. Harding, G. H. Jackson, T. Johnson, W. C. James, J. W. Lawton, G. H. Leslie, G. Latham, E. S. Morgan, H. R. Mark, W. F. Mitchell, J. G. Moses, A. E. Maylard, W. G. H. B. Marsh, W. A. Maggs, J. W. O. Mogg, H. E. F. G. Miller, W. J. Miskelly, W. Norman, O. E. B. Marsh, F. J. Latham, H. W. James, A. F. Parker, W. C. Nicholls, F. C. Palmer, G. B. Rawes, A. P. Russell, J. Ryley, R. C. Reid, J. B. Sincok, A. J. Rowbotham, L. E. H. Sherwell, A. Smart, H. Todd, E. O. Scallon, G. A. Taiter, G. M. Tuke, J. Tonks, H. G. Thompson, J. T. Toll, H. Tidy, D. P. H. Taylor, G. Underhill, F. G. H. Whitley, A. G. Williams, G. A. Walker, R. C. S. Walcott, A. H. Wilson, A. H. Thompson, E. V. Whitby, E. L. Williams, F. S. Smyth, J. Carroll, C. R. Hall, H. A. Speed, J. J. F. Barnes, C. C. Beddoes, A. L. Douglas, H. E. Friend, S. O. Hector, H. J. D. Innes, J. M. McCarthy, W. D. Stamp, and W. G. Guppy.

There will not be another examination in Arts until December.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, July 20th, 1871.

Aikin, Charles Edmund, 7, Clifton Place, W.
Baldock, Alfred, Charterhouse Square
Biggs, Moses George, Welford, Northamptonshire
Bryan, Francis Charles, Delamere Crescent
Fosbroke, George Haynes, Bidford, Redditch

Furner, Willoughby, King's Road, Brighton
Harris, Michael, Hackney
Tombs, George Augustus, Cirencester

The following gentlemen also on the same day passed their first professional examination.

Bosson, George, University College
Brodrigg, Charles Aikin, St. Mary's Hospital
Brodrigg, Francis Benjamin, St. Bartholomew's Hospital
Brumwell, James Parker, Guy's Hospital
Carey, Richard John, University College
Davies, George Augustus, University College
Lawton, Herbert Alfred, St. Thomas's Hospital
Moxon, John, King's College
Morgan, William Lewis, London Hospital
Shapley, Harry Tom, London Hospital
Webber, William Littleton, St. Bartholomew's Hospital

As an Assistant in compounding and dispensing medicines.
Bradley, John, Bingley, Yorkshire

MEDICAL VACANCIES.

The following vacancies are announced:—

ABERFOYLE, Perthshire—Parochial Medical Officer.
ATHLONE UNION, co. Westmeath—Medical Officer for the Moate Dispensary District.
BIRMINGHAM and MIDLAND FREE HOSPITAL for SICK CHILDREN—Resident Medical Officer.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon.
BRIDGWATER UNION, Somersetshire—Medical Officer for District No. 7.
BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.
DERBYSHIRE GENERAL INFIRMARY, Derby—Resident Assistant House-Surgeon; Two Dental Surgeons; Non-Resident Dispenser.
HEREFORD GENERAL INFIRMARY—House-Surgeon.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street—Assistant-Physician.
INFIRMARY for EPILEPSY and PARALYSIS, Charles Street, Portman Square—Physician.
KINGTON UNION, Herefordshire—Medical Officer for the Eardisley District.
LEEDS GENERAL INFIRMARY—Fourth Assistant Resident Medical Officer.
LOUDOUN, Ayrshire—Medical Officer and Public Vaccinator.
LOYAL EARL OF LONSDALE LODGE OF ODD FELLOWS, Bampton, Cumberland—Medical Attendant.
NEWBURY UNION, Berks—Medical Officer for the Thatcham District.
NEWCASTLE-ON-TYNE LYING-IN HOSPITAL—Visiting Surgeon for the Out-department.
OLDBURY BOARD OF HEALTH—Medical Officer.
SANDAY, Orkney, Island of—Medical Officer.
SPANISH and PORTUGUESE JEWS LYING-IN INFIRMARY—Surgeon.
UNST, Shetland—Parochial Medical Officer and Public Vaccinator.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BUCKLY, Daniel Francis, L.R.C.P. Edin., appointed Medical Officer for the Clane and Timahoe North Dispensary District of the Naas Union, co. Kildare.
CATON, Richard, M.D., appointed Demonstrator of Practical Physiology and Histology at the Liverpool Royal Infirmary School of Medicine.
EUSTACE, Robert, L.F.P.S. Glasg., appointed Medical Officer for Westray, Orkney.
O'FLAHERTY, Jerome, Esq., appointed Medical Officer, etc., for Division No. 1 of the Kingstown Dispensary District of the Rathdown Union, co. Dublin.
MACLELLAND, Alexander, M.B., appointed Medical Officer for Dailly, Ayrshire.
REID, John Henry, L.R.C.P. Ed., appointed Medical Officer, etc., for the 2nd Division of the Kilkeel Dispensary District of the Kilkeel Union, co. Down.
WATT, Dr. J. Ross, appointed Medical Officer for the District of Innellan, parish of Dunoon and Kilmun, Argyshire.
WEIR, James B., M.B., appointed Medical Officer for the parish of Rerrick, Kirkcudbrightshire.
WILSON, Henry, Esq., appointed Junior Surgeon to St. Mark's Ophthalmic Hospital, Dublin.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

BLANDFORD.—On July 15th, at 71, Grosvenor Street, Grosvenor Square, the wife of *G. Fielding Blandford, M.D., of a daughter.
BOGGS.—On July 14th, at Paris, the wife of Alexander Boggs, M.D., late of Her Majesty's Indian Army, of a daughter.
WRIGHT.—On July 8th, at Birmingham, the wife of *M. Hall Wright, Esq., Surgeon, of a son.

MARRIAGE.

GOYDER, David, M.B., of Bradford, Yorkshire, son of the Rev. D. G. Goyder, of Wivenhoe, Essex, to Ann Eliza, second daughter of Robert THOMAS, Esq., of Rawdon, near Leeds, at St. Mary's, Moseley, near Birmingham, by the Rev. J. R. Davison, assisted by the Rev. R. B. Earée, on Thursday, July 20th. No cards.

DEATHS.

CRAWFORD, John Duncan, M.B., Surgeon-Major of the 2nd Bengal Cavalry, at Dhurmsala, Punjab, India, on May 16th.
DARLINGTON, Abraham E., Esq., Surgeon, at Prees, Shropshire, aged 74, lately.
WHITELAW.—On July 11th, suddenly, at Kirkintilloch, N.B., aged 2 years, William Peter, second son of *W. Whitelaw, M.D.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.
WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.
THURSDAY ... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.
FRIDAY Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
SATURDAY ... St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

RAILWAY ARRANGEMENTS FOR THE ANNUAL MEETING.—A London member will find all the information that we possess regarding the railway arrangements for the annual meeting, in the programme published at page 131. We understand that up to the present date no diminution of fares has been agreed on by the Great Western Railway.

THE NAVY MEDICAL SERVICE.

SIR,—The Admiralty are again in the market and bidding for medical recruits. Yet they have just ordered the Staff Surgeon of the Flag Ship in the Flying Squadron (a not unimportant squadron now-a-days) to refund all the additional pay he has drawn as Staff Surgeon of a Flag Ship, viz., five shillings per diem, on the score that the Admiral in command who had sanctioned the issue of the sum is "Commanding-in-Chief," and not "Commander-in-Chief." To make this Act of injustice still more glaring, the Paymaster Navigating Officer and Chief Engineer all draw special allowances over and above their regular pay in virtue—mark this—of their being in a Flag Ship.
I am, etc., AN ASSOCIATE.

THE TREATMENT OF GANGLION.—Dr. G. Goddard Rogers writes to say that, during 1856, he often found difficulty in writing, owing to a painful ganglion connected with the extensor sheath of the right carpus. He used iodine freely, and kept up a succession of blisters. It so happened that, at the time, a paper was read at St. George's Hospital Medical Society which led to a discussion on the different forms of ganglion. He exhibited his, which every member present manipulated. Considerable pain followed, but in two or three days all trace of the ugly swelling was lost; and from that time to the present he has experienced no inconvenience.

ANOTHER member writes to say that, several years since, a large ganglion on the wrist, of considerable standing, was most effectually dispersed by a blow from Liddell and Scott's Lexicon.

DR. LEWIS SAYRE'S HIP-JOINT SPLINT.

MR. HOWARD MARSH, Surgeon of the Children's Hospital, writes to correct an error "in the otherwise excellent report" of Dr. Lewis Sayre's clinical reports, which appeared in the JOURNAL of last week. "The child who before had evinced extremely acute suffering on slight movement of the joint, as soon as the apparatus was applied was able to bear without pain free movement of the limb, and the rough shaking of the chair on which he sat." The case to which it was applied was not in the recent acute stage, and the limb, which was greatly flexed, could not at the time be so straightened as to allow the child to walk. In this latter particular, the report seems to have mixed up two cases. Mr. Marsh expresses a strong opinion of the value of the splint, which, as the case proved, "answered admirably the purpose of its inventor—to prevent concussion of the joint surfaces together on any movement of the limb." He proposes to give it a careful trial, and, we are pleased to add, to furnish our readers with the results which he obtains. We hope that other surgeons who, we believe, profess to try the splint, will also place their results before our members.

TREATMENT OF TAENIA-WORM.

SIR,—Other remedies having failed to cure TAENIA in M.D.'s case, santonine, which I have found answer in a similar case, or the pomegranate root bark, in powder or decoction, deserves a trial. Either remedy should be followed by a good dose of castor oil, or castor oil with turpentine. It would be interesting to know the result.
I am, etc., THOS. M'CLURE, L.R.C.P.

Wellow, Bath, July 18th, 1871.

SIR,—I recommend M.D. to try Chabert's empyreumatic oil—two teaspoonfuls administered morning and evening for several days after an active purgative. As the oil is nauseous, it should be administered in a strong carminative mixture. The dose should be continued for some time with the interposition of repeated doses of an active purgative.
I am, etc., JAMES THOMPSON, M.D.

Leamington, July 18th, 1871.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

THE document forwarded to us concerning the Walsall Cottage Hospital appears to be confidential; and we should be unwilling to notice it except at the wish of all parties concerned.

ANTISEPTICS AND DISINFECTANTS.

SIR,—I feel much obliged to Dr. Sanson for his reply in your JOURNAL of March 18th to the letter of Mr. Charles Roberts, which appeared in your paper of February 25th; and should not have troubled you with any remarks of my own, had Mr. Roberts put his strictures on my experiments with carbolic acid and other disinfectants in a less offensive and more scientific form. If, also, before rushing into print with his theories, he had taken the trouble of reading the whole of my paper, he would have observed that I had made a series of experiments in which I dipped pieces of meat in dilute solutions of the various substances used as antiseptics, and would have noticed the results obtained. Lastly, had he repeated my experiments, he would have found that the solution of carbolic acid used was sufficiently dilute not to coagulate albumen, and so could not act by "simple mechanical obstruction." This would have saved him the trouble of forming a theory, and might also have led him to doubt whether "we have already laboured too long under the incubus of carbolic acid," as well as that "it had gained its popularity on purely theoretical grounds." Allow me, again, to remark that this coagulation theory cannot account for the preservation of substances containing no albumen, such as wheaten starch, farina, and various other vegetable bodies.

With respect to the action of various antiseptics on meat suspended over solutions of them, I might, like Mr. Roberts, have theorised on the subject, but preferred making the experiment, as the various substances mentioned in my paper are used under practically the same conditions. This series was made with a view of showing that these antiseptics were not disinfectants, and that actual contact of the contagious particles with the disinfectant was essential before any action could take place; but this cannot be with such substances as chloride of zinc and that class of bodies which are not volatile, while in the case of carbolic acid it can be easily understood that, being volatile, it is diffused in the atmosphere and comes into contact with the germs or means of contagion, and destroys them.

In speaking of heat as a disinfectant, it is stated that "boiling would suffice for linen and cotton goods." If Mr. Roberts really believe this, how can he in the next sentence say that "much anxiety is naturally felt by the public lest small-pox and scarlet fever should be brought home from the laundry"—and this is a fruitful source of contagion. His stoving process may be very effective; but every shopkeeper or clerk, to say nothing of every labourer, cannot go to a large firm in London to order a stove for disinfecting purposes, nor could he use it safely if he got it. The stoving of carpets, beds, etc., is not easily effected; and, unless this be done, stoving the smaller articles would be useless.

With respect to the use of sulphurous acid, Mr. Roberts believes that the cure of scabies by sulphur ointment is due to the presence of a small quantity of free sulphurous acid; whether or not on purely theoretical grounds he does not vouchsafe to inform us.

In commenting on the fact of cholera being less frequent among the workers in gunpowder factories in India and elsewhere, he says it is due probably to the presence of sulphur and sulphurous acid; and then he says that, if so small a quantity of the gas suffices to destroy rank vegetable growth, a much larger quantity in the air, though not more than can be comfortably breathed, may be fairly expected to destroy minute organic poisons and germs. Are these, or are they not, purely theoretical grounds? Is Mr. Roberts aware of the destructive action of sulphurous acid on metals, or of its bleaching action on many vegetable colouring matters, or of its use in dyeing fabrics and staining papers? Has he a theory which will overcome these slight objections to its use? I do not for a moment deny that sulphurous acid is a powerful disinfectant in cases where it can be fairly employed; but with its excessively irritant action on the respiratory organs, it is absurd to speak of its use in sick chambers; and had it been easily applicable, it would not have remained for Mr. Roberts to advocate now the use of a substance the value of which as a disinfectant has been known from time immemorial.

I may further remark that Mr. Roberts would have rendered a great service to the medical profession, if he had shown by experiment that sulphurous acid would prevent the spread of pyæmia in wards in which there were patients suffering from that disease, as Professor Saxtorph of Copenhagen, Professor Lister, and Mr. J. Paget have shown practically to be the case with carbolic acid.

In conclusion, I may state that, carbolic acid being now public property, I should not have considered the letter worth my attention had Mr. Roberts attempted to discuss the matter as a scientific question; but, as he has made a personal attack on myself, I felt that it might perhaps lead some to suppose that my experiments were not fairly conducted, but were published from motives unworthy the consideration of a scientific man.

I am, etc., CRACE CALVERT, F.R.S.

DENTAL HOSPITAL.—There will be an examination for the Dental Diploma of the Royal College of Surgeons early in the ensuing week. Write at once to the Secretary.

ROYAL COLLEGE OF SURGEONS.—The following questions were submitted to the candidates last week at the pass examination for the diploma of member. *Surgery.*—1. Mention the articular surfaces of the Superior Maxillary Bone; describe the operation for its removal and the parts cut through in the operation. 2. Describe the operation of Extirpation of the Globe of the Eye; and state the injuries or diseases which render the operation advisable. 3. Name the parts cut through in the following operations, viz., Hare-lip, Umbilical Hernia, Amputation of the Thumb at the Carpo-Metacarpal Joint; and in Ligature of the Ulnar Artery in the middle of the forearm. 4. Enumerate the various kinds of Ulcer which occur in the Tongue. State the cause and characteristic appearance of each, and write in full prescriptions for their appropriate treatment. 5. Give the Surgical Anatomy of the Ischio-rectal Region, and describe the dissection necessary to display it. 6. Mention the diseases or other conditions which may render Laryngotomy or Tracheotomy necessary. Describe the mode of performing those operations, and state your reasons for preferring one to the other.—*Medicine.* 1. Mention the duration of the incubation and subsequent stages in Small-Pox, Measles, and Scarlet Fever, and describe the eruptions in those diseases, and state how you would severally distinguish them from each other. 2. When would you consider a patient who had had Small pox or Scarlet Fever, free from the risk of conveying the disease to others? 3. Mention some of the preparations of Iron and Lead in the *Pharmacopæia*, giving the doses and purposes for which they are employed. Write a prescription for a case of Hæmoptysis.

Dr. H. R. SWANZY may address his letter to the care of Dr. Rose Cormack, 7, Rue d'Aguesseau, Paris.

JOHN HUNTER'S HOME.

SIR,—While thanking you for your kind advocacy of the intended memorial of John Hunter in Kensington, I hasten to remove an erroneous inference that might arise from the allusion to the property. The present occupier of John Hunter's home at Earl's Court, Kensington, informs me that the lease has several years longer to run than was generally supposed.

I am, etc.,

JOHN J. MERRIMAN.

CERTAIN POINTS RELATIVE TO GENERATION.

SIR,—It is well known that by cultivation the floral envelopes of plants may be changed in form and function—single flowers becoming double or infertile monsters. Similarly the floral envelopes of the human female become changed, and infertility is usually found to prevail. The labia majora represent the calyx in two segments, and the labia minora and clitoris the corolla in three segments. The os uteri is equivalent to the base of the pistil (this organ having been cut off). Lock wards present numerous instances of misshapen hypertrophy of the clitoris and labia minora, resembling the changes in the floral envelopes of plants. Infertility is caused not only by over-culture of the generative function, but also by luxurious habits; the individual being cultivated and developed rather than the race.

Another curious subject is the attractiveness of the floral envelopes of plants. Insects aid in the fructification of the vegetable kingdom whilst they enrich themselves with its spoils; but I have never read any explanation of the fact that women delight themselves with flowers to a much greater degree than men as a general rule. I imagine that there are sympathies aroused in women, and that love and beauty are developed and intensified by the form, colour, and scent of flowers. The power of scent over the generative function is well known in animals, and the most energetic scents (castor and musk) are procured from animals. Women are sometimes rendered hysterical by powerful scents. This subject deserves study.

There is parallelism betwixt the generative function of plants and animals in the secrecy of generation. Germination occurs in the dark, whilst animals are entombed in some secret place or in the womb during development. Wild animals generate in secrecy; and man does the same, showing shame at generation. Secrecy obtains in both the vegetable and animal kingdom, and shame as well as secrecy in the higher animals, including man. To this rule there are exceptions. Domesticity alters this characteristic in some degree; and many individual men and some tribes exhibit shamelessness. All the mental traits of the animal world are developed in man more or less perfectly, rendering one man different from another, and one race the contrast of another race. This is true in matters of generation as well as on other points; and we find one man happy with one mate, like the dove; whilst another man, like the peacock, requires many wives. Again, one man makes a good parental nurse, like the stickleback; whilst another, like the hart, would injure his offspring if they were not removed from his company (as occurs with the hind and her young).

I beg to apologise to your readers for these desultory remarks. In conclusion, I would say that to man is given moral nature as certainly as physical nature, and that it is incumbent on him to control and regulate his desires and appetites agreeably to the commandments of God. In strict obedience, there is great reward in this present world, for morality and public health are inter-dependent.

I am, etc.,

FREDERICK JAMES BROWN, M.D. Lond.

Rochester, July 1st, 1871.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, July 22nd; The New York Medical Record, July 13th; The Boston Medical and Surgical Journal, July 13th; The Madras Mail, May 15th; The Shield, July 22nd; The Philadelphia Medical Times, July 5th; The Philadelphia Medical Independent, July 8th; The Cambrian, July 21st; The Islington Gazette, July 21st; The Western Daily Mercury, July 20th; The Durham Chronicle, July 21st; The Mansfield and North Notts Advertiser, July 22nd; The Plymouth Watchman, July 22nd; The Dublin Evening Post, July 25th; The Irish Times, July 25th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Sir Henry Thompson, London; Mr. Joseph Lister, Edinburgh; Dr. J. Crichton Browne, Wakefield; Dr. Mapother, Dublin; Dr. Protheroe Smith, London; The Secretary of the Royal College of Physicians of London; Dr. M. W. Taylor, Penrith; Mr. A. B. Steele, Liverpool; Mr. Charles Steele, Clifton, Bristol; Dr. Angus Mackintosh, Callington; A London Member; Dr. Alfred Wiltshire, London; Dr. Wade, Birmingham; Dr. Peatson, Manchester; Mr. F. J. Reynolds, Appledore; Dr. Woodward, Worcester; Messrs. Calvert and Co., Manchester; Mr. R. Johnson, Walsall; Dr. John Evans, Dublin; Mr. Frederick J. Gant, London; Dr. Rutherford, London; Mr. G. F. Hodgson, Brighton; Messrs. Fannin and Co., Dublin; A. B., Ramsey; Dr. Thomas B. Forster, Plymouth; Mr. T. Watkin Williams, Birmingham; Dr. Henry Barnes, Carlisle; Dr. Mayo, London; Dr. Edis, London; Dr. Squire, London; Dr. A. Evershed, Amptill; Dr. C. Currie Ritchie, Manchester; Mr. R. W. Parker, Berlin; Mr. T. M. Harding, London; Dr. Cornelius Fox, Scarborough; Mr. Dyte, London; Mr. Jessop, Leeds; Mr. Husband, York; Dr. Cheadle, London; Dr. Peart, North Shields; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Surgeon-Major Atchison, London; Mr. Kemp, Wellington, New Zealand; Dr. Littleton, Plymouth; Dr. Sheen, Cardiff; Dr. Bishop, Paris; Mr. R. J. Swan, Northleach; Mr. Worth, West Anderton, Devonport; Dr. S. Skinner, Nailsea; Dr. C. J. Workman, Teignmouth; Dr. Yellowlees, Bridgend; Mr. Wathen, Fishguard; Mr. T. D. Griffiths, Swansea; Mr. T. K. Gray, Carlisle; Dr. J. Thompson, Leamington; Dr. J. J. Phillips, London; Dr. Palfrey, London; Mr. H. Wilson, Dublin; A Certifying Surgeon; Dr. G. E. Day, Torquay; Dr. Falconer, Bath; Dr. Robert Rattray, Aberdeen; The Rev. Dr. Haughton, Dublin; Mr. Lawson Tait, Birmingham; Dr. Ransome, Bowden, Manchester; Dr. Bolton, Leicester; Mr. T. G. Wales, Downham; Dr. Hitchman, Derby; Mr. Greenway, Plymouth; Dr. Swanzy, Dublin; Mr. R. J. Harvey, Würzburg; Dr. Markheim, Paris; Dr. Sturges, London; Mr. Wilson, Cullen, N.B.; Mr. Board, Clifton; Mr. R. Davy, London; Mr. John Wood, London; Dr. Barham, Truro; etc.

LECTURE

ON THE

DIFFUSION, PATHOLOGY, AND TREATMENT OF ASIATIC CHOLERA.

BY

SIR THOMAS WATSON, BART., M.D., F.R.S.

[AT the present juncture, when we are again threatened with an invasion of Asiatic cholera, it has appeared to us that the publication of that portion of Sir Thomas Watson's revised Lectures on Medicine, which relates to the mode of diffusion, pathology, and treatment of this disease, would be of considerable professional interest and advantage. We have accordingly requested and received authority to publish the following portions of this lecture from advance sheets of the new edition now passing through the press.]

A fourth great visitation of cholera—that of 1865-66—has come and gone since I last addressed you on this subject, and it has been far more fertile of instruction on many interesting points relative to the disease than any of the three preceding epidemics.

Very few, I imagine, of the original doubters remain unconverted to the doctrine which I have held from the beginning, that epidemic cholera is *catching*: that it results from a material poison which is portable, capable of being conveyed from place to place, and communicated from person to person—or from inanimate substances to which it clings, such as articles of furniture, or clothing. That the morbid matter floats also in the air, and may be wafted about by its currents, is a general and well-founded belief. I think, with Dr. Baly, that when it travels over great distances, as from one country or region to another, it uses the vehicle of human intercourse; but that it may be and often is diffused over smaller spaces, as from one part of a town to another, or from a tainted port to a ship anchored to leeward, by the movements of the atmosphere. The long migrations of the disease are not made rapidly. Its rate of progress never exceeds, and is often slower than, that of modern travelling. Its primary appearance in an island or a kingdom is always at its outer boundary. In our own country, for example, it first planted its foot in a seaport town on the *east* coast, over against the mainland where cholera was raging, and whence ships had very recently arrived. The same is true of its subsequent visitations. On the other hand, the crews of vessels sailing from healthy places remain free from the disease until they have entered an infected port, or held intercourse with an infected shore.

In his statistical report of the Royal Navy, published in 1858, Dr. Bryson says:—"The medical records of the (naval) service have been searched in vain to discover an instance in which either cholera morbus or yellow fever made its appearance amongst a ship's company, unless one or more of the men or officers had previously—within at most twenty-one days—been exposed in some house, ship, or locality where the infectious virus which emanates from persons ill of the one or the other of these diseases existed. The spontaneous origin of either malady, far away from an infected locality, is unknown in the naval service."

That the atmosphere forms one vehicle of infection seems clearly proved by some incidents ascertained respecting the last epidemic before it struck this country. I copy them from the *Times* newspaper for October 15th or 16th, 1865:—"Five miles from Gibraltar stands the little town of San Roque; and San Roque and Gibraltar were abruptly smitten by the plague, not only on the same day, but almost at the same moment. At Gibraltar it was a sudden access of the malady; at San Roque a first outbreak. At a small town near Toulon the plague fell upon the place in the night; and thirty cases occurred simultaneously between evening and morning." (This, let me observe in passing, might *possibly*, though not probably, have happened from the use of drinking water as a vehicle of the poison.) "At Constantinople it was observed that, while the cholera was raging, all the sea-gulls which used to flit over the waters of the Bosphorus deserted the place, nor did they reappear till the disease had departed and the atmosphere became pure once more."

Compare this with an extract from the *Dublin Morning Register* respecting the first epidemic—that of 1832:—

"A Westport correspondent, upon whose veracity we place reliance, has communicated to us the following extraordinary fact:—In the demesne of the Marquis of Sligo, near Westport House, there is one of the largest rookeries in the west of Ireland. On the first or second

day of the appearance of cholera in this place, I was astonished to observe that all the rooks had disappeared; and for three weeks, during which the disease raged violently, these noisy tenants of the trees completely deserted their lofty habitations. In the meantime the revenue police found immense numbers of them lying dead upon the shore near Erris, about ten miles distant. Upon the decline of the malady within the last few days, several of the old birds have again appeared in the neighbourhood of the rookery; but some of them seemed unable, from exhaustion, to reach their nests. The number of birds now in the rookery is not a sixth of what it was three months ago."

A striking proof that the air may be a vehicle of infection—that the poison may enter the lungs with the breath—is furnished by the fact that two pilots took the disease in consequence of having their open boat towed by a ten-fathom rope at a considerable distance astern of the steamship *England*, on board of which cholera was raging. They were never on board the vessel. Both of them had cholera, and one of them died of it. Both took the disease home, and transmitted it to their families, near Halifax, where the disease had been unknown for many years.

But although the infection thus proceeding from the bodies or the excretions of the sick, and entering by the lungs the bodies of the healthy, may strike and destroy individuals here and there, it seems very doubtful whether the disorder can become epidemic, except in certain conditions of the atmosphere.

It appears from the extremely interesting report of Mr. Glashier on this subject, that "the first three epidemics were attended with a particular state of atmosphere, characterised by a prevalent mist" (he is speaking of London and its immediate neighbourhood)—"thin in high places, dense in low. During the height of the epidemic in all cases, the reading of the barometer was remarkably high, and the atmosphere thick. In 1849 and 1854, the temperature was above its average, and a total absence of rain, and a stillness of air amounting almost to calm, accompanied the progress of the disease on each occasion. In places near the river the night temperatures were high, with small diurnal range." He goes on to enumerate, as characteristic of the atmosphere at these periods, "a dense torpid mist; and air charged with the many impurities arising from the exhalations of the river and adjoining marshes; a deficiency of electricity; and (as shown in 1854) a total absence of ozone, most probably destroyed by the decomposition of the organic matter with which the air in these situations is strongly charged."

The ozone here mentioned is endowed, as I told you formerly, with peculiar purifying properties. It has a high oxidising power, in virtue of which it unites with, decomposes, and so destroys miasmata, while it is at the same time itself proportionately destroyed. There is no ground for ascribing cholera, as some have done, to the absence of ozone—except in the sense of there not having been a sufficient quantity of it in the atmosphere to counteract all the poisonous miasm which actually produces that disease. The total absence of ozone affords presumptive evidence of the presence of atmospheric impurities.

A remarkable law of *altitude*, that is of elevation above the level of the Thames, has been announced by Dr. Farr as governing the mortality from cholera in this metropolis; and if here, so doubtless, under similar circumstances, elsewhere. "The elevation," he says, "of the soil in London has a more constant relation with the mortality from cholera, than any other known element." The mortality is inversely as the altitude.

This law of altitude—so important and so practically valuable—is but an expression of the result of many concurrent circumstances. The material poison of cholera will be likely to gravitate, as the marsh poison gravitates, with which it has many points of analogy, to the lowest part of the atmosphere; where the high barometrical pressure is the greatest, and vaporous diffusion therefore the least; where unwholesome exhalations from the soil and from the water are the most abundant; where the dispersing and diluting influence of winds is least felt. Indeed the air may be completely stagnant while on the neighbouring heights a brisk breeze is blowing. The lower regions of the atmosphere are the hotter also as well as the moister; and under the agency of a high temperature the organic impurity with which the air is charged runs more readily into decomposition. The inverse law of altitude is therefore an intelligible law. We see also how it may sometimes be disturbed or broken, under exceptional circumstances.

At the time when Mr. Glaisher's observations were made, the river Thames had become, without metaphor, the common sewer of this enormous and ever-growing town. Foul with the daily and hourly influx of abominable filth, it was offensive to the senses, and a cause of added foulness to the incumbent atmosphere. When we learn from Mr. Glaisher that during the summer months the night temperature of the river is considerably above the minimum temperature of the air, and that its vast area was simmering all night long, and throwing off clouds

of noisome and noxious vapour, we need be at no loss to account for the special unhealthiness of those quarters of the town which lie nearest to its banks.

But however unwholesome and pernicious the atmosphere may thus become, it cannot generate cholera, unless the specific exciting poison of that disorder be present also. In the autumn of 1859 the Thames stank horribly; yet we had no cholera. On the other hand, there is good reason, I say, to believe that this poison can never create a spreading pestilence, unless it meets with a congenial atmosphere. The foul air lends force and diffusion to the poison, and aids, or causes, its increase.

Notwithstanding that the choleraic poison in an invisible and impalpable state may thus pervade, and be communicated through, the air, it had long been conjectured, and it is now perfectly certain, that (horrible thought), we may eat and drink the poison, and so obtain the disorder. That, as I shall have to tell you, is the case also with enteric fever; the discharges from the alimentary canal are at once the main outlet for the poison and the chief source of infection. The late Dr. Snow was the first to broach the notion that the poison may be *swallowed* with the food which we eat, or the water which we drink; and that its multiplication takes place within the system, whence, by the alimentary canal, a new and abundant stock of it is voided. He showed how easily portions of the rice-water excretions, colourless and but slightly odorous as they are, may, without our notice, come to adhere to our food during its preparation, or its consumption. And the horribly disgusting fact had been made too certain by the unchallengeable disclosures of the microscope, that the water which is supplied by the several water companies for domestic purposes to this great city habitually contained visible particles of human ordure. Some striking facts had been collected by Dr. Snow, which warranted the presumption that a most fearful outbreak of cholera in Soho was attributable to the water of a certain pump, contaminated from a neighbouring sewer. A remarkable converse fact had been reported by the late Sir William Lawrence. Bethlem Hospital, and an asylum for children called the House of Occupation, stand near together on an open space of ground between fourteen and sixteen acres in extent, lying in the parish of St. George, Southwark. Being dissatisfied with the filthy water then supplied by the Lambeth Company, the Governors some forty years ago sank Artesian wells on the premises, and the pure water thus procured is used exclusively in the two institutions, which between them number about seven hundred residents. There was not a single case of cholera in the Hospital or in the House of Occupation in any of the first three epidemics; although the disease prevailed extensively in the parish, and in the streets in their immediate vicinity.

The result of an inquiry suggested by the Board of Health into the effects of the consumption of impure water during the second and third cholera epidemics was favourable to Dr. Snow's theory. Mr. Simon reported that "the population drinking dirty water appeared to have suffered three and a half times as much mortality as the population drinking other water."

That cholera may indeed be contracted by drinking a mixture of choleraic discharges and water, is demonstrated with all the force, if not with the reality, of an experiment, by the facts thus stated by Mr. Macnamara, a gentleman practising in India:—"I may mention the circumstances of a case in which the most positive evidence exists as to the fact of fresh cholera dejecta having found their way into a vessel of drinking water, the mixture being exposed to the heat of the sun during the day. Early the following morning a small quantity of this water was swallowed by nineteen persons. (When partaken of, the liquid attracted no attention either by its appearance, taste, or smell.) They all remained perfectly well during the day, ate, drank, went to bed, and slept as usual. One of them, waking next morning, was seized with cholera; the remainder of the party passed through the second day perfectly well, but two more of them were attacked with cholera the next morning; all the others continued in good health till sunrise of the third day, when two more cases of cholera occurred. This was the last of the disease; the other fourteen men escaped absolutely free from diarrhoea, cholera, or the slightest malaise."

At the time of this remarkable occurrence there was no cholera in the neighbourhood, nor had there been for several years, nor, so far as Mr. Macnamara is aware, has there been since.

Mark here the period of incubation, varying from twenty-four hours to two or three days; mark also that the majority of those who drank the tainted water escaped unhurt; in other words, that some persons take the complaint more readily than others.

The epidemic of 1865-66 has illustrated in a very remarkable way the soundness of Dr. Snow's theory. The prevalence of the epidemic in this country was clearly a step forwards in the progress of the malady in its rapid advance from Mecca to Egypt, and thence to various places on the eastern and southern coasts of Europe, and in the basin of the

Mediterranean. Mr. Simon lays it down as an axiom to be generally accepted in State Medicine, that "contagions current on the continent of Europe must be deemed virtually current in England." The disorder first showed itself here in the autumn of 1865, as usual at a seaport—Southampton. Then, as usual, it slept apparently for a while, to reappear and diffuse itself, after fresh importations from the Continent, and at its customary rate of increase, in the spring and summer of 1866; when, in the middle of July, there occurred in the eastern part of London an increase of the disorder so sudden, vast, and rapid as to warrant its being spoken of as an explosion. This outburst was limited to a certain definite and remarkable area, the line of limitation having an obvious relation, not to *soils*, but to *houses*; it was contemporaneous over that area, and stopped short abruptly within and along the line of limitation. It had a week's duration only. Its cause began to act during the week ending on July 14, and ceased to act in the week following. On the sixth day of its increased activity cholera had appeared in every portion of the before-mentioned area; the rate of its increase, as compared with the previous week, was nearly seven times greater than in the rest of the metropolis; while in the subsequent week the rate of increase became virtually the same over the whole of London. It is worthy of remark that there had been no undue prevalence of diarrhoea in the affected area.

This strange and definite outbreak must have had some adequate and definite cause; and, upon careful search, there was found evidence only just short of demonstrative proof—evidence which I cannot stop to state in detail, but which you may study in the ninth Report of the Medical Officer of the Privy Council—that this local calamity was produced by the temporary distribution to the area in question of unfiltered and infected water from certain reservoirs of the East London Water Company.

The peculiar blue mist which was noticed in the epidemic of 1854 was present also in the last epidemic. Mr. Glaisher says of it:—"On some days no trace of the mist has been visible; on other days it has been seen for parts of the day only. It has extended from Aberdeen to the Isle of Wight. This mist increased in intensity when viewed through a telescope; usually no mist can be seen when thus viewed." As in previous epidemics, there was a marked deficiency of ozone in the atmosphere. In other respects the meteorological phenomena were in remarkable contrast with those which had occurred during previous visitations of the cholera, and the law of altitude was broken by the predominance of more powerful influences.

With respect to the mode of propagation of the disease, Mr. Simon uses this strong language:—"It cannot be too distinctly understood that the person who contracts cholera in this country is *ipso facto* demonstrated with almost absolute certainty to have been exposed to excremental pollution. Excrement-sodden earth, excrement-reeking air, excrement-tainted water—these are for us the causes of cholera."

He adds: "The local conditions of safety are, above all, these two: (1) that, by appropriate structural works, all the excremental produce of the population shall be so promptly and so thoroughly removed, that the inhabited place, in its air and soil, shall be absolutely without faecal impurities; and (2) that the water supply of the population shall be derived from such sources, and conveyed in such channels, that its contamination by excrement is impossible." And he concludes with the pious hope that "for a population to be poisoned by its own excrement will some day be deemed ignominious and intolerable."

Our knowledge of the *morbid anatomy* of cholera has become more complete and more exact during the last epidemic.

Drawing my conclusions not from any experience of my own, but from numerous and very careful *post-mortem* inspections made by Dr. Parkes, by Dr. Johnson, by Dr. Sutton, and by others, I believe it may be stated as a rule—a rule broken sometimes, no doubt, by disturbing but intelligible circumstances—that in cases of death *during collapse*, when the examination is made sufficiently early, the lungs are found to be shrunken, light, dry, and pale—in one word, unnaturally bloodless; the left ventricle of the heart is contracted and nearly empty; its right cavities, the trunk of the pulmonary artery, and the systemic veins, much distended with blood; the mucous membrane of the intestines free from congestion, and pale.

In some of these cases the lungs, though very light in weight, are of a dark colour, which gives them an appearance of congestion. This colour Dr. Johnson refers to a backward engorgement of the *bronchial* veins and capillaries, consequent upon the block in the pulmonary artery and its branches.

When death has occurred during incipient and imperfect reaction, the morbid conditions disclosed by dissection are the reverse of these. The lungs are congested, sometimes even inflamed; and the mucous membrane of the intestines is also loaded with blood.

These are points which bear closely upon the pathology of the dis-

ease; and upon its true pathology rests its rational treatment. To these I now turn.

There are two conflicting theories as to the pathology of cholera; and there are two conflicting principles—which accord with and flow from these theories respectively—as to its proper treatment. Upon this momentous problem of treatment, the final appeal must clearly be made to experience.

It is acknowledged on all hands that the primary and special danger in cholera lies in its period of collapse. Now it was a very natural and plausible theory which attributed this state of collapse to a drain upon the blood by the profuse and repeated fluxes from the stomach and bowels, whereby the blood, being robbed of its more liquid ingredients, and made thick like tar or treacle, became incapable of flowing freely, if at all, through its natural channels; and thus the circulation coming ultimately to a stop, life stopped also. And the practice suggested, and put in force, as a direct corollary to this theory, was that of endeavouring to arrest the destructive flux by astringent drugs and by opium, to sustain or urge on the lingering circulation, and to restore the spent strength and the lost animal warmth by alcoholic and other stimulants. Upon similar grounds was advocated the dilution of the thickened blood by water injected into the veins.

It is affirmed, on the other hand, that the condition called collapse is not due to the excessive discharges from the body; that those discharges are really eliminative of the poison, or of the products of the poison, which caused the disease, and are to be permitted, or even encouraged, rather than checked; that to pen the poison and its products within the body is to fight against the conservative forces, and to do what art can do to ensure the mortal agency of the poison, and, therefore, that astringents and opiates can do no good, but are, on the contrary, positively hurtful.

Were the first-mentioned theory true, there must be a discernible relation between the alleged cause and its effect. The greater the amount of the intestinal discharges, the more certain and the more decided should be the resulting collapse. But no such proportion has, in fact, been observed. Nay, the very reverse not seldom obtains. The most hopeless cases are those of collapse after very scanty discharges, or with no discharges at all.

Again, if the collapse were indeed owing to the drain upon the blood effected through the intestinal discharges, it would be prolonged, deepened, and rendered more perilous, by the continuance of those discharges; whereas it is notorious that patients emerge from the state of collapse, and recover, while the evacuations nevertheless go on, and that the cessation of the evacuations during collapse is a fatal sign. "It may confidently be asserted", says Dr. Parkes, "that there is no one who has seen much of cholera who does not know that, exclusive of the mildest forms of the disease, a case with little vomiting or purging is more malignant and more rapidly fatal than one in which these are prominent symptoms."

Tested, then, by the evidence of acknowledged facts, this theory must be pronounced a failure, and the treatment founded upon it a mistake.

In truth, a fallacious analogy has been assumed between the collapse or exhaustion arising from a drain upon the blood and the collapse in cholera. In one single point—namely, the smallness and weakness of the arterial pulse (in other words, the defective circulation of the blood)—the two may seem to touch each other. In almost every other point they differ widely. A person exhausted by loss of blood, or by a long continued drain upon that fluid, is in a state that is very near to syncope. When the exhaustion is extreme, if he assume the erect posture, he faints outright, and becomes unconscious. To walk, to stand, or even to sit up, is simply impossible; whereas, in the collapse of cholera, a patient, with death stamped apparently upon his features, with no pulse to be felt at his wrist, with a blue and icy-cold skin, may be able to walk about the room, and to perform many of his usual functions. He does this indeed at the peril of his life; but the fact that he is capable of such an effort proves that there is an essential difference between cholera collapse and ordinary syncope. The exhausted man, if he recover, recovers slowly; the repair of his impoverished blood is necessarily a gradual process. The cholera patient rallies from his collapse at once, if at all. He may be in full collapse to-day, and convalescent the day after to-morrow, and apparently but little the worse for the terrible disorder through which he has so recently passed. "I have seen", says Mr. Grainger, "a man stand at his door on Wednesday, who on Monday was in perfect collapse." Again, the way in which remedies tell upon the two contrasted conditions is totally and instructively unlike. The coldness and faintness of exhaustion are relieved at once by a glass of wine or of brandy; the pulse instantly acknowledges the virtue of the stimulus. But alcoholic stimulants do not warm or invigorate, even for a moment, the patient in choleraic col-

lapse; rather, they seem to make matters worse. On the other hand, blood-letting has often brought marvellous relief under collapse; while to draw blood from a person who is fainting from exhaustion would probably ensure his death, and would certainly aggravate his danger. Take the following instance, recorded by Sir Ranald Martin, of the effect of venæsection. "On visiting my hospital in the morning, the European farrier-major was reported to be dying of cholera. I found that during the night he had been drained of all the fluid portion of his blood. His appearance was surprisingly altered: his respiration was oppressed; the countenance sunk and livid; the circulation flagging in the extremities. I opened a vein in each arm; but it was long before I could obtain anything but trickling of dark treacly matter. At length the blood flowed, and by degrees the darkness was exchanged for more of the hue of nature. The farrier was not of robust health, but I bled him largely; when he, whom not a moment before I thought a dying man, stood up and exclaimed, 'Sir, you have made a new man of me'. He is still alive and well."

The question has naturally been put, "Is it possible to reconcile facts of this kind with the theory that the collapse of cholera results from the loss of the liquid constituents of the blood?" If Sir R. Martin's hypothetical statement that his patient "had been drained of all the fluid portion of his blood" were an accurate expression of facts, can we conceive it possible that he could have "made a new man" of him by extracting largely the blood which remained in the vessels?

The main advocate in this country, and, as I think, the triumphant advocate, of what may be called the evacuant or cleansing practice in cholera, is your present able professor of physic, Dr. George Johnson. To him is justly due the great merit of having established, by his persevering efforts in the face of much opposition and discouragement, the worth and efficacy of that practice, although he was not the first to recommend or to adopt it. It was, in fact, tried, with favourable results, nearly half a century ago, by English practitioners in India; its professed object being that of getting rid of offensive morbid secretions. The practice thus vouched for by Dr. Johnson is directly in accordance with, and serves to confirm, that view of the pathology of cholera which, by a methodical display of numerous facts, and by a process of close and conclusive reasoning, he may fairly challenge as his own. Briefly, he holds, as many before him held, that the phenomena of cholera result from the entrance of a peculiar poison into the blood, where it probably undergoes, like that of small-pox, a rapid process of self-multiplication, and spoils certain of the blood-constituents, which are then ejected through the mucous membrane of the alimentary canal; that the feelings of general oppression and *malaise* sometimes experienced before the onset of the bowel symptoms, are indicative of blood-poisoning; that the copious discharges are expressive of the efforts of nature to throw off a noxious material, and really form, therefore, a necessary part of the process of recovery; and that, if the pouring forth of the vascular excretion be checked (as it can, perhaps, be by opium), the risk of fatal collapse is thereby increased. He declares that the results of his own practice, founded on these views, have amply justified them; and a considerable body of other evidence has now been furnished in support of the same plan of treatment.

It is plain that, if "elimination" be a condition of recovery, the method of elimination is Nature's method, which Art may help or hinder—help by the cleansing method, hinder by the astringent.

In discussing the principle of treatment I have shot ahead of several points in the novel, interesting, and, to my mind, satisfactory exposition of the general pathology of cholera by Dr. Johnson.

Remember the abrupt contrast seen, upon early examination of the body after death during collapse, between the anæmic condition of the lungs, and the gorged condition of the trunk of the pulmonary artery and of the systemic veins. What is the explanation of this sudden arrest of the stream of blood in the small arteries, just before it reached the capillaries? Were the arrest of motion due to gradual thickening in consequence of the continued abstraction of its liquid portion, it would be found stagnating in the capillaries, as well as in the arteries. Bear in mind that one characteristic symptom of cholera—that symptom which, irrespectively of the fatality of the disease, renders it truly a disease to be dreaded—consists in very painful cramps of the larger muscles of the body. These contractions, it may be assumed, are produced by the choleraic poison, just as we know they are producible by the poison of strychnine. Dr. Johnson supposes that a similar spasm or cramped state of the muscular fibres which embrace the minute pulmonary arteries, is caused by the same choleraic poison, and bars these slender channels against the advancing blood: that the stopcock action which I have so often explained to you, comes here into play. The thickening of the blood is a consequence, and not a cause, of the arrested circulation and the collapse. Precisely the same blood-thickening occurs as a result of the impeded circulation through the lungs which is associated with long

continued, extreme, and fatal apnoea, as I have explained to you in a former lecture.

The true explanation of the fact that mere diarrhoea, however profuse, does not thicken the blood, is probably, as Dr. Johnson suggests, that water is rapidly absorbed from the soft tissues to take the place of that which escapes from the alimentary canal. Acting on this principle of physiological hydraulics, we remove a dropsical accumulation by the action of a hydragogue purgative.

Surely the theory that I have now placed before you seems a reasonable theory. It is founded on a true analogy; it is consistent with the symptoms noticed during life, and with the conditions discovered after death. We may, therefore, legitimately regard it, until fairly refuted, as a sound as well as a most ingenious and important theory. In truth, it derives strong confirmation from the fact that it unlocks, like the right key, the whole of the pathological intricacies of the disease. Thus the emptiness of the systemic arteries accounts for the extinction of the pulse at the wrist, for the cadaverous sinking in of the eyeballs and falling of the features, for the blueness and coldness of the skin, and for the absence of syncope. The circulation stops, not from debility of the heart, as in exhaustion, but in consequence of a direct mechanical impediment to the onward course of the blood. We can understand the impotence of brandy against this condition; and how, on the other hand, bleeding may help, both by relaxing the spasm and by unloading the distended right heart, to restore the circulation. Into this explanation Dr. Johnson presses, plausibly enough, the singular effect of the injection of fluids into the veins of these patients. It appears that, to be most influential, the fluids must be hot; and he concludes that they act partly by diluting the morbid blood, but chiefly by relaxing, through their warmth, the spasm of the smaller arteries. The blood then flows on again, and the symptoms of collapse are for a time removed. Again, the husky whispering voice is owing, not to muscular weakness, but to the small volume of tidal air in the respiratory currents. As but little venous blood reaches the lung-tissue proper, there is but little demand for air to meet and decarbonise it. The respiration accordingly becomes shallow, and the vocal pipe, feebly blown through, refuses to speak. Under the temporary impulse of the warm injections, the voice regains its usual tone and note. Once more, there are chemical and less obvious changes which receive their explanation from this theory, and further attest its truth. The stream of blood through the pulmonary capillaries being greatly lessened, the supply of oxygen is proportionally reduced in quantity. Hence during the stage of collapse there is defective oxygenation of the blood and of the various tissues of the body, coldness and blueness of the surface, diminished exhalation of carbonic acid, and suppression, nearly absolute, of bile and of urine—carbonic acid, and the chief constituents of bile and of urine, being all results of oxidation. That this is the correct explanation of the suppression of bile and urine during collapse is rendered all the more probable by the curious fact that, when a nursing mother becomes the subject of cholera, and falls into collapse, the secretion of milk continues unchecked. Now the chief constituents of milk—casein, sugar, oil, and water—may be obtained from the blood without the addition of oxygen. They are *not* products of oxidation.

If the doctrines advanced by Dr. Johnson be well-founded, as I firmly believe them to be, it must be wrong to dam the choleraic poison and its products within the body. Even when those products have, in one sense, been separated from the system, they may produce highly noxious effects if they remain shut up in the stomach or bowels, there to ferment and decompose. Admitting, as we must, that a minute quantity of the morbid excretions swallowed with water may suffice to produce the disease, a large quantity retained, through weakness of the expulsive powers or otherwise, can scarcely be harmless. Rather may we expect that its expulsion will tend to liberate the patient from danger and discomfort; just as the opening of large abscesses, and the discharge of foul pus and imprisoned gases, are often seen to rescue, as if by magic, a sick man from apparently impending dissolution. Whatever may have been Dr. Johnson's earlier purpose, he does not now propose to *excite* discharges from the mucous surface of the digestive canal; but simply to facilitate the removal of matters lodged there. And this he would do by emetics, by draughts of tepid water or other diluents, or by castor-oil, of which the action is both speedy and gentle. The recommendation of the evacuant plan must, after all, lie in its comparative success, and its worth has already been put closely and extensively to the proof.

In the fiftieth volume of the *Medico-Chirurgical Transactions* there is a most instructive communication from Drs. McCloy and Robertson. They show that, of 375 cases of cholera admitted into the Liverpool Parish Infirmary in the last epidemic, 161 proved fatal—a gross mortality, under all the modes of treatment adopted, of 42.93 per cent. Of these cases, 91 were treated with astringents and stimulants, camphor

and iced water, applications of ice, and hypodermic (opiate) injections; and the mortality per cent. of these cases was 71.42. 87 cases were treated with castor-oil, and with a liberal use of food and alcohol; and the mortality was 41.37 per cent. 197 cases were treated with castor-oil only, and the mortality was 30.45 per cent. The authors of the paper declare that "recovery never occurred without the continuance of the intestinal discharges; or their restoration, if previously arrested."

The late Inspector of Prisons, Mr. Perry, had charge, in 1832, of the cholera patients in the Marylebone Workhouse. He told me that, though he had no specific notes to refer to, he distinctly remembered that about thirty patients were treated with castor-oil; and that they did better than any of the others.

When I last spoke on this subject in these Lectures, I stated that the few recoveries which I had witnessed had all taken place under large and repeated doses of calomel, but that I could not venture to affirm that the calomel cured them. At present, I am much disposed to believe that, by its cleansing action, the calomel may have helped the recovery; and, after all that I have since seen, heard, read, and thought upon the matter, I must confess that, in the event of my having again to deal with the disorder, I should feel bound to adopt, in its generality, the evacuant theory and practice; and to avoid alcoholic stimulants and opiates.

Now, if this theory and practice in respect of cholera be true and right, the practice ought to be right in respect of the associated diarrhoea also; and it is strongly affirmed by those who have largely tried it, that it is right, inasmuch as it is eminently successful. Dr. Johnson avers that he has found it so.

Hear the concurring testimony of Drs. McCloy and Robertson. "Our experience of diarrhoea was very extensive. Several thousand cases came under our observation in the different dispensaries connected with the West Derby Union and in the Liverpool Parish Infirmary. Among these were doubtless many which would have recovered under any mode of treatment, or by the *vis medicatrix naturæ* alone. But there were many, too, of a most severe choleraic type. The treatment adopted was generally evacuant in its nature; and consisted in the administration of castor-oil, calomel, rhubarb, or magnesia. In every case relief was afforded 'pleasantly, quickly, and safely.' It was but seldom that more than two or three doses of oil were required." The medical officers of the Bootle Dispensary depose to the same effect: "We certainly had less trouble with the evacuant mode of treatment. Our patients seldom gave us a third visit; two doses of castor-oil or rhubarb mixture being generally sufficient to cure the disease." "We never saw a diarrhoea patient, treated with evacuants from the commencement of his attack, require subsequent removal to hospital. In a large proportion of our cases there was 'premonitory diarrhoea' which had been treated, often for four or five days, with astringents. Diarrhoea patients undoubtedly recover when treated with astringents; but the recovery is not consequent upon the arrest of the discharges, as these are invariably restored before the patient feels well."

In the face of this and of much similar evidence, I feel bound to say that the rules laid down by Dr. Johnson for the treatment and prevention of diarrhoea and cholera, seem now to me safer and better than the less discriminating advice which heretofore I gave you, "whenever a suspicion arose that cholera was present in the community, not to try, in cases of diarrhoea, to carry off the presumed offending matter, but to quiet the irritation and to stop the flux as soon as possible, by astringents, aromatics, and opiates."

No doubt, the true indication of treatment is, to stop the flux as soon as possible; but this may sometimes be best effected (as also in "crapulous diarrhoea, and in the summer cholera of Sydenham") "by carrying off the offending matter."

POISONOUS SILK GLOVES.—Dr. J. T. Dickson writes in a daily paper: On Saturday last a patient called upon me and exhibited her hands covered with very irritable blebs or blisters. After minute examination and questioning for cause, she told me that during the week she had purchased in Marylebone a new pair of silk gloves for two shillings, had worn them during a journey to Manchester and back, and that her hands had borne these vesications ever since. She wore the left glove more constantly than the right, and the left hand is consequently much more affected than the right. I desired her to bring the gloves to me, and I found that they were of good quality spun silk, dyed of a light-brown colour, the dye apparently being an aniline dye of coal-tar origin. Spun silk takes the bright colours made from aniline very well, but the use of articles so dyed is dangerous. In the museum of the College of Surgeons are preserved some brightly-coloured children's socks, which gave rise to a similar affection on the feet of a child (I believe in France). I also believe that the late Marquis of Hastings was once similarly affected.

CLINICAL LECTURES

ON

MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,

Medical Director, West Riding Asylum; Lecturer on Mental Diseases to the Leeds School of Medicine; etc.

II.—HYSTERICAL MANIA.—(*Concluded.*)

WHAT, then, are the symptoms of this well marked type of mental disease called hysterical mania? Some of these have been already brought before you in connexion with the cases introduced, but it may be well to give a separate and succinct sketch of them. The preludes to the attack are generally debility, with defective appetite and menstrual disorder. The attack itself begins suddenly, either without any warning, or after a few days of depression or silent reserve. Loquacity and restlessness are its earliest and most permanent symptoms. Philosophers have asserted that women possess a superiority over men in their powers of conversation; and this remark is powerfully confirmed by the disease under consideration. The untiring vigour with which a delicate-looking girl will talk incessantly for twenty-four hours is positively amazing. She seems to gather strength as she goes on; for, as the disease advances, volubility becomes greater. The utterances thus fluently poured forth are at first disjointed, but rational sentences; inopportune, but sharp and comprehensible remarks; and then mere broken and interjectional phrases. The incoherence in this disorder, however, is never comparable with that of acute mania, even in its worst phases, as some shreds of sense may be found in it; some laws of association may be observed to regulate it. In the midst of a torrent of what sounds meaningless chattering, you will be surprised by some clever or pertinent expression—some words that prove that memory is active, and that perception is acute. Very soon after talkative excitement is established, it assumes an emotional complexion. This is happy and joyous, and there are fits of laughter and musical outbursts; or pensive and sad, and there are profuse tears and convulsive chokings. Most frequently these emotional states alternate with each other, while the mind is gradually sicklied over with the pale cast of eroticism. In a great majority of cases, the morbid excitement of what has been called the tender emotion is distinctly observable. There is increased agitation produced by the presence of a member of the opposite sex; there are rhapsodies addressed to some real or ideal lover; there are sentimental cravings; there are passionate invocations; there are lascivious movements, obscene speeches, and even filthy acts; and along with these erotic manifestations there are perverse and mischievous propensities. Dugald Stewart said that women surpass men in docility and aptitude to learn. After watching a few cases of hysterical mania, you will see reason to doubt at least the first part of that statement. The intractability, obstinacy, and noisy spitefulness displayed are truly disheartening to those who have to deal with them. In the worst cases, there are also destructiveness, violence, and degraded habits, and perverted appetites leading to consumption of cinders or garbage. Throughout the disease, however, in the worst cases as well as the mildest, a peculiar power of rallying is generally preserved. Self-control is not altogether lost. The current of excitement can be stemmed for a few seconds. A degree of intelligence can be exhibited which seems incompatible with such decided mania. As the excitement diminishes and recovery is approached, there is either depression of spirits, listless indifference, or acute sensitiveness. In some cases, there are confusion of thought, a sense of bewilderment, and an obliteration of memory as regards the whole or large portions of the attack.

Along with these mental symptoms there are, at the beginning of hysterical mania, headache (often limited to the frontal region), loss of appetite, and muscular tremor. In a few cases there is also spinal tenderness in the dorsal region, with pains in the abdomen and legs. Pallor of the countenance and dilatation of the pupils are always present. The pulse is only slightly increased in frequency; the skin is cool and moist; and the tongue clean, or only coated with a thin white fur. There is usually a profuse flow of light-coloured limpid urine. A very fair amount of sleep is obtained; but, as the attack progresses, this gradually lessens in amount, until, at its height, the whole night is perhaps passed without even a snatch of rest. As sleep is reduced in quantity, cutaneous sensibility is heightened, until a state of general or local hyperæsthesia is attained. The slightest touch causes, or seems to cause, sharp pain. This condition, however, is not constant, but comes and goes, and is occasionally replaced by anæsthesia or bluntness of feeling. There is invariably muscular restlessness throughout

the whole stage of excitement. The play of features, or rather the contortion of the face, is constant and inexhaustible. All sorts of gestures and gesticulations are practised. Spasms and twitchings affect the voluntary muscles, and sometimes the involuntary ones also, producing choking, hiccup, and griping pains. Not rarely there is a vehement trembling of the eyelids, and also palpitation of the heart. The excitement and rapid movements cause some acceleration of the pulse and elevation of temperature, but ordinarily the pulse and temperature undergo less change than might have been anticipated. A sudden and transitory rise in either may happen without any obvious explanation, but their average range is tolerably normal. As the attack proceeds, constipation of the bowels comes on, as well as menstrual irregularity, if that has not existed before the incursion of the insanity. Throughout the whole attack, the body retains its plumpness in an almost miraculous manner. Notwithstanding that little food is taken, and that wear and tear are excessive, emaciation is warded off. When convalescence is reached, weakness is much complained of, and also frequently the pain under the left breast, first described by Dr. Todd, and referred by him to reflex sensation. If I might venture in any way to amend what has been stated by so eminent an authority as Dr. Todd, I would tell you that this pain is felt more in the splenic than in the submammary region; and that it is in a few cases associated with profound anæmia, without leucorrhœa. Along with this pain, during convalescence after hysterical mania, there are occasionally gastrodynia of a severe kind, and various erratic neuralgic pains. Respecting the duration of an attack of hysterical mania, I can give you no reliable information. In some cases, it terminates in a few days; in others, it continues for months. It is rarely, however, that any one attack, even when unmodified by treatment, lasts more than three months.

To bring more practically before you, in the concrete, what I have told you about hysterical mania, or at least part of what I have told you, I shall now recall to you the case of S. M., aged 18, single, a dressmaker from Leeds, who was discharged recovered on the 14th of December last. This girl had been a pupil-teacher in a Wesleyan school, and had applied very closely to her studies and passed her examination creditably at sixteen years of age, when all at once her health failed and she became melancholy and hysterical. She was then sent to the country, and in about six weeks became quite strong again. Up till August last she was in good health and employed as a dressmaker. Then, however, she became weak and pale and ill, and was noticed to be more sensitive than was her wont. No specific ailment could be discovered, but her debility grew upon her until the beginning of September, when she became quiet and dejected. In this state she remained for two days, and then suddenly launched out into vociferous cheerfulness, which passed through various stages of aggravation, and finally necessitated her incarceration in this asylum on the 20th of September. One cousin of hers had been insane, and another epileptic. Her mother had always been nervous. Out of five brothers and sisters of hers, four had died in infancy. When admitted here she was talking in a loud tone of voice and rambling manner upon many subjects, interlarded with fragments of texts and prayers. She understood what was said to her, answered questions, only too glibly and copiously, and could remain quiet for a little when ordered peremptorily to do so. She insisted upon pacing up and down and tossing her arms about. She said she had pain on the right side of her head and "all down the spine of her back", so that she could not lean upon a chair nor allow the skin over the vertebræ to be pressed or rubbed. She was of average height, exceedingly pale with fair hair and widely dilated pupils; the skin was moist. There was slight increase of vocal resonance over the apices of both lungs, and the heart-sounds were loud and widely diffused. During the night of the 20th she slept well, but as soon as she awoke on the morning of the 21st recommenced to vociferate. She also wept and laughed, and could not be persuaded to take much food. On the 28th September she is reported as somewhat more composed, and as having taken abundant nourishment, but being so weak as to be unable to stand. On the 30th she is said to be very excitable and unmanageable; also more incoherent and destructive, having torn up some clothing and flowers in the airing-court. A specimen of her incoherence was taken down *verbatim*, and I now read it to you. "Gold, silver, waxworks, yellow, pink, and white—Get a substitute—Reverend So and So—Plenty of law-givers—Two brothers—Bible—Eternal life and death—A man I love to honour—Honour to whom honour is due—My master—Give him a life pill—Self praise is no recommendation—Venerable old age—Fox and Pitt."—All this, and endless quantities of the same stuff, with the most extraordinary volubility. On October 1st, the entry is in the case-book:—Pulse 90; tongue clean; takes her food indifferently, talking incoherently, but remains in bed. On the 2nd it is:—Has been much excited all day, crying out in a loud harsh voice; very emotional; attitudinises and throws herself into tragica.

postures; is alternately erotic and religious in her conversation, love, however, being her chief theme. Pulse 130; tongue clean; bowels have not acted for two days. On October 3rd, Has had some broken sleep; very incoherent and mischievous; raves mostly about some one named "Cavosa," to whom she refers in amorous terms; pulse 120. On October 4th, Is a little quieter; pulse 123, and irritable; pupils much contracted; face pale; tongue clean. On October 12th, Is decidedly improved; capable of rational conversation; has not menstruated for six weeks. On October 23rd, Still improving, but very weak; is quiet and downcast; employed in sewing. After this she gained ground steadily until the date of her discharge.

No difficulty attends the differential diagnosis of hysterical mania. It could only be confounded with acute mania, and the excited stage of acute dementia. From the former it is distinguished by its history, by the less deep and universal involvement of the mind which characterises it, by the character of the delirium, by the moisture of the skin and comparative cleanness of the tongue and unaltered state of the secretions, by the absence of great muscular strength or rigidity and of rapid emaciation, and by the slightness of the modification of the pulse and temperature; from the latter it may be known by the absence of the stupidity and fatuity which mark the delirium of acute dementia, and of that chilled and livid state of the hands, feet, and features, which accompanies it.

The prognosis of hysterical mania is equally simple with its diagnosis, and is invariably favourable. The tendency of the disease is to end in recovery. But this tendency may be fostered and encouraged, and the duration of the disease much curtailed by judicious treatment. The only danger to be apprehended is that of relapse; but this is sometimes considerable, as many as five and six relapses taking place in one case.

Fortunately, there is no morbid anatomy of hysterical mania. In one case only have I seen death occur in consequence of an intercurrent condition. That, however, was the most inveterate and distinctive case of hysterical mania that I ever encountered, and I shall therefore read to you the notes of the *sectio cadaveris* as far as they bear upon our present subject. The skull was of average thickness, but unsymmetrical, bulging posteriorly to the left. On removing it, the dura mater was seen to be tense, without folds or wrinkles, as if it were tightly stretched over the brain. On opening it, the brain expanded and bulged over the sawn edge of the skull as if it had been subjected to compression. The whole brain weighed forty-six ounces. There was very slight thickening of the arachnoid. The gyri were plump and in close apposition to each other. The grey matter was extremely pale, especially in its deeper layers, which were scarcely distinguishable from the medullary substance, which was of unusually firm consistence. The ventricles were of average size and contained no fluid. A small round body, of firm gelatinous consistence and about the size of a pea, lay imbedded at the anterior end of the third ventricle, fastened there by little fibrous attachments. The middle commissure was of extraordinary thickness and strength. The floor of the fourth ventricle was congested. The neck of the uterus was much enlarged and indurated. The left ovary was of the size of a large walnut, and was converted into a fibrous capsule containing dark fluid contents and one large clot. There was a cyst at the outer extremity of the left Fallopian tube.

The treatment of hysterical mania requires a careful adaptation to varying conditions. Its occasionally transitory nature justifies a trial of home-treatment before an asylum is resorted to; but if under home-treatment it remain unabated at the end of fourteen days, then removal should not be any longer delayed. The most protracted and troublesome cases that have fallen under my observation have been those in which home-treatment had been persevered in for months, until patience had been exhausted. The prolongation of the disease increases the risk of relapse, so that it is of much importance to cut it short at the earliest possible moment. During the maniacal condition there is not much room for moral treatment. A conciliatory and yet firm manner on the part of the physician, however, is not without its effect. Quietness and rest are also advantageous, and any simple occupation, such as sewing, if its adoption can be secured during an interval of tranquillity, is often very useful. It fixes attention, and by its very monotony soothes the perturbed mind. Exercise in the fresh air ought to be taken daily, and nourishing food must be administered. The medical treatment I generally begin with is a mixture containing bromide of potassium and tincture of valerian—forty grains of the former and a drachm of the latter in each dose, to be taken three or four times a day. This has sometimes a most gratifying effect, as in the case of A. H., who was perfectly well four days after her admission here. If, however, its beneficial action be not very speedily manifested, no good will result from continuing its employment. I should recom-

mend you, then, to resort to morphia and assafoetida. From a quarter to half a grain of the muriate of morphia with from ten to thirty grains of assafoetida may be given twice or thrice a day. The tincture of assafoetida is not objected to in pauper asylums. This treatment is generally successful; but should it fail, as it sometimes will, then cannabis Indica with bromide of potassium ought to be tried. This valuable combination was brought into notice in the *Annales Médico-Psychologiques* in 1867. We have employed it here constantly since then, and with decisive benefit in many cases. The use of narcotics is not contraindicated in hysterical mania. Warm, tepid, and even cold shower, baths are sometimes composing and useful. During convalescence, iron is almost always required, sometimes quinine also. I have a particularly high opinion of the value of Easton's syrup of the phosphates of iron, quinine, and strychnia, during recovery from hysterical mania. Of course, menstrual disorders must be subjected to their appropriate treatment.

THE HASTINGS PRIZE ESSAY, 1870.

ON DIGITALIS: ITS MODE OF ACTION AND ITS USE.*

By J. MILNER FOTHERGILL, M.D.,
Late Senior Resident Medical Officer to the Public Dispensary, Leeds.

Drugs of similar Power.—The whole question of agents acting upon the heart so as to increase its power of contraction is comparatively new. With the exception of digitalis we are, generally speaking, scarcely acquainted with their names. The agents are either entirely new, or nothing has hitherto been known of their secondary effect upon the heart. The list of them is a short one, and will not take up much space in the enumeration. Thus Dr. Clifford Allbutt has advocated the use of Virginian cherry-juice (*Prunus Virginiana*) in cardiac affections; Dr. John Harley has investigated the action of belladonna; Dr. Braidwood the action of dajasc, or arrow-poison of Borneo (*Tanganina venenifera*); Drs. Hilton Fagge and Stevenson have investigated the action of the *Scilla maritima* and the *Helleborus viridis*; and Leven has investigated caffein and thein. Of these, the writer has only experimented on digitalis, belladonna, and caffein. There is thus plenty of opportunity for investigating further the action of these drugs, and adding to what we already know of their action; while there is a ground for hope that to this list may be added new agents more certain, more effective, and more manageable than those we as yet possess. It is, then, with the hope and expectation that such will be the case that the writer has devoted so large a space to the consideration of the mode of action of digitalis. He has striven to aggregate what is known of the subject, and his own more recent conclusions, in order that the question may be regarded as broadly as possible. The frequent digressions and the consideration of the action of the morbid process have sometimes been considered at greater length than the administration of the agent; as, once admitting the increase in the activity of the ventricular contraction as the chief therapeutic action of the agent, the question of the value of the agent must rest on the question as to how far increased ventricular contraction may or may not be beneficial. By thus treating digitalis as a member of a class of agents, it will much facilitate the investigation into the usefulness, or uselessness, of a drug as a cardiac neurotic. It is obvious that other agents which increase the ventricular contraction and bring the heart to a standstill in systole, must necessarily possess a therapeutic value allied to that of digitalis. In prosecuting such an inquiry, it will be easy to ascertain to what extent the action is common to that of the whole class, or in what it is singular. This grouping of agents as to action will assist us in aggregating a number of agents with either a primary or secondary effect upon the heart; in time this will constitute a group, and in practice the remote effect of an agent upon the heart will be taken into consideration in the choice of therapeutic agents. Thus, we as yet can merely guess to what extent the different actions of opium and belladonna, as hypnotics, may be dependent, as regards the success or non-success following their administration, on the vascularity of the brain. How far the beneficial effect of belladonna, at times when opium has failed to relieve, may rest directly, not on the different hypnotic alkaloid, but on the vascular supply of the brain being augmented by its use, we know not. Thus a series of experiments with belladonna in

* Concluded from page 116 of last number.

delirium tremens, similar to those of Mr. Jones of Jersey with digitalis, when the pulse is feeble and fluttering, would be of the greatest practical interest. These might then be contrasted with a series with opium; and thus from a few facts we might attempt to build up a principle, and the application of that again to cases would in time furnish us with a law worth any amount of empirical guessing. It is only by the grouping of agents and then testing them by clinical experience and physiological experiment, observing the successes, the failures, and their causes, that we can expect to emerge from our present therapeutical chaos. Thus, under our old plan of empirical testing of agents, colchicum has six or eight (I forget which) times been removed in and out again of our *Pharmacopœia*. The same, to a less extent, has occurred to numerous other agents of no trifling activity. It is obvious that the use of these agents has been conducted on nothing approaching a law, else some definite conclusions one way or the other must have been arrived at. Without some definite idea of what it is we want exactly to attain, and by what action our agent is likely to achieve the desired result, we cannot be said to do anything more than—to use a vulgarism—"make shots." The experiments of Crum Brown and Frazer into the physiological and chemical agency of drugs, and Broadbent's valuable speculations on chemical tension, and the question of the retardation or aiding of oxidation as a mode of explaining the action of many agents, are steps in the right direction, the value of which we are scarcely yet in a position to correctly estimate. The advance of therapeutics hand in hand with increasing knowledge of physiological and pathological processes is much to be desired. It is scarcely cheering to find men who are teachers telling us that they have found rest in bed the only useful treatment in diseases of the heart. What, then, must become of those who must work or hunger? A hopeless therapeutical scepticism will never solve the problem how to enable those injured by rheumatic fever to be still useful members of the community. If rest in bed were all that modern medicine can do for these supplicants, many of them valuable lives, with good work in them, then we need not wonder at their regarding it as giving them a stone when they ask for bread, and at their trying hydropathy or homœopathy in sheer despair. The question is, how far can we not only enable them to live, but endow them with capacity to labour. This utilising a large number of lives which would otherwise be rendered inutile, is a problem which it is in the province of medicine to solve. That even with our present imperfect knowledge of these agents, much has been and is being done by numbers of enthusiastic workers at this field of inquiry, is unquestionable. In the present consideration of the mode of action of digitalis, the writer has striven so to arrange his materials as not only to elucidate the agency of it, but also to establish some broad rules applicable to the agents as a class, if once the action of the drug, as being capable of increasing ventricular contraction, be established. In order, then, to elucidate as far as possible this subject both particularly and generally, the action of morbid processes and the mode by which Nature proceeds to spontaneously repair them, or to compensate the lesions, have been subjected to critical review, and their indications recorded. The subject is one which must necessarily require great labour and pains to bring to anything like perfection, and anything written here must be considered as necessarily incomplete. The consideration of the question of increased ventricular contraction has been so conducted as neither to include nor exclude the question as to whether this group of agents are cardiac sedatives or tonics; in fact, it becomes more and more difficult to draw a distinction betwixt the two. The writer has thus striven to avoid all controversial inquiry on these heads, and by laying down the increased ventricular contraction as the action *par excellence* of digitalis, has striven so to conduct the investigation as not only to fix, to some extent at least, the action of the agent, and to demonstrate how it affects morbid conditions, but also to clear so much ground towards the successful investigation of allied agents, and the establishment of a new class of agents whose importance in the future we cannot estimate, but about the value of which we may at least be permitted to hope.

Its Action in Nervous Affections.—From the unquestionable benefit resulting from the administration of digitalis in some nervous affections, an impression has existed that it exercises a neurotic action, or to be more explicit, that it has some specific action over the nerve-centres. Like all powerful therapeutic agents, it has enjoyed an ephemeral reputation in the treatment of epilepsy; and from the undoubted influence it possesses over the vaso-motor system from the heart to the capillaries, it is conceivable enough that in some cases, its use was followed by benefit, but only it is improbable that it possesses any influence other than that it exerts over the circulation. Serré used Debout's pill, consisting of four-fifths of a grain of digitalis, and one grain and a half of quinine, in the treatment of hemicrania, continuing it for long periods together. The success which followed the treatment was greatly influ-

enced no doubt by the quinine; in fact, it is difficult to rid oneself of the impression that the quinine had the most to do with the result. Lockhart Robertson found that in certain cases of maniacal excitement in general paresis of the insane, its use was attended with marked benefit. He states: "It acts in every case of the kind in which I have given it as a specific, calming the excitement, and enabling the patient to pass without wear or irritation through this stage of the malady. Its action has been to steady the pulse, and thus apparently to supply the brain better with blood, and so obviate the tendency then existing to effusion of serum."

In Delirium Tremens.—The use of digitalis in heroic doses by Mr. Jones, of Jersey, with marked success, is one of the extraordinary facts of therapeutics. The administration of the tincture in half-ounce doses, and repeated, too, at short intervals of time, was found to exercise an action that was almost amazing in delirium tremens. It was attempted to make out that this was due to the half ounce of proof spirit; but that was simply preposterous. The amount of digitalis in four drachms of the tincture must have exercised an influence of some kind. Neither has it been found universally successful in attaining the desired result. From personal experience, I may state that it is when the pulse is compressible, rapid, fluttering—in fact, when there is evidence of cardiac distension accompanied by great nervous prostration, that its administration is followed by beneficial results. The condition of the brain is one of anæmia from cardiac feebleness; while that feebleness is no doubt occasioned by the exhaustion of nerve-force, by the continued administration of the alcoholic stimulus. The sympathetic is exhausted, and cardiac distension follows; from that, again, imperfect circulation and cerebral anæmia; the exhausted brain is deprived of its blood-supply to a great extent; less and less nerve-force is evolved; the sympathetic is still further enfeebled; and the condition of a complex cerebral anæmia, called delirium tremens, ensues. The administration of digitalis in heroic doses produces a decided effect on the circulation, and that, again, relieves the brain, in a manner strictly analogous to that described above by Dr. Lockhart Robertson. When the pulse is full and sustained, and there is no great prostration, its use is not followed by any desirable result.

In Anæmia of the Brain.—In some conditions of cerebral anæmia dependent on disease at the aortic valves, digitalis exercises a decided beneficial action; so much so, indeed, that it is easily conceivable that it might be regarded as a nervine tonic. In speaking of anæmic conditions of the brain, Todd, in his *Cyclopædia*, Art. Abnormal Anatomy of Nerve-Centres, states—"It is also present when the heart, oppressed by some disease affecting its own structure, fails to propel the blood with its proper force into the brain." A most interesting instance of this has fallen under my own notice. An old and visibly feeble lady of 70, was subject to attacks coming on suddenly, during which she fell, but did not lose consciousness. This at once cleared away any suspicion of epilepsy, and suggested the condition of acute cerebral anæmia. That is, the supply of blood to the brain became so interfered with, that the brain was unable to evolve the normal amount of nerve-force, and the patient fell just as in swooning; in fact, it was syncope. The falling thus took off the weight of the blood-column above the heart, and thus gave relief to it; while at the same time, the head falling as low as any other part, the blood gravitated into it as readily as into the rest of the body. There was aortic obstruction, and, after some careful watching, it became apparent that the attacks came on whenever there was any approach to exhaustion, either from physical or mental effort. That is, the amount of blood passing out of the narrowed outlet was sufficient to maintain a species of integrity of nerve-manifestation for the wants of the system when all was quiet; but exertion, by overtaking the power of the heart, led to anæmia of the organ placed highest up in the organism; and then the fall, by restoring the circulation through the encephalon, and permitting to the heart a period of comparative rest, comes to the rescue and allows of readjustment. The administration of digitalis and consequent improvement of the heart's action, invariably gave her relief, and enabled her to undergo more exertion without the attacks of syncope, and relieved her from them when recurring after any exhaustion. The period of benefit lasted for some time—in fact, as long as any evidence of its action on the heart remained. The beneficial effect of its use in cerebral affections can only, I believe, be explained after this fashion. Cerebral disorder is frequently due to cardiac disease; and when it is so related, and the nervous affection can be regarded as a sequel to the cardiac impairment, whether to persistent disease or debility referable to passing circumstances—when the head-symptoms can be clearly attributed to failure in the heart's power of blood-propulsion—then the administration of digitalis may fairly be calculated upon to be beneficial. When cerebral anæmia has a cardiac origin, then, and then only, I believe that digitalis is of service.

Is Digitalis a Diuretic?—If by a diuretic is meant an agent eliminated by the kidneys, and producing increased secretion in the true sense of the word, then certainly digitalis is not a diuretic. If by a diuretic is meant an agent which increases the renal secretion by some special action, as juniper or cantharides, irrespective of an alteration in the arterial tension, digitalis can lay no claim to the appellation. Digitalis is not a true diuretic, though perhaps no material in the *Pharmacopœia* produces such decided increase in the renal flow as it does; but only under certain conditions. An alteration in the blood-pressure on the glomeruli of the kidney affects the flow; if that pressure be decreased, as in advanced cardiac disease, with enfeebled circulation, then a small quantity of urine is passed. If that pressure be increased, no matter how, increased flow follows. Thus, for instance, a large imbibition of water, by passing into the circulation and producing increased pressure on the glomeruli, will soon affect the renal flow unless some other excretory organ be very active. When the skin is acting freely, and a large quantity of blood is located in the vessels of the skin, a sudden cooling of the skin is followed by diuresis, the cold contracting the cuticular vessels, and thus driving the blood internally, and increasing the pressure on the vessels of the viscera. Interstitial nephritis or cirrhosis of the kidney acts as a diuretic in the same manner. So much of the structure of the kidney is destroyed for all useful purposes; and therefore, as no diminution takes place in the calibre of the renal artery, there is increased pressure on the remaining uninjured portion, and thus there ensues increased diuresis—one of the prominent early symptoms of cirrhotic kidney. So, also, the flow of limpid urine in hysteria. We know that in hysteria there is a diminution of the calibre of the arteries, due to derangement of the vaso-motor system, and accompanied by increased action of the heart to overcome that condition, so much so as often to bring out palpitation; thus the pressure is again increased, and diuresis follows. But these conditions, though producing an increase in the renal flow, are not true diuretics. Digitalis in a similar manner acts as a diuretic in enfeebled conditions of the circulation, by increasing the arterial tension, as described in a preceding section. When administered to people in health, it does not increase the flow of urine proper—that is, of salts as well as water. Stadion put himself upon a strict diet, and took digitaline, and his urine was diminished. Winogradoff gave digitaline to several persons for five days, and found no results, except in one, and then there was diminution. Brunton, who experimented on himself freely, found increased diuresis; but on the day marked “intoxication”, there was a distinct fall. The case of poisoning related by him illustrates the effect of digitalis well. He says: “The amount of urine in my own case was markedly diminished during the period of intoxication, when the gastrointestinal canal was most affected; and in the case of Daniel G., when the pulse was most affected, it fell from an average of between 40 and 50 ounces to 30 ounces on December 2nd, 25 and 26 ounces on the 3rd and 4th, and 18 ounces on the 5th and 6th; again slowly rising, till on the 10th it rose from 25 to 44 ounces, and then remained at its normal standard.” Christison and Mazel both noticed suppression in cases of poisoning by it. Boulby and Reynal found a temporary suppression in the horses experimented on by them. In fact, when digitalis is producing those symptoms of intoxication which accompany a too firmly closed ventricle, a diminution in the flow of urine is one symptom. But then that is merely again a question of arterial tension. If a small quantity of blood only be thrown into the aorta at each ventricular systole, it makes no difference whether it be due to a state of over-contraction and imperfect distension of the ventricle, or to an imperfect systole. The effect is the same, whether due to the imperfect contraction of distension, or to the imperfect dilatation in the unnaturally contracted condition of the ventricle, which takes its rise in the excessive administration of digitalis. When the digitalis is given beyond the point of maximum, arterial tension resulting, then the urine is diminished in quantity; the flow and the arterial tension being indissoluble. Thus, when given in cardiac disease, when an imperfect systole does not produce arterial tension, it increases the flow of urine which had previously been defective. When administered to poisoning, even total suppression may follow. In fact, my opinion is identical with that of Dr. Germaine: “there is no proof that digitalis possesses diuretic properties, the reputation conferred upon it to this effect by Withering having been accepted without discussion; and the diuresis which often follows when an amelioration of the condition of the circulation has been produced by it in organic disease of the heart, is only a mediate effect, resulting from the return of the circulation to its normal condition.” On the other hand, the flow of urine following its administration in enfeebled conditions of the heart, is so affected as to be, in one case at least the writer knows of, in itself to be a source of danger.

The Use of Digitalis.—Like other vegetable substances, digitalis is prepared for use by either tincture, infusion, extract, or separation of the

active principle digitaline. The extract is little used, and personally I know nothing about it. The tincture is the most convenient form ordinarily, but throws down a dark green precipitate with iron, which detracts from its desirability. For general use, it can be given along with the ammonio-citrate of iron, or, still better, the potassio-tartrate. It is better kept in a dark cupboard or wrapped in a dark coloured paper, as light is supposed to act deleteriously upon it, weakening it and lowering its activity. The infusion is a good preparation for use along with potash or diuretics, and is conveniently added to vegetable infusions. Digitaline in solution may be the most elegant form, and perhaps may be found ultimately to be the most exact form for accurate administration; but a strong impression against it was left on my mind from experiments on frogs, when a solution of digitaline did certainly not produce such a decided effect as the tincture upon the ventricular contractions. It is certainly possible that the other constituents, digitalose, digitalic acid, etc., may possess properties peculiar to themselves; and when the importance of a knowledge of the action of different agents on the heart-walls becomes fully recognised—for as yet we are only on the threshold of the inquiry—a careful investigation of them may not be barren in results. This field of inquiry is a most promising one; and no more important addition could be made to the present usefulness of medicine than a perfect knowledge of the action of agents on the heart, either in the chronic condition of persistent alteration—either as a primary or secondary lesion, or in passing conditions. We have long been acquainted with the frequency with which cases occur when, in chronic disease, the question of the integrity of the muscular walls of the heart, or of structural change in them, guides our prognosis as to how long the struggle may be maintained. We are, too, gradually recognising the failure of the right side of the heart in asthenic disease or affections of the respiratory organs, as the channel through which death commonly approaches; we can calculate how certainly the right ventricle, taxed to the utmost, becomes gradually paralysed by the carbonic acid of its contained blood anæsthetising its action. If we can find means to keep up its action, we may tide that patient on to recovery; while in the present state of our knowledge, the condition is only recognised by a few, and the means of producing any impression upon the condition by therapeutic agents confined to the hopefulness of only a very few. In the treatment of chronic conditions, when it is necessary to keep up the administration of digitalis until structural changes are produced, perhaps the powdered leaves are the most desirable form. In this form, it can be given in pill with the dried sulphate of iron, carminatives, laxatives, or both, and in this form will keep some time, and can be given twice a day without causing the patients to revolt at its nauseous taste, or creating any aversion, on æsthetic principles, to its muddy-looking combination with iron. For long, a favourite form of pill with me for persistent use has been a combination of half a grain to a grain of powdered digitalis, with an equal quantity of the dried sulphate of iron in powder, and a morsel of cayenne, in extract of gentian, or aloes and myrrh pill. Thus we secure at one cast an action on the circulation, the addition of iron in a form which will act locally on the stomach, and thus act as an astringent in the gastric catarrh so common among the sufferers from heart-disease; while the carminative action of the cayenne is useful, and also takes off the griping from the action of the laxative, when an action is also necessary, as is commonly the case, on the bowels. I have had patients for months, and in some cases even years, thus under its influence in the most satisfactory manner. With their box of pills they can go anywhere, can take them about, and have a reserve stock if necessary; and then, twice a day or so, a pill can be taken without any inconvenience or parade of medicine-taking. One point of some importance must not be forgotten in this mode of its use, viz., that the pill must be taken shortly after food, otherwise it may be pouched in a fold of the stomach, and lie dormant, or it may be passed at once into the bowels, and its good effects lost. The pill is an artistic application of scientific research to the food, and must be regarded as such essentially, as, in fact, must all restorative remedies. In the use of digitalis, the addition of iron is of great importance. Some may raise objections that the good effect is due solely to the iron; but surely the constant administration of so potent an agent as digitalis cannot be without some effect. The results thus attained appear too early to be the mere effect of the iron. While the attempt to produce better nutrition of the heart from its use, as we saw in a preceding section, does actually succeed, the addition of iron, from its hæmatic properties, aids us most materially. From the cheering results which I have witnessed in numerous cases of chronic cardiac disease, and the great alteration effected in the patient's condition, both as regards comfort, or, rather, relief from discomfort, ability to take more exercise, and even to undergo more exertion in those cases where the patient's circumstances necessitated labour, I can urge most honestly and conscientiously its use, and especially in this combination.

Another application of it is very important, and that is its absorption through the skin. In many instances, it is desirable to bring out the action of the digitalis when the risk of disordering the stomach may act as a check, or even when there is already great gastric disturbance. Here it may be used by either poultices of the leaves, or flannels soaked in the infusion, or a mixture of the tincture and water applied to the abdomen and thighs. Cases are given by Christison of such use of it. Trousseau relates a very interesting case where very decided results were thus obtained (vol. i, chap. xxxv). Some cases were recently detailed in the journals of such use of it. This manner of administering digitalis should never be lost sight of, as it may now and then enable us to do what we cannot accomplish by the mouth.

Hypodermic injection is another mode of administering it which should not be overlooked. Certainly, in the experiments on frogs, this was chiefly resorted to on account of its convenience. Bouillaud pursued an endermic treatment by dusting a blister over the heart, with from six to fifteen grains of powdered digitalis. These various modes of administering digitalis have each their advantages according to peculiar circumstances. No one plan of action must bind the practitioner's mind in fetters. He must be ready and willing to use each in its place, or even to substitute for digitalis some drug of similar action. From the known intolerance of mercury in some constitutions, and notably in those suffering from cirrhosis of the kidney, which is often followed by consequent heart-mischief, with its train of sequelæ, the old combination of digitalis, squill, and blue pill may have to be abandoned, and for the blue pill iodide of potassium substituted. Patients' prejudices, as well as their needs, must be consulted. It is much to be desired that some drug may be discovered with equal properties to digitalis, and about whose action no preconceived opinions, based on imperfect observation, may bias the minds of medical men. It would be easier to establish the use of such an agent especially in this experimental age, than to war against a settled impression. And though at present the list of agents possessing an action on the heart, and through it a control over the circulation, may be a very limited one, but at the same time very important, the day is not far distant when the importance of inquiry in this direction will make itself felt. I have not claimed for digitalis anything for which it cannot fairly substantiate its claim, nor have I accorded to it any mystical action, differing from that of any other therapeutic agent. I have striven, as far as possible, to exercise the functions of a judge, as well as of an advocate, and tried fairly to lay down what, in the present state of our knowledge, digitalis can do, and what it cannot. And I am quite willing to labour under the disadvantage of being regarded as an enthusiast, if only the subject can get that attention paid to it that it deserves; and my experience tells me in language that is unmistakable, that the effect of agents upon the heart, of which digitalis is the most powerful one with which we are yet acquainted, can no longer be overlooked by any one in the profession who regards either his own interests or those of his patients.

TELEOLOGY AND EVOLUTION.

BY THE

REV. SAMUEL HAUGHTON, M.D. Dubl., D.C.L. Oxon., F.R.S.
Fellow of Trinity College, Dublin.

WITH permission, I shall take advantage of the opportunity offered by Dr. T. Clifford Allbutt's letter of the 12th instant, published in the BRITISH MEDICAL JOURNAL of the 15th instant, to make a few brief remarks on Teleology and Evolution.

There is no necessary opposition between these expressions; and it is quite possible, perhaps even probable, that Teleology works out its purpose by means of Evolution. If the Evolution be the result of foresight and contrivance, it becomes merely the expression of the chain of Second Causes by means of which the purposes of the great First Cause are harmoniously carried out. But if, on the other hand, Evolution admit of chance combinations, capable of becoming permanent, and not foreseen, then it is irreconcilable with the fundamental hypothesis of Teleology.

Dr. Allbutt has, I believe, correctly interpreted what I intended to show in my occasional references to Teleology during my lectures on the Principle of Least Action. I illustrated this principle by means of the limbs of the tiger and the wing of the albatross, and endeavoured to show that the several conditions which combine to produce the action of those members are so related to each other as to fulfil the requirements of the principle of Least Action; or, in other words, that these conditions are so related to each other that, if all of them

save one be given, we can calculate with certainty the remaining condition.

This remarkable fact is, in my judgment, irreconcilable with the hypothesis of Evolution, by means of slow variation of the conditions, which is the fundamental idea of Mr. Darwin's hypothesis.

Let us suppose, in fact, that the exercise of any complex organ of an animal depends upon a certain number of conditions, which we may call a, b, c , etc.; then the result may be expressed as a function of those conditions,

$$F(a, b, c, \text{etc.}, x, y, z).$$

The principle of Least Action requires this function to be a maximum, which will be the case for certain definite groups of values of the elementary conditions on which the complex function depends, and for no others. We shall, therefore, have the principle of Least Action fulfilled for certain groups of values.

$$F(a, b, c, \text{etc.}, x, y, z).$$

$$F'(a', b', c', \text{etc.}, x', y', z'). \text{—And so on.}$$

I showed in my lectures that, if certain conditions, a, b, c , etc., be given, the other unknown conditions, x, y, z , can be calculated on the hypothesis of Least Action; and I verified this statement by several remarkable examples. We may therefore consider it as proved, or at least admitted, that the existing arrangements of Nature fulfil the conditions imposed by the principle of Least Action. This admission is fatal to the hypothesis of Evolution by slow variation. For, let us suppose the two functions F and F' each to satisfy the conditions of Least Action, each of these will represent a complex result which is stable, and which will refuse to vary indefinitely from its original value. Let the quantities x, y, z , etc., vary by slow degrees in any direction whatever, I assert that the principle of Least Action, which requires the function F to be a maximum, will prevent x, y, z from varying indefinitely; or, in other words, that the controlling influence of the remaining conditions, a, b, c , etc., will compel x, y, z to return back to their original values; which values, in conjunction with those of a, b, c , etc., rendered the function F a maximum. In like manner, F' is another maximum; and its elements, $a', b', \dots x', y'$, etc., cannot vary indefinitely by slow degrees.

The conditions involved in F and F' are each stable; and, when variations of small extent occur, there is a necessary return to the condition F , or F' , which involves the maximum effect; but it is absolutely impossible for F to be transformed into F' by slow variations of its elements, without losing that property of being a maximum on which its continued existence depends.

The function F is a maximum only for certain definite, and often far removed, groups of values of a, b, c , etc., x, y, z ; and we cannot transform F into F' without making the hypothesis of *abrupt* changes in the values of the elements, for any small slow changes will reproduce F again and again.

The force of this argument will remain unchanged, if by F and F' we mean two species, instead of two arrangements of organs.

An illustration from physical astronomy will clear up this point. If there were only one planet revolving round the sun, it would describe an ellipse which would remain the same at each revolution; but, as there are several planets, each exerting a *small* disturbing force, the planet describes an ellipse which differs slightly at each revolution from its predecessor and from its successor. Still the path is always an ellipse, and never shows any tendency to become a hyperbola or parabola, for the simple reason that all its elements change *slowly*. Let us now, however, take the case of a comet, moving in an hyperbolic path round the sun, and coming into close proximity to a large planet: the elements of the comet's path, a, b, c , etc., are now *abruptly* changed, and we find the hyperbolic path changed in a few hours into an ellipse.

The Evolution of one species from another must, in my opinion, be the result of *sudden*, not of *gradual*, changes of conditions; and no scientific attempt has as yet been made to show how such evolution of species may take place.

The concluding portion of Dr. Allbutt's letter, respecting the *surplusage* of force sometimes found in Nature, opens up a subject of discussion on which I could say much, were I not afraid to weary by my much writing, as I have already offended some by my much talking.

In conclusion, I would remark that, in the supposed slow passage of an organ or species from the *maximum* F to another *maximum* F' , it must necessarily pass through a *minimum*, which will exhibit in an extreme degree want of contrivance and imperfection. Where are these imperfections? They ought vastly to exceed in number the perfect types which have reached the *maximum* effect. Where is the evidence of the endless succession of blunders which blind Nature has used as stepping-stones to produce her few happy successes? I cannot find them either in living nature or in the records of palæontology.

DYNAMICS OF NERVE AND MUSCLE.

By CHARLES B. RADCLIFFE, M.D., F.R.C.P.,

Physician to the Westminster Hospital, and to the National Hospital for the Paralysed and Epileptic.

IN the article in last week's JOURNAL, in which my recent book entitled *Dynamics of Nerve and Muscle* is taken as the text, certain conclusions are drawn which ought not, as it seems to me, to be allowed to pass unchallenged.

The gist of the article is to object to a part of a theory of animal electricity which in substance is simply this—that the walls of the fibres and cells of living muscle and nerve-tissue during rest are charged in the way in which Leyden jars are charged, and that this charge is discharged during action, the discharge being analogous to that of the torpedo. It is argued that these walls are sufficiently bad conductors to justify the conclusion that they may act as dielectrics; it is argued that a charge of one kind of electricity may originate in the molecular reactions connected with nutrition and respiration, and that the development of the charge upon one surface of these dielectric walls may induce a charge of the other kind of electricity upon the other surface; and the opposite electrical condition of the sides and ends of the fibres are accounted for by supposing that the sides correspond to the outer charged surface, and the ends to the inner charged surface of the walls—the charge of the latter surface being conducted to the ends by the contents of the fibres. This in substance is the view to which exception is taken, and for which I am still disposed to do battle.

What may be regarded as the starting-point in my theorising is conceded, namely, this, that certain animal tissues—the sarcolemma and neurilemma in particular—are bad enough conductors to be capable of acting as dielectrics; and also this, that the electrical phenomena of living nerve and voluntary muscle during rest may be accounted for on the supposition that the neurilemma and sarcolemma are then in the predicament of charged Leyden jars. But it is objected that this view cannot apply to involuntary muscles of which the fibres are without sarcolemma; and it is further urged that the explanation given of the method of charging the fibres of nerve and muscle may be called in question, and that the discharge is taken for granted without sufficient proof of its existence. Objections are indeed raised which cannot be disregarded, and to which I therefore address myself *seriatim*, merely premising that I have lately made many new measurements of the resistance of animal tissues to electrical conduction, which show that this resistance, instead of being overrated, has been greatly underrated; that all soft animal tissues, when dry, really become insulators; and that perfectly fresh yellow elastic tissue, which enters largely into the composition of both sarcolemma and neurilemma, is a very bad conductor—the worst of all the animal tissues, apparently.

The objection that the Leyden jar hypothesis cannot apply to the fibres of involuntary muscle appears, at first sight, to have considerable weight in it. These fibres consist of a number of contractile cells, imbedded in an amorphous transparent substance. They have no proper sheath or sarcolemma like the fibres of voluntary muscle. But what of this? The cells, there is every reason to believe, are the contractile part of the fibre. Their walls, in the opinion of many, take the place of the sarcolemma, being in fact analogous to the sarcolemma; and certainly there is no reason why the contents of these cells should not be regarded as analogous to the contents of the sarcolemma. In point of fact, there is no good reason why these walls, if there be any walls, together with the amorphous transparent substance of the fibre outside them, should not be a crude, thick, less elaborated sarcolemma. Thick or thin walls will equally serve my purpose, provided they have the requisite non-conductibility to enable them to act as dielectrics. Nor need this view be looked upon as at all far-fetched; for it must be borne in mind that in many long voluntary muscles the fibres do not run through the muscle from end to end, but are made up of several fusiform fibres, overlapping more or less at their ends, and so really copying, in a sense, the arrangement of separate contractile cells which is met with in certain involuntary muscular fibres. Hence, after all, there need be no structural difficulty in supposing that the living fibres of involuntary muscles, like the living fibres of voluntary muscle, may, during rest, be charged like Leyden jars, as the theory supposes.

The next objection, which concerns the explanation I have offered of the way in which the fibres are charged, is only hinted at, but it must not be passed by without notice. I have said that this charge may have its origin in certain molecular reactions *outside* the walls of the fibres and cells: in the article under consideration it is hinted that this charging is as likely—nay, more likely—to happen from the *inside*. And so say I now. Indeed, for some time past I have held, as several per-

sons can testify, that the more probable view of the charging is this: 1. That the granular or fibrilliform substance within the fibres and cells, which substance represents more or less unchanged protoplasm, receives food and air, feeds and breathes, from without, not through every part of the walls, but only at the points occupied by the nuclei, which nuclei, indeed, may represent so much more or less unchanged protoplasm; 2. That an electrical charge is developed upon the *inner* surface of the walls by the molecular changes in the contents of the fibres and cells, which changes are brought about by nutrition and respiration—the opposite charge, which is not wanted, escaping to earth by the same opening, or openings, through which the fluids having to do with respiration and nutrition found entrance; and, 3. That in this way the walls of the fibres or cells are charged from within to without, the charge on the inner surface inducing through the dielectric walls the opposite charge on the outer surface of the walls. Either view is possible; but this view is, as it seems to me, not only simpler, but it also disposes of a difficulty which has been started elsewhere; namely, this, that I do not provide the conducting surfaces of the dielectric walls which are necessary to the charging on the Leyden-jar hypothesis; for it is manifest that the *inner* surface of the walls, whether this be a conductor or an insulator, will be charged by being directly in contact with the substance in the molecular reaction of which the charge originates; and that in this way the outer surface will be charged also, for, if one surface be charged, induction will secure the charging of the other surface, be that other surface a conductor or an insulator.

Nor do I consent to the statement that I have failed to supply sufficient proof of the discharge during action, for which I contend. In proof of this discharge I argued, along with Matteucci, from certain striking anatomical and physiological analogies between the muscular and electrical apparatus of the torpedo, and from the phenomenon of secondary or induced muscular action which Matteucci discovered; and I supported this argument by appealing to the parallel phenomenon of secondary or induced *nervous* action discovered by Du Bois-Reymond; and this argument, as it still appears to me, is perfectly valid.

In proof of this discharge, I instanced also the more or less complete disappearance of the muscle-current in muscular action, and of the nerve-current in nervous action—the great facts discovered by Du Bois-Reymond; and I argued that this disappearance *may* be a proof of the discharge of which Matteucci had inferred the existence from analogy; and these facts, as I take it, still justify this conclusion.

In proof of this discharge, I also showed—a fact which I have myself made out for the first time by means of Sir William Thomson's new quadrant electrometer—that in both nerve and muscle there is a disappearance more or less complete during action of the electrical charge demonstrably present during rest: and I argued, as I still do, that this is the very *experimentum crucis* of discharge, the instrument taking cognisance only, not of changes of current, but of the simple facts of charge and discharge.

In physiological matters, proof no doubt must always be more or less a matter of probability; but surely there must be here a fair amount of proof, not only that action in nerve and muscle may be accompanied by discharge of electricity, but also that this discharge is analogous to that of the torpedo!

What, then? Is this view of which I have been speaking, or that of Du Bois-Reymond, the more probable?

The primary electrical condition of nerve and muscle, according to Du Bois-Reymond, is not static, but current. The nerve and muscle are made up of what this physiologist has called *peripolar* molecules—molecules negative at the two poles and positive at the equator, or *vice versa*; and the nerve-current and muscle-current are derived portions of infinitely stronger currents ever circulating in closed circuits around the peripolar molecules. How these primary currents are kept up—how, that is, the two opposite electricities are separated and kept apart in the peripolar molecules—is not explained; how the weakening of the nerve-current and muscle-current, which happens in the action of nerve and muscle, is brought about, is not accounted for. The theory is incomplete in these respects; but this, perhaps, is of less moment, for no physiological work is supposed to be done by the electricity. On the other hand, there is nothing in the view of which I have been speaking which is not readily grasped by the imagination, and which does not as readily tally with the facts. In this view, the non-conducting properties of certain parts of the tissues, which are difficulties in the way of accepting the current-view, find their *raison d'être*. On this view, the disappearance of electricity during action in nerve and muscle, which is not accounted for on the current view, has its explanation, for it is only the sign of the discharge of the charge present during rest. On this view, the existence as well as the separation of the two opposite electricities in the fibres, which is not accounted for on the current view, is also explained, for the clue is simply the theory of the Leyden jar. And,

moreover, as I have endeavoured to show in the book supplying the text to the article upon which I am commenting, important consequences flow out of this theory, which consequences are themselves strong arguments in favour of the probability of this theory—consequences which show that electricity, instead of being a mere accident, may be an all-important agent in vital phenomena, an agent in many cases doing work which has been wrongly attributed to life.

The subject, no doubt, is difficult enough, but its difficulties, in the main, disappear when once the threshold of the inquiry is crossed; and my object at present is to ask my readers not to be deterred from entering by any terrors connected with the “dweller on the threshold”, but to enter boldly, and then to do me the justice to weigh my argument as a whole, and not in part, and to reserve their judgment until they can find time to read what I have myself written on the subject.

EXPERIMENTS WITH CARBOLIC ACID.

By ANGUS MACKINTOSH, M.D., Callington.

IN the interest of science, as bearing specially on the effects of carbolic acid on organic substances, I desire to record a few experiments, with their results, which I carefully performed with carbolic acid in November last, with the view of proving further to my own satisfaction certain chemical and physiological changes that I have observed in treating ulcers and severe surgical injuries with the acid. The results at which I arrived were published last year; and, in consequence, Messrs. F. C. Calvert and Co., the well known chemists of Manchester, kindly forwarded to me several samples of the different preparations made by them, to be tried in small-pox, etc. I have now tested them in many cases of small-pox with almost unparalleled success, and also in various surgical operations; and, in justice to Messrs. Calvert and Co., must say that I consider their preparations immensely superior to any other of the acid yet given to the profession.

Having had reasons for years to question the accuracy and correctness of the germ-theory of disease, and of the *modus operandi* of the antiseptic system of treatment, so ably brought before the profession by my respected teacher, Professor Lister, I last year called the attention of the profession to the fact that the beneficial effects of carbolic acid on wounds, etc., were not to be attributed solely to the destruction of atmospheric germs, but mainly, if not completely, to the chemical and stimulating effects of it on the constituents of the blood and surrounding parts. The following experiments confirm the opinion then expressed.

CLASS I. Experiment I.—On November 8th, 1870, I mixed a quarter of a pound of bullock's blood (fresh) with two ounces of F. C. Calvert and Co.'s carbolic acid No. 5 (proportion, 10 of water to 1 acid), and covered the whole so as to admit no air. The temperature was 50 deg. *Result*, July 10th, 1871: No signs of putrefaction.

Experiment II.—On November 8th, 1870, I mixed a quarter of a pound of bullock's blood (fresh) with two ounces of Calvert's carbolic acid No. 5 (proportion, 10 of water to 1 acid), and left the whole uncovered and exposed to the air. The vessels used in this and the previous experiment were placed side by side in the same apartment. *Result*, July 10th, 1871: Not the slightest signs of or tendency to putrefaction.

Experiment III.—On November 9th, 1870, I weighed two ounces of lean fresh beef, and placed it in a pot with two ounces of carbolic acid (Calvert's No. 5, 10 water to 1 acid), and covered the contents completely from the atmosphere. *Result*, July 12th, 1871: The meat was perfectly free from putrefaction.

Experiment IV.—On November 9th, 1870, I weighed two ounces of lean fresh beef, and placed it in a pot with two ounces of carbolic acid (Calvert's No. 5, 10 water to 1 acid), and left the contents exposed to the air in the same apartment with Nos. 1, 2, and 3. *Result*, July 10th, 1871: There was no offensive odour nor putrefaction.

CLASS II. Experiment V.—In January 1871, I excised from a man's left arm a non-malignant tumour weighing a pound and a half, and dressed the wound with thin muslin and Calvert's carbolic acid No. 5 (proportion, 30 of water to 1 of acid). The acid solution was dropped freely over the muslin many times during the day. The wound healed without suppuration or putrefaction.

Experiment VI.—I amputated an old man's middle finger in April 1871, and dressed it in the same way as No. 5, with thin muslin, dropping the acid solution freely over the muslin several times throughout the day. The result was a perfect cicatrix, without any appearance of pus, suppuration, or putrefaction.

Experiment VII.—A miner had both arms and face burnt in consequence of an explosion whilst blasting. The face was treated with linseed-oil and linseed-meal poultices, and afterwards with oxide of zinc

ointment. A small quantity of pus could be detected. The arms were treated with carbolic acid and linseed-oil, 1 to 20. The muslin (the only covering) was always kept wet with the oil and acid. The result was a complete cure, without any pus or putrefaction.

These experiments, in combination with those which I published last year, have completely convinced me that the detailed plan of dressing wounds recommended by Professor Lister is absolutely unnecessary for the object of healing wounds by the first intention or without the formation of pus; and that the germ-theory of disease is, correctly speaking, an error.

In the first class of these experiments, I treated the blood and beef with exactly the same quantity of the acid solution, in the same proportion; and sealed one so as to exclude the contents completely from the atmosphere, and left the other exposed to the atmosphere. Under these opposite conditions, both, in the course of eight months, presented almost the same appearance, and no appreciable distinction could be recognised between their odours. There were no marks or signs of putrefaction in either.

The second class of experiments also gave the same result, and shows that only careful attention and regular application are required to produce always similar effects. I used the muslin cloth, so as to allow a free current of air to all parts of the wounds. I firmly believe that the real difference in healing with or without suppuration is chiefly, if not altogether, owing to regularity in the application; and that the beneficial effects of the acid are to be principally attributed to its chemical and stimulating influence on the constituents of the blood and other parts concerned.

NOTES ON THE TREATMENT OF INSANE PATIENTS IN PRIVATE PRACTICE.*

By D. YELLOWLEES, M.D., Medical Superintendent of the Glamorgan County Asylum.

IF we could obtain prophetic knowledge as to the effects of remedies, or could understand a case as fully at its commencement as after we had watched its progress, this unattainable knowledge would often modify our treatment. Possessing unusual opportunities for observing insanity in all its phases, and for watching the progress of cases of which others have seen only the commencement, it has occurred to me that this special experience, in so far as it relates to home-treatment, might be usefully summarised. I hope no one will construe my remarks as reflecting on the treatment of others, or will suppose that I wish to assume the office of an instructor: nothing can be further from my intention. I know well the extreme difficulty—often the impossibility—of properly carrying out the treatment of the insane at their own homes; and it is with a view to lessen, if possible, this difficulty, that I submit the following notes.

Insane patients treated at home are apt to get—

1. *Too much narcotic medicine and too little general treatment.* This is often the case, and very naturally. The mental excitement is the most prominent symptom, the one which most alarms the friends, and for the abatement of which they are supremely anxious. Even to the practitioner, the brain-disturbance is apt to eclipse the other symptoms, and to receive undue or almost exclusive attention; whereas treatment may be urgently required for the amenorrhœa, the dyspepsia, the constipation, or other coexisting disorder, of which the brain-disturbance is probably in great measure a result. Relieving a sluggish liver, or restoring the functions of a neglected skin, often allays excitement better than any quantity of sedatives. When sedatives are necessary—and they are often most necessary and beneficial—chloral hydrate, bromide of potassium, or bromide with cannabis Indica, should generally be first used; they often answer admirably, and the injurious general effects of more direct narcotics are avoided. I am satisfied that the recovery of curable cases has often been retarded, and the condition of hopeless cases aggravated, by the undue use of opium. On the other hand, it is often of great value.

2. *Too much depression and too little support.* This is a frequent phase of home-treatment. Antimony, alone or with morphia, is often a favourite remedy; and the friends are always anxious to aid in keeping the patient low. This may, perhaps, be wise treatment in some cases; but it is very certain that brain-excitement is usually a result of *asthenia*, and requires support far oftener than depression. I know no form of excitement that is aggravated by an ample supply of the most nourishing and wholesome food. In every case it is an essential element of proper treatment, and in many cases a liberal addition of stimulants is the best sedative we can use.

* Read at the annual meeting of the South Wales and Monmouthshire Branch, July 5th.

3. *Too much confinement and too little open-air exercise.* This constitutes a drawback almost inseparable from home-treatment, so great and so obvious that I need only mention it. A most important means of restoration is wanting when the patient cannot get out of doors, and has nothing on which to fix his attention or expend his energies beyond the limits of his room.

These unfavourable conditions are rendered still more so by—

4. *Too much interference and too little tact* on the part of those around the patient. If he be apprehensive, dejected, or terror-stricken, he is harassed by attentions and services which he wholly misinterprets, and which only aggravate his distress. If he be irritable, defiant, or dangerous, he is coaxed, deceived, or threatened, as seems best to serve the purpose at the time; and, if he be thus goaded into violence, or driven to it by delusions and the utter *enemi* of close confinement, the only notion of management usually entertained by friends is to overpower him by sheer force and tie him to the bedstead—the omnipotent influence of calmness, truthfulness, patience, and non-resistance, being unknown or untried.

I anticipate, of course, the reply to all this: that such evils, or most of them, are inevitable in the treatment of lunatics at home. I answer that, where such evils are really inevitable, no one should undertake the treatment, and the sooner the patient is sent to an asylum the better; but they are not always inevitable, even when they seem so at first, and many insane patients can quite well be treated at home. In such cases, these short notes may serve to indicate the evils to be chiefly avoided.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

CASE OF INTRACRANIAL OSTEOPHYTES WITH HYDROCEPHALUS:
DEATH: CLINICAL REMARKS.

(Under the care of Dr. HENRY THOMPSON.)

RUTH CLEAVER, a servant, about twenty-three years of age, was admitted on January 14th, 1871. For some years she had been liable to severe throbbing headaches, and to a discharge from the right ear. She had also suffered a good deal lately from mental worry and distress. On June 18th, she was seized with an attack of vomiting, which lasted twenty-four hours, and then ceased on the administration of a dose of calomel. From that date the headache became more continuous and more severe.

On admission, the pulse was 68; respirations 20; temperature 98.2 deg. The patient was dull and stupid, complaining of acute throbbing pain, chiefly at the top of the head, but stretching down the back of the neck. There was great intolerance of light; the pupils were dilated, sluggish, and unequal; the right was the larger. The breath was foetid; the gums spongy and red. The tongue was coated with a thick creamy fur, and protruded slightly to the right side.

January 15th, 10 A.M. Pulse 58; respirations 20; temperature 98.8 deg. The extremities were cold. There was no action of the bowels or of the bladder. Urine was withdrawn by catheter; it was of specific gravity 1030, contained no albumen, and no sugar.—1.30 P.M. *Tache cérébrale* was readily produced and well developed. A roseolous blush appeared this morning in irregular patches over the neck and front of the chest, and, though fully pronounced at the time of the visit, disappeared entirely before the visit was over.—3.30 P.M. She was quite insensible and comatose. Pulse 160, irregular in force and rhythm, short and sharp. The face was deeply flushed; the pupils were dilated, equal, unaffected by light.—4 P.M. The face and lips were intensely blue; the breathing slow and stertorous. Frothy fluid escaped from the mouth and nose. The pulse was too small and rapid to be counted. She died at 4.15 P.M.

Necropsy, twenty-four hours after death.—On removing the calvaria, the dura mater was found to be deeply injected; the convolutions were flattened; and the hemispheres gave the feeling of fluctuation to the touch. On removing the brain, a large quantity of perfectly clear fluid issued from the third ventricle. This, together with that withdrawn from the lateral ventricles, amounted to seven ounces. On slicing away the hemispheres, the white substance was found to be greatly softened, and the ventricles themselves enormously dilated. A portion of the softened material, submitted to the microscope, showed no appearance of granule-cells. There was no trace of tubercle to be found anywhere; nor was there any plugging discovered either in the

veins of the neck, the venæ Galeni, or the cerebral sinuses. Imbedded in the dura mater, and seemingly developed from it, were eight or ten thin plates of bone, not adherent to the calvaria. At the base of the skull, especially on the right side, there were several similar deposits, which adhered firmly to the temporal and occipital bones; and at these points the dura mater appeared to be wanting. With the above exceptions, the cranial bones were healthy. There was, however, a small vein plugged within the substance of the right petrous bone. In the thorax, the heart was small, its muscular substance firm; the aorta was atheromatous in patches; the aortic valves were thickened, with minute vegetations engrafted upon the thickened portion. The pericardium contained about an ounce of clear straw-coloured fluid. Both lungs were greatly congested, and attached to the chest-walls at various points by a few old fibrous adhesions; but they contained no tubercle. Several of the bronchial glands were reduced to cretified masses. No tubercle was discovered in the abdominal cavity or in its contents.

Remarks by Dr. Thompson.—At first sight, on a hasty glance at the history and symptoms of the above case, caries of the petrous bone, with its ordinary accompaniments and consequences, would almost inevitably have been the diagnosis which would have taken precedence of all others in the mind of the observer. Possibly, if this glance had been yet more superficial, and limited to existing symptoms alone, he might have entertained the idea of tubercular meningitis. Nothing of either kind was disclosed in the *post mortem* examination. There was no abscess of the brain; no unequivocal inflammation of its membranes; no pyæmia; no disorganisation of bone-substance; no thrombosis of sinus or vein, if we except the plugging of an insignificant venule within the right petrous bone—an event in itself of no material bearing on the pathology of the hydrocephalus. Again, there was no tubercle anywhere, nor anything akin to tubercle in the remotest degree, unless we so designate the cretified masses found in the bronchial glands. The key to the diagnosis was the long duration of the headache, which had lasted for some years before admission—a circumstance wholly incompatible with either of the above mentioned hypotheses, and pointing to the probability of some more or less massive or solid intracranial growth, although he would have been a bold man who should have diagnosed the particular growth discovered—the osteophytes developed originally from the dura mater; for such would appear to have been the origin of all the growths described, whether they were imbedded in the dura mater or adherent to the bones. In the absence of every other assignable cause, we can only conclude that these osteophytes played the part of tubercle in producing hydrocephalus. The peculiar membrane, the seat of their development, was indeed different; but the result was similar. The pathological changes proper to inflammation were less conspicuous; but the morbid process itself in all essential respects bore a strong analogy to that which is ordinarily set up by the presence of tubercle in the meninges. The so-called cerebral streak and the roseolous rash are worthy of a passing notice. Clearly they were the same phenomena under different aspects, and due to the same fine susceptibilities in the cutaneous circulation; the one presenting accidentally or spontaneously the same vascular engorgement which the other can be made to exhibit artificially.

CHILDREN'S HOSPITAL, BIRMINGHAM.

CHRONIC RHEUMATIC ARTHRITIS.

(Under the care of Dr. JOHNSTON.)

H. C., female, aged 7, was admitted an in-patient of the hospital on June 15th, with general rheumatic pains in all her joints, no one joint in particular being affected. There was no cardiac mischief. The left side of the face was flattened, the axis of the lower jaw on that side being directed towards the opposite side. The condyle could not be felt. There was no depression in front of the meatus auditorius. The molar teeth were decayed. She had some slight power of movement of the jaw, but could not speak at all distinctly. The left forearm was pronated and flexed. The elbow-joint was swollen, particularly on the radial side. The head of the radius could be felt much enlarged. On supinating and flexing the arm (which caused great pain), a crackling could be heard and felt in the joint. The mother said that, when three weeks old, the child came to the hospital with rheumatic fever, after which she was "paralysed"; but, after being under treatment for twelve months, she could use all her limbs well except the left arm, which was weak. About this time she noticed that the jaw-bone was "growing out of its place". There was then no swelling of the elbow-joint. When two years old, the child was run over, the wheel passing over the left elbow. A short time after this, the mother noticed that the joint was enlarging; and it has gradually increased till of its present size. The child suffers no pain except in changeable weather, when she has the rheumatic pains.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 5TH, 1871.

THE ANNUAL MEETING.

THE list of papers to be read at the meeting next week, and the programme of the proceedings, promise a gathering of very great interest, and one which will, we hope, be largely attended. The Annual Addresses will be delivered by men remarkable for their philosophical innovations in theory as well as in practice, and in no way accustomed *stare super antiquas vias*. The papers to be read in the Sections will bear upon many subjects of large importance. Cholera will find its place in the Section of Medicine; and some of those best qualified to discuss its epidemiology, pathology, and treatment, will be present. In Public Medicine, we are promised discussions of the largest interest. The whole question of sanitary reorganisation will be raised by the report of the State Medicine Committee. Dr. Maunsell comes from Dublin to describe the Irish Poor-law Medical System, which is precisely on the order of the day as a subject of proximate legislation. Mr. Benson Baker will speak with authority of the defects of the English system, and their remedies. Mr. Hope will come from Edinburgh, at great personal inconvenience, to raise the question of Sewage Irrigation. There is much important business to discuss, of which it will require all the moderation, good sense, and mutual forbearance of members, to dispose satisfactorily.

The Local Committee, and the Local Secretary, Dr. Littleton, have spared no pains to make this meeting in every sense successful. The great beauty of the scenery of Plymouth and its neighbourhood will afford the opportunity of closing the meeting by holiday excursions of the most agreeable kind. We shall hope to be able to record next week that the efforts of all concerned to make this in every way a brilliant and numerous meeting have been altogether successful.

MR. SIMON'S REPORT.

THE Thirteenth Annual Report of the Medical Officer of the Privy Council, although brief, contains much that is of considerable professional interest. Discussing the special diseases of the year 1870, he briefly notes the spread of relapsing fever at Liverpool, Leeds, and Merthyr Tydfil; the extraordinarily fatal prevalence of scarlatina in various parts of England; and the severity of the existing epidemic of small-pox. In respect to vaccination, £5,685 : 8 was awarded in gratuities to public vaccinators; one of the vaccinators of the Leeds Union receiving as much as £83 : 17 in gratuity; and the vaccinators of Salford Union together, £182 : 12. As many as 227,036 charges of lymph have been distributed by the central department.

The accelerated publication of the Registrar-General's quarterly reports has given facilities for the prosecution of earlier and more numerous sanitary inquiries. These disclosed local neglect generally of the grossest kind. The staff of the department being insufficient for the purpose, an appeal has been made to Parliament (and we believe successfully) to furnish larger funds for a more numerous staff.

Mr. Simon reviews the question of medical legislation pithily. He admits that the present construction of the General Medical Council, under the Act of 1858, "represents a kind of compromise between the profession and the public, arrived at with difficulty after long and renewed discussion, which, while it lasted, effectually prevented all legislation to amend the license system of the medical profession; and if that compromise were put forward for reconsideration, probably a new settle-

ment would be scarcely less difficult than the old;" but he is of opinion that "the two objects at which the Lord President's Bill of 1870 actually aimed were universally admitted to be of great and urgent importance to the public; and experience suggested that the attainment of those objects might be quite indefinitely delayed if, in endeavours to compass them by legislation, the constitution of the General Medical Council must also be treated as an open question."

On the pharmacy question, he drily observes that he believes it to have been by an accidental oversight in legislation that, while all other powers to be exercised for public purposes by the Society under the Act were vested in the Council of the Society, the language of the first section vested in the Commonalty, and not in the Council, the very important power which that section confers, and to which his present observations relate. It is, perhaps, not surprising that a large body of tradesmen should be slow to take the initiative in imposing even the most reasonable penal restrictions on themselves; but he submits, as a fact deserving the consideration of Parliament, that this non-fulfilment of the Society's duty, to make rules against dangerous slovenliness in the keeping, dispensing, and selling of poisons, is a breach of the implied contract under which the Legislature in 1868 gave powers and privileges to the Society.

Dr. Burdon Sanderson's highly interesting studies on contagion will receive from us a more detailed notice. Without altogether concurring in his reasoning, we accept his facts as a valuable contribution to science.

ONE PORTAL FOR THE PROFESSION IN ENGLAND.

IN view of the legal difficulties which have been stated by the Society of Apothecaries to prevent that Society taking part in the formation of an Examining Board in this division of the United Kingdom, the following scheme has been approved by the governing bodies of the Royal Colleges of Physicians and Surgeons of England.

I. That a Board of Examiners be appointed in this division of the United Kingdom by the co-operation of the Royal College of Physicians of London, the Royal College of Surgeons of England, and of such other of the medical authorities in England, mentioned in Schedule (A) to the Medical Act, as may take part in its formation, it being understood that, liberty being left to such co-operating medical authorities to confer, as they think proper, their honorary distinctions and degrees, each of them will abstain from the exercise of its independent privilege of giving admission to the *Medical Register*.

II. That the Board be constituted of examiners, or of examiners and assessors appointed by the several co-operating medical authorities.

III. That examiners be appointed on the following subjects: Anatomy and physiology; chemistry; materia medica, medical botany, and pharmacy; forensic medicine; medicine; surgery; midwifery; or on such subjects as may be hereafter required.

IV. That no examiner hold office for more than five successive years, and that no examiner who has continued in office for that period be eligible for re-election until after the expiration of one year.

V. That the examiners be appointed by the several co-operating medical authorities, on the nomination of a Committee, called herein "The Committee of Reference", but no member of the Committee of Reference shall be eligible for nomination as an examiner.

VI. That a Committee of Reference, to consist of an equal number of representatives of medicine and of surgery, be appointed as follows: One representative of medicine and one representative of surgery to be appointed by each of the Universities in England; four representatives of medicine to be appointed by the Royal College of Physicians of London; four representatives of surgery to be appointed by the Royal College of Surgeons of England.

VII. That one-fourth of the Committee of Reference go out of office annually, and that, after the first four years, no retiring member be re-eligible until after the expiration of one year.

VIII. That the duties of the Committee of Reference be generally as follows. I. To determine the number of examiners to be assigned to

each subject of examination; 2. To nominate the examiners for appointment by the several co-operating medical authorities; 3. To arrange and superintend all matters relating to the examinations, in accordance with regulations approved by the co-operating medical authorities; 4. To consider such questions in relation to the examinations as they may think fit, or such as shall be referred to them by any of the co-operating medical authorities, and to report their proceedings to all the said authorities.

IX. That there be two or more examinations on professional subjects, and that the fees of candidates be not less than thirty guineas, to be paid in two or more payments.

X. That every matriculated student of an English University who shall have completed the required curriculum of professional study, and shall have passed such an examination or examinations at his University as shall comprise the subjects of the primary examination or examinations conducted by the Board, be eligible for admission to the final examination; and that every candidate so admissible to examination be required to pay a fee of five guineas; but he shall not be thereby entitled to the Licence of the Royal College of Physicians of London, nor to the Diploma of Member of the Royal College of Surgeons of England, without the payment of an additional fee of not less than twenty-five guineas.

XI. That every candidate who shall have passed the final examination conducted by the Board shall, subject to the bye-laws of each licensing body, be entitled to receive the Licence of the Royal College of Physicians of London and the Diploma of Member of the Royal College of Surgeons of England.

We are happy to be able to state that the University of London gives its entire approval and co-operation to this scheme, suggesting only very slight alterations for the security of candidates proceeding from the Universities, to which the Corporations have already acceded in principle. These alterations are in Clause IV, to the effect that the examiners shall be subject to annual re-election; and in Clause XI, substituting the "curriculum required by their own University" for "the required curriculum of professional study". Subject to these amendments, which will obviously be accepted, the University of London consents to make a regulation that every candidate for the M.B. degree shall be required to pass the final examination of the Conjoint Board. The other Universities will, we believe, signify without delay their acceptance of the scheme, and will make the like concession.

It is difficult to exaggerate the importance of this step. The liberality of the Universities deserves the warmest praise: they have made important and distinct concessions, of great value to the public and the profession, although of none to themselves. The Corporations, too, have shown especially in the later steps of the negotiation an intelligent and liberal appreciation of the general good, which claims the warmest recognition. They have at every step met with ignorant abuse from one clique of writers, who put themselves forth as representing liberal opinions, but who have throughout shown a childish ignorance of the question at issue, and an utter incapacity to grasp its bearings. It remains for us, who have steadily adhered to the advocacy of the great principles which the British Medical Association has at heart, and of which one—the one portal—triumphs to-day, to express the earnest hope that the other divisions of the kingdom will follow this example, and that Ireland and Scotland will not long be left without unified Boards of Examination and one *minimum* test for all who enter the profession. It is a great step in medical reform, and augurs, we trust, the speedy triumph of the other principles of reform which our Association has, with the almost unanimous consent of the profession, declared essential parts of its programme—direct representation on the General Medical Council, and an efficient penal clause.

MEDICAL RELIEF, SCOTLAND.

THE Select Committee of the House of Commons on Poor Law (Scotland) have reported that the present condition of medical relief is

not generally satisfactory. The parochial boards are not obliged to appoint medical officers; and, when they are appointed, their tenure of office is uncertain, and their emoluments are not always such as to secure competent men. In England and in Ireland, the public Exchequer contributes one-half the actual amount expended in salaries to medical officers, and in medicines; whereas in Scotland a fixed sum of only £10,000 is granted from the public funds, which does not meet one-third of the very limited expenditure which occurs under this head in Scotland. The Committee agree with the suggestion that Scotland should be put upon as favourable a footing as England and Ireland in respect of grants from the public Exchequer on this account; that the local boards should be required to appoint medical officers, with a suitable salary, which should be exclusive of the cost of medicines; and that the dismissal of medical officers should be subject to the approval of the Board of Supervision. They recommend that every parochial board be required to appoint a medical officer at a suitable salary, exclusive of the cost of medicines; regard being had to the population and extent of the parish and the number of paupers. Medical officers not to be removed from office, except with the approval of the Board of Supervision. The Parliamentary grant in aid of medical relief to be placed on the same footing as it is in England and Ireland. Every parochial board be required to have, and furnish with requisite medicines, a dispensary at or in the vicinity of the residence of their medical officer; and to publish in their annual accounts a statement of medicines so supplied. As to pauper lunatics, they say that the evidence regarding the treatment and condition of pauper lunatics is, on the whole, satisfactory. The expense of maintaining pauper lunatics in asylums is a heavy and increasing charge; and it is suggested that, with a proper system of supervision, many more harmless lunatics might be advantageously either boarded out or removed to the lunatic wards of poorhouses, where their cost is much less than in asylums.

DR. CAYLEY has been appointed Physician to the London Fever Hospital.

THE *Northampton Herald* of July 29th records an heroic rescue of a lad from drowning by Dr. John M. Bryan, junior.

THE Working Men's Fund for the extension of the Queen's Hospital, Birmingham, has reached £5,465, of which £3,472 has been subscribed by artisans. It is proposed to close the fund in February next, at the end of the third year.

Dr. ALFRED MEADOWS has been elected Lecturer on Midwifery and the Diseases of Women and Children to St. Mary's Hospital Medical School, having recently also been appointed Physician-Accoucheur to the Hospital. Mr. Stocker, M.B.Lond., has been appointed Medical Tutor in the School.

BY way of grateful return to a medical man of Cologne who took good care of him during his illness, a French officer, on his return to France from captivity, has, according to the *Kölnische Zeitung*, sent his photograph to the doctor, with a written certificate of his good treatment, and a request that his companions in arms should, in the "campaign of revenge", when they reached Cologne, treat the doctor with every consideration.

THE following is the list of Members elected as Fellows of the Royal College of Physicians. It was accidentally omitted last week:—Thomas Bishop, M.D., Paris; Arthur Leared, M.D., London; Gilbert William Child, M.D., Oxford; John Hitchman, M.D., Mickleover, near Derby; Augustus Drake, M.B., Exeter; Edward Copeman, M.D., Norwich; Willoughby Francis Wade, M.B., Birmingham; Philip Frank, M.D., London; Thomas Stevenson, M.D., Guy's Hospital; Charles Theodore Williams, M.D.Oxon., London; William Tilbury Fox, M.D., London; Edward John Waring, M.D., London; Philip John Hensley, M.D., London.

DR. JOHN MURRAY has been appointed Assistant-Physician to the Hospital for Sick Children, Great Ormond Street.

THE Swiss Federal Council have instructed their Consul-General in London to contradict a statement made by a London paper, which warned tourists from travelling in Switzerland on account of prevalence of small-pox. The disease, it is officially stated, showed itself in a few places in the spring, but has almost totally disappeared, the localities visited by strangers being entirely free.

BRITISH PHARMACEUTICAL CONFERENCE.

THE British Pharmaceutical Conference commenced its meetings on Tuesday in the Craigie Hall, St. Andrew's Square, Edinburgh. The President for the year is Mr. W. W. Stoddart, F.C.S., Bristol. There were about a hundred members present. A *conversazione* was given in the evening by the Chairman and Local Committee in Edinburgh, in the Museum of Science and Art.

THE CHOLERA.

No cases of cholera have as yet been recorded in this country this year, and thus there is little to be added to Mr. Forster's statement in the House of Commons. The amount of diarrhoea and choleraic diarrhoea registered in this country thus far is, moreover, below the average of previous years. This, however, is of course connected with the unusually low temperature of the season thus far. A few weeks of continued heat may tell a different tale. There is no doubt that the epidemic constitution which favours cholera, and the particular contagion which conveys it, are steadily advancing upon us, following their usual march. Mr. J. N. Radcliffe, Inspector of the Privy Council, is now visiting the eastern ports, and is at present at Sunderland, charged with a special mission of informing the local authorities of their special powers and duties under the late order in Council, and conferring with them as to the proper precautions to be taken. They have, we believe, shown every disposition to concur in all possible precautions.

THE BERKSHIRE CAMPAIGN.

WE have reason to fear that the officers of the Medical Department of the Army do not fully appreciate that unaccustomed and remarkable subordination of military projects to presumed sanitary considerations which has put an end to an important series of manoeuvres, for fear of injuring the men's health by exposure to the "equinoctial gales" which prevail in September on the plains of Berkshire. It is less, however, with the view of reassuring Lord Northbrooke, than of re-establishing the facts on their proper basis, that we state that his fears are not shared by the medical officers of the army, and that they have never entertained any apprehension but that the resources of art and rules of hygiene might be successfully applied to enable the British soldier to encounter an ordeal even more severe than that of a mock campaign among the autumn stubbles in the royal county. The health-returns of the troops in the campaigns of China, Australia, and Abyssinia, and the well devised and successful resistance of the Guards to the depths of a Canadian winter, taught other lessons than these; and it is a pity that they should be misread. Nor is it altogether fair that the officers of this department should be made the scapegoats of what would seem to be the shortcomings of others.

PHYSICIANS IN THE UNITED STATES.

WE take the following facts from the *Philadelphia Medical Times*:—"The total number of physicians who paid taxes to the Government for the year ending April 30, 1871, was 49,798. Of these there were—regular, 39,070; homœopathic, 2,961; hydropathic, 133; eclectic, 2,860; miscellaneous or not classified, 4,770. These figures show that the number engaged in the profession has been over-estimated. The usual guess at the number of homœopaths has been 10,000. It is believed that the Government list is very full and accurate." It is said that the Internal Revenue Department has prepared a list giving the name and post-office address of every one of the 49,798 physicians.

PREPARING FOR THE CHOLERA.

THE condition of Stanwix in the Carlisle Union does not appear yet to have engaged the attention of the Privy Council; but it seems to be as well disposed as any district could be to invite the approaches and diffuse the ravages of Asiatic cholera. Its water-supply, we observe from a special report to the guardians, is not only defective, but largely contaminated by sewage; and in many of the "ash-pits" are large accumulations of decomposing sewage, so placed as to be in actual contact with the walls of adjacent houses and above the level of the floors. These accumulations are described in the report of the Sanitary Committee as being repulsive to sight and offensive to smell, outrages on decency, and dangerous to health. From various local causes, it seems little likely that any effectual remedy will be applied—at any rate for an indefinite time. The prospect before the inhabitants of Stanwix and those into whose homes they are well-fitted to import zymotic disease, is not altogether cheerful.

THE EDINBURGH UNIVERSITY CLUB.

A GENERAL MEETING of the members of this club was held at St. James's Hall Restaurant, 69, Regent Street, W., on Tuesday, August 1st, 1871; Dr. E. H. Sieveking, V.P., in the chair. Dr. George T. Mitchell and Mr. Frederick Churchill, were unanimously elected members of the club. Dr. Andrew Clark, President of the Medical Society of London, was nominated as a member of the club. Dr. Sieveking then presented a very handsome mull and box of snuff to the club, and he hoped that the club might soon possess a "loving cup" of its own. It was proposed by Mr. Batten, and seconded by Dr. Halley, Honorary Treasurer: "That the cordial thanks of the meeting be given to Dr. Sieveking for his handsome present of a mull." The dinner then followed; Dr. Lyon Playfair, M.P., C.B., in the chair. Twenty members and ten guests were present. Congratulations were conveyed by telegraph to the new graduates of the University of Edinburgh (August 1st being capping-day); and their reply of thanks was received and read by the Chairman during the dinner amidst much enthusiasm. A subcommittee was appointed to take steps to purchase a "loving-cup" for the club; the subscription-list was opened, and twenty guineas were at once announced. Each member will receive in the course of a few days a letter, asking him to join the list of subscribers. The cup will be presented to the members at the next dinner. Dr. Playfair made some interesting remarks on the work done in Parliament during the Session; and stated that the medical element, at any rate, had not been wanting in zeal; and that their labours would be found in the Acts relating to Baby-farming and Local Government. Some excellent songs were sung; and the meeting passed off very successfully.

SERO SED SAPIENTER.

PROMOTION in the naval medical line has lately been very slow, but it is stated that, probably, there will be several assistant-surgeons promoted at an early date.

THE INTERNATIONAL AID SOCIETY.

THE International Aid Society held this week its annual meeting. It has still a reserve of £73,000, and will, we are glad to learn, seek for a Royal Charter. The Society has issued an extremely interesting report of its operations, accompanied by maps, and a special report by Dr. Sutherland, of the War Office, on the correspondence from the agents of the Society. A further volume records the criticisms of the working-staff of the Society on the operation of the treaty of Geneva, and the results of the Society's labours during the Franco-Prussian war. We greatly regret that an overwhelming pressure of matter prevents us now from entering into these subjects in detail, and comparing the conclusions with those derivable from other personal experience at our disposal. We shall not, however, delay to congratulate the Society, and especially Colonel Loyd Lindsay and Captain Burgess, on whom the chief labour and responsibility of central organisation fell during twelve months, on having worked through what was very like early failure to

final success of an admirable character. These reports, coming chiefly from those actually in the service of the Society, and for many reasons far more likely to describe its and their achievements than their shortcomings, are nevertheless marked by a commendable candour. Some critics, whose observations could hardly have failed to jar somewhat upon the sweet music of the laudatory chorus of the staff, have considerably refrained altogether from replying. Thus these volumes stand as fair records of a noble achievement, of which Englishmen will never think without thankfulness that they were permitted to take part in a work of mercy so unstained, pure, and far-reaching.

ADULTERATION OF FOOD, DRINK, AND DRUGS.

LORD EUSTACE CECIL has given notice that, failing the action of the Government to bring in a measure to amend the law relating to the adulteration of food, drink, and drugs, or to introduce clauses for that purpose in any sanitary Act which they may propose, he will early next Session again propose a resolution upon the subject for the consideration of the House.

HOSPITAL ACCOUNTS.

A GOVERNOR of St. Mary's Hospital writes to us as follows, touching our note of last week on Hospital Statistics. "It is refreshing to find any one advocating the desirability of rendering accounts in an uniform and intelligible shape; but Mr. Kemble is, I fancy, rather out when he starts the idea as a new one. Mr. J. G. Wilkinson urged it in his very able pamphlet, of which you have taken prominent notice; and the Social Science Association not only took the matter up, but printed and circulated a form of balance-sheet whereby the accounts of hospitals might be rendered in an uniform shape, with classification sufficient for all purposes of comparison. The public, however, do not appear to attach any importance to this subject; and while secretaries are, as a rule, hostile, and governing bodies indifferent, I fear that things will have to go on in their present very unsatisfactory state. Mr. Kemble's suggestion for showing the cost of the medicine ordered for each class of patients, and the different diets separately, rather amused me. Even if it were practicable, I cannot understand what advantage would be gained by such minute details."

THE CITY WATER-SUPPLY.

AT a recent meeting of the Common Council of London, Mr. Rudkin called attention, amid marked expressions of approval, to the present state of the water-supply in the City. He said he knew instances where persons were suffering from the effects of the bad quality of the water, and it had occurred to him that it would be desirable, in view of existing facts and apprehensions, to induce the water companies to have recourse for a time to water-posts, as in winter, at stated places, so that the poor people living in confined courts and alleys might get a supply of water fresh from the mains, instead of from stagnant cisterns. Mr. De Jersey, Chairman of the Commissioners of Sewers, undertook to use his influence with the water companies to do everything in their power that might be thought desirable under the circumstances. Mr. Dresser Rogers was glad to say, with reference to the Metropolitan Water Bill (No. 2) now before Parliament, that the Corporation had obtained a concession, under which the entire supervision of the water-supply would be in the hands of the Corporation itself. We commend this example to the notice of other Corporations.

THE ALBERT IDIOT ASYLUM.

THE Emperor of Brazil has extended his visit to the Royal Albert Asylum for Idiots and Imbeciles at Lancaster. The interest evinced by the Emperor in every detail relating to the work of idiot-training was alike creditable to his intelligence and his humanity. This asylum is now in full operation, under the medical superintendence of Dr. G. E. Shuttleworth, and contains sixty patients. Free cases are received only from the seven northern counties; full-payment cases from all parts. We observe that the Lunacy Commissioners, in their annual report just issued, speak in the highest terms of the asylum, and pay a

just tribute to the energy of its benevolent founder, Dr. De Vitre. They express a hope that similar energy may evoke like liberality, and lead to the foundation of sister institutions in other divisions of the kingdom.

BABY-FARMING.

AT the Manchester assizes on Saturday, before Mr. Baron Martin, Frances Rogers, a baby-farmer, was tried on the charge of doing grievous bodily harm with intent to kill, and sentenced to twenty years' penal servitude. The case gone into was that of the child of a woman named Agnes Murray, which the prisoner had undertaken to take charge of for £8. There were other indictments relating to the cases of Elaine Bennett, James Gallagher, and a child named Robinson. In all these cases laudanum had been administered systematically to allay hunger.

THE CONTAGIOUS DISEASES ACTS.

IN the House of Commons this week, in answer to questions from Sir J. Elphinstone and Mr. Baines touching the literature of the Contagious Diseases Acts controversy, Mr. Bruce said that if it were conducted with discretion no law could interfere with it, but if it degenerated into a tone of grossness it would be for the Courts to say whether it came within Lord Campbell's Act.

CHOLERA IN PERSIA.

NOTWITHSTANDING conflicting statements and the very energetic denial by the Persian minister, it is confirmed that famine, cholera, and a pestilential disease described as plague, have been prevalent recently in Persia, although to an extent much less than might be gathered from current reports.

UNIVERSITY COLLEGE, LONDON.

AT an extraordinary general meeting of the members of the College on Saturday, July 29th, the Right Hon. Lord Belper, LL.D., F.R.S., was unanimously elected President of the College, in the place of the late Mr. George Grote. At a session of the Council, on the same day, the following appointments were made: Dr. Charlton Bastian, F.R.S., to be Physician to University College Hospital; Mr. Berkeley Hill, Mr. Christopher Heath, and Mr. Marcus Beck, to be Teachers of Practical Surgery. The Sharpey Scholarship, recently established for the promotion of the study of Biological Science in the College, was conferred upon Mr. E. A. Schäfer.

THE MIDDLESEX HOSPITAL.

THE death of Mr. Francis Broderip has disclosed the name of a munificent benefactor to the above institution. Early in 1866 the then Chairman of the Weekly Board, Mr. Michael Smith, reported 'an anonymous donation of £20,000, 4 per cent. Brazilian Bonds, to the funds of the hospital; and now that the death of the donor has released Mr. M. Smith from his promise of secrecy, he has informed the Weekly Board that Mr. Francis Broderip was this benefactor, and that at the same time he promised an annual subscription during his lifetime of £100 towards the Samaritan Fund.

ACCIDENTAL POISONING.

A GENTLEMAN named Wall, aged 33, living at Salcombe Regis, near Sidmouth, who was in the habit of taking morphia, sent the other day a prescription to a druggist named Webber, for a mixture containing a small quantity of that narcotic. Having received the medicine he took a dose of it and went to bed. Soon afterwards his wife noticed that he was breathing unnaturally, and sent for a medical man. Meanwhile, the druggist discovered that he had made a mistake, having put an excess of muriate of morphia into the mixture, and immediately despatched a messenger to obtain possession of the bottle, but too late, half of the quantity taken being enough to kill an habitual morphia taker. Everything was done by the medical men who attended Mr.

Wall, but he died a few hours afterwards. "Death by misadventure" was the verdict at the inquest, and the druggist was admonished "to be more careful for the future".

A SEPARATION of the Siamese twins now appears imminent. One is said to be at the point of death, at their home in North Carolina. The other is in good health. In anticipation of death, arrangements have been made for the immediate separation of the living from the dead brother.

THE list of pensions granted during the year ending the 20th of June, 1871, and charged upon the Civil List, includes only one medical name: Gavin Milroy, Doctor of Medicine, in consideration of his medical services under Government, and especially in the Crimea, and of the injury which he thereby professionally sustained, £100.

AN American lady, Miss Putnam, who has been a student of medicine in Paris for some years, has just graduated in medicine with highest honours at the University in that city.

MR. J. K. KENYON, Medical Officer and Public Vaccinator of No. 3 District of the Highworth and Swindon Union, has received a gratuity of five guineas from the Lords of the Privy Council, for successful vaccination in his district.

SCOTLAND.

THE SYME TESTIMONIAL FUND.

EXACTLY two years ago, a preliminary meeting was held in London for the purpose of taking steps to inaugurate a testimonial to Mr. Syme, on the occasion of his relinquishing the Chair of Clinical Surgery in the University of Edinburgh, the result of which was a large and influential public meeting in St. James's Hall in the ensuing November. At this meeting, it was resolved that a suitable memorial of the great surgeon should be raised, and that it should take the form of a fellowship for the promotion of surgery in the University of Edinburgh, to be called "The Syme Surgical Fellowship"; and a marble bust, to be placed in the University Library, or in the Hall of the new Royal Infirmary. Dr. Murchison, who had taken the initiative in promoting the testimonial, was appointed Honorary Secretary. He has now issued his Report of the Syme Testimonial Fund, and it is exceedingly satisfactory. The total sum raised in Great Britain, America (which contributed handsomely), and the colonies, amounts to £2,295:10:11, which includes a liberal donation of £305 by Mr. Syme's son in memory of his distinguished father. This sum has enabled the Committee to present an admirable life-like marble bust of Mr. Syme, by Mr. Brodie of Edinburgh, to the University of Edinburgh, as well as to the Royal Infirmary. There remains, after deducting all expenses, the sum of £2,000 for the foundation of the fellowship; and, by an arrangement with the Association for the better Endowment of the University of Edinburgh, this sum has been augmented to £2,500. The first competition for the fellowship will take place some time during the year 1874. The chief feature of, and condition in holding, the fellowship, are, that it will be of the value of about £100, tenable for two years, or, under certain circumstances, a longer period; and that it will be awarded to the competitor, who must be a Bachelor of Medicine of the University of Edinburgh of not more than three years' standing, and who shall present the best thesis on a surgical subject, giving evidence of original research or practical talent. The conditions under which the fellowship is to be held are, we think, those which are likely to encourage original surgical talent, of which Mr. Syme was so brilliant an example. That the completion of the testimonial has been successful beyond expectation, must be gratifying to Mr. Syme's old friends and pupils, and especially so to Dr. Murchison, to whose exertions the success of the testimonial is largely due.

UNIVERSITY OF EDINBURGH: GRADUATION CEREMONIAL.

THE "capping" of the medical graduates took place on Tuesday, before a large assemblage of ladies and gentlemen. The Lord Justice General, Chancellor of the University, occupied the Chair. The degree of LL.D. was conferred on the following, amongst other gentlemen, before the ceremony of graduation in medicine. Professor Thomas Andrews, F.R.S., of Belfast; Dr. W. B. Carpenter, F.R.S., of London; Dr. G. E. Paget, of Cambridge; Professor Allen Thomson, of Glasgow; and the Anatomist Professor Pierre Joseph Beneden, of Louvain. Professor Bennett delivered the graduation address.

THE EDINBURGH UNIVERSITY: THE SENATUS AND THE LADY STUDENTS.

THE Senatus have arrived at the following decision on Miss Jex Blake's communication, in which she made application that opportunities should be afforded to the lady students to enable them to complete their medical education in Edinburgh: "That the Senatus intimate to Miss Jex Blake that, having taken the opinion of counsel with reference to the proposals contained in her memorial of date 26th June, 1871, they find themselves unable to comply with either of those proposals." It is stated that the Senatus was very equally divided, the resolution being carried by the casting vote of the chairman. The Senatus asked the opinion of counsel as to their adopting either of Miss Jex Blake's suggestions, and as to the rights of the lady medical students to examination and graduation. The opinion, we understand, amounted to this, that, whether matriculated by permission or not, women had no legal status in the University. The other motion brought forward was to the effect that the opinion and accompanying papers be sent to the University Court with a strong expression of the desire of the Senatus that the lady medical students should in some way be enabled to continue their studies. The subject will probably be brought up again in October.

THE NORTH OF SCOTLAND MEDICAL ASSOCIATION.

THIS Association held its annual meeting in the Medical Hall, King Street, Aberdeen, on Saturday, July 29th. Dr. Davidson of Warrle presided. The President, before the commencement of the business of the meeting, passed a high eulogium on the late Dr. Keith, who had immediately preceded him in the presidential chair. A report, prepared by the Aberdeen Medico-Chirurgical Society, on the Existence of Small-pox and other Epidemics in the Locality, was presented by Dr. Beveridge. The report shewed that there was little occasion for anxiety as regards small-pox, its prevalence being very slight. Dr. Jamieson of Peterhead, Dr. Mackie of Inch, Dr. Gavin of Strichen, and others, having offered some remarks on the subject of small-pox and vaccination, the following motion was proposed by Dr. Mackie, Inch, seconded by Dr. Jamieson, Peterhead, and, after some discussion, ultimately carried: "That this Association, considering it is very desirable that a general understanding be come to with regard to professional conduct in the intercourse of members, resolves to appoint a Committee to prepare a code of rules to be submitted to the next meeting." The President and Secretary of each of the district societies were appointed a Committee on the subject. Professor Inglis read a paper on a case of Cæsarean Section. The Treasurer's accounts were submitted. Professor Ogston was appointed President for the ensuing year. The members then paid a visit to the Infirmary, and afterwards dined together in the Great Northern Hotel.

IRELAND.

APOTHECARIES' HALL, IRELAND.

THE Governor and Court of Examiners of the above institution gave a dinner at the Exhibition Palace, Dublin, on Thursday, July 27, to which the following received invitations: Dr. Banks, President of the College of Physicians; Mr. Wharton, President of the Royal College of Surgeons; Sir D. J. Corrigan, Bart., M.P.; Dr. Stokes; Mr. Adams; Mr. Porter; Sir W. Wilde; Sir Wm. Carroll; Dr. Macnamara; Dr. M'Dowel;

Dr. Churchill; Dr. Ringland; Dr. Albert Walsh; Dr. G. Johnstone; Dr. Hargrave; Dr. Denham; Dr. Kidd; Dr. Cruise; Rev. Dr. Haughton; Dr. Hudson. After the usual loyal toasts, "The Health of the President of the King and Queen's College of Physicians" was proposed. In responding, Dr. Banks dwelt upon the benefit and mutual advantage of the representatives of the whole profession thus meeting together. Mr. Wharton, as President of the Royal College of Surgeons, returning thanks for his health, spoke of the desirability of a union of the several branches of the profession, and of the formation of an Irish conjoint board of examiners. The "Health of the Governor and Court of the Apothecaries' Hall" was proposed by Dr. Banks. The "Health of the Rev. Professor Haughton", in connection with Trinity College, was proposed by Dr. Harvey, and warmly responded to. Dr. Haughton, in returning thanks, mentioned the continuous efforts made by each of the medical educational bodies of Ireland in the cause of advancing the profession. He pointed out the great benefit that would accrue from unanimity, and asserted for Ireland the right to regulate the education of her youth in accordance with that respect for the Deity which had from the very earliest ages of Christianity marked the teaching of her schools.

THE CHOLERA.

THE CHOLERA AND THE GOVERNMENT.

ON Friday night, in answer to Mr. Hardy, Mr. Forster made the following statement as to the dreaded outbreak of cholera.

"For the last two years cholera has been in Russia, and since last August in St. Petersburg. Since April of this year it has been in Wilna and other western places; recently, it has increased in St. Petersburg, but not nearly so much there as some months ago, and the disease is said to be diffused through the western provinces of Russia. We need not assume that this bodes any immediate danger to this country. We have no knowledge of any cases in Germany; but the Foreign Office is to make special inquiry on this point at Berlin. While thus there is no reason for immediate alarm, or for any particular action of central authority, there is ample reason that local authorities should exert themselves in the removal of nuisances, and should watch with extreme care over the sources of water-supply within their districts. Water-companies should be mindful that the greatest disasters produced by cholera in this country have been due to their distribution of sewage-tainted water, and every care should be used by them, in good time, to prevent the recurrence of any such mischief. Their customers, too, should watch them narrowly."

Notwithstanding this statement, however, it appears that, from information received on that evening, Mr. J. N. Radcliffe, one of the inspectors of the Privy Council, was despatched that night to Hull to investigate the facts connected with a reported outbreak of cholera in ships from the Baltic, and found, on his arrival there, that two ships had come into the port from Cronstadt, and that a fatal case of cholera had occurred in each—in one two days before, in the other two days after, sailing. In the latter, therefore, the death had happened when the ship was only five days from England. No other cases had occurred, and there had been no cholera in Hull itself. The facts, however, made it clear that danger was to be apprehended on the side of the Baltic, from which sea, from now until October, a constant stream of vessels will be entering Hull and other eastern ports. The course of the emigration from North Germany to America is by way of Hull and Liverpool; and it will be remembered that on a former occasion cholera broke out among these emigrants only when they had reached the latter port, and were about again to embark. In Hull itself the docks are absolutely within the town, so that ships are moored immediately against houses, and in this position they are sufficiently under the jurisdiction of the local authority. The Lords of the Privy Council, however, on hearing Mr. Radcliffe's report, determined still further to protect the town by an order, which was issued on Saturday, under which all ships arriving from the Baltic will be examined before they enter the port; and any necessary measures of isolation or disinfection will be strictly enforced. At the same time Mr. Radcliffe was again despatched to the north, with instructions to visit all the eastern ports in order to give necessary information and injunctions to local authorities with regard to the measures to be taken under the order, and also to proceed to Liverpool and Birkenhead to insure that due provisions are made for dealing with cholera if it appear among any emigrants who have been allowed to land at Hull and to

continue on their way. At present, although there is abundant necessity for precaution, nothing has occurred to justify grave alarm, and it may reasonably be hoped that the precautions taken will prove effectual. The order, published in the *Gazette* of Saturday, provides that ships coming from districts in which cholera prevails may be inspected by the nuisance authority of the district. On the arrival of such a ship the nuisance authority shall cause all persons on board to be examined by a doctor; and, while those free from the disease will be allowed to land, those infected shall be removed to a hospital or otherwise dealt with. If any death from cholera take place on board, the body shall be taken out to sea and there committed to the deep, and the clothing, bedding, etc., on board, with which the patient has come in contact, must be disinfected or destroyed.

CHOLERA IN PERSIA.

As regards cholera in Persia, the Persian Minister here writes, there is no occasion to take any exceptional notice of it. "Every year at the period of excessive heat, the imprudent consumption of fruit gives rise to a certain number of cases, and this number has not been exceeded in any remarkable proportion." The alarming telegrams about the cholera, the writer believes to be "the wretched expedient of some agent of a commercial house, or of some one employed in connection with the telegraphs who has been detained at Teheran during the insupportable hot season while his colleagues or friends have gone to the neighbouring mountains in search of a cooler atmosphere, and who has endeavoured by publicity to inspire such fears to supply a motive for his departure from Teheran, or to secure for himself some exceptional privilege as a reward for having remained at his post under such painful circumstances."

CHOLERA IN INDIA.

FROM Indian papers we learn that cholera has broken out at Berhampore, and we are very sorry to learn that one of the first victims of the disease was Dr. John White, the civil surgeon of the station. Dr. Ewart has been called to Berhampore. Happily, the type is not epidemic.

CHOLERA IN RUSSIA.

THE *Moscow Gazette* publishes the following return respecting the spread of cholera in Russia. "On the 17th July, 100 persons were attacked with cholera in Wilna, and 40 died; on the 18th, 62 were attacked, and 30 died; on the 19th, the cases of illness rose to 281. At Riga, hospitals are already established for the exclusive use of cholera patients, and physicians are kept on duty day and night. The epidemic is approaching the Prussian frontier."

CHOLERA IN BERLIN.

It is stated in the weekly health-return from Berlin that the reports as to the progress of the cholera are incomplete, but that it is certainly entering Riga on the Baltic, at the mouth of the Dwina. In Tambow, out of 30,000 inhabitants, 458 died from cholera in the week ending July 13th: this is in Central Russia, where the sanitary conditions are unfavourable. The English Registrar-General points out how important it is at the present time that the greatest energy should be used in securing prompt and efficient treatment in the earliest stages of diarrhoea, "for it cannot be too generally known that all cases of cholera commence with diarrhoea."

Reports from Berlin, under date August 2nd, say the cholera epidemic has crossed the Prussian frontier. The first case has occurred at Königsberg, where a Polish Jew was attacked by it and died. On the same day two other persons were reported ill, one of whom died. No further reports have arrived yet.

The reports from Russia are unsatisfactory. On the 25th July, 595 cholera patients were in the hospitals at Moscow, and the same day 102 fresh cases were reported. Up to that date there had been 3125 cases, of which 1428 proved fatal, in addition to those cases which may not have been reported to the authorities. At the same period there were 103 patients in Riga, and 55 new cases, with 48 deaths, on the same day.

THE foundation-stone of the Barnes Convalescent Home at Cheadle, in connection with the Royal Infirmary, Manchester, was laid on Saturday last by Hugh Birley, Esq., one of the members of Parliament for the city, in the presence of the Bishop of the Diocese and others.

TESTIMONIAL.—Mr. A. L. Peacock, surgeon, of Churchingford, Devon, has been presented with a handsome silver tea-service by a number of friends as a token of esteem, and of regret at his leaving the neighbourhood.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
ANNUAL MEETING.

THE Thirty-ninth Annual Meeting of the British Medical Association will be held in Plymouth, on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th of August next.

President—E. CHARLTON, M.D., D.C.L., Physician to the Newcastle-upon-Tyne Infirmary.

President-elect—JOHN WHIPPLE, Esq., F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital.

An *Address in Medicine* will be delivered by GEORGE JOHNSON, M.D., F.R.C.P., Professor of Medicine in King's College, London.

An *Address in Surgery* will be delivered by JOSEPH LISTER, Esq., F.R.S., Professor of Clinical Surgery in the University of Edinburgh.

The business of the meeting will be conducted under four Sections.

SECTION A. MEDICINE.—*President*, Dr. Barham, Truro. *Vice-Presidents*—Dr. Quain, F.R.S., London; Inspector-General Smart, M.D., C.B., R.N., Penge, Surrey. *Secretaries*—Dr. Clay, Windsor Villas, Plymouth; Dr. Wade, Temple Row, Birmingham.

SECTION B. SURGERY.—*President*—Joseph May, Esq., Stoke, Devonport. *Vice-Presidents*—P. C. De la Garde, Esq., Exeter; Deputy-Inspector-General Longmore, C.B., Netley. *Secretaries*—W. P. Swain, Esq., Ker Street, Devonport; C. Steele, Esq., Meridian Place, Clifton, Bristol.

SECTION C. MIDWIFERY.—*President*—Dr. Beatty, Dublin. *Vice-Presidents*—Dr. Swayne, Clifton, Bristol; Dr. Alfred Meadows, London. *Secretaries*—Dr. John Rolston, Stoke, Devonport; Dr. Phillips, 26, Finsbury Square, London, E.C.

SECTION D. PUBLIC MEDICINE.—*President*—Dr. A. P. Stewart, London. *Vice-Presidents*—P. W. Swain, Esq., Stoke, Devonport; Dr. Beddoe, Clifton, Bristol. *Secretaries*—Dr. Row, Ker Street, Devonport; David Davies, Esq., 2, Queen Square, Bristol.

TUESDAY, August 8th.

The meetings this day will be held at the Royal Hotel, PLYMOUTH.

1 P.M.—MEETING OF COMMITTEE OF COUNCIL.

3 P.M.—MEETING OF GENERAL COUNCIL.

8 P.M.—FIRST GENERAL MEETING. *Business*: a. Reception of Congratulatory Address from Plymouth Corporation; b. President's Address; c. Vote of thanks to the President; d. Report of Council, and Discussion thereon; e. Election of General Secretary; f. Election of Auditors; g. Report of Medical Benevolent Fund; h. Presentation of Hastings Medal.

WEDNESDAY, August 9th.

8.30 A.M.—PUBLIC BREAKFAST—Royal Hotel, DEVONPORT.

9.30 A.M.—MEETING OF NEW COUNCIL—Royal Hotel, DEVONPORT.

11 A.M.—SECOND GENERAL MEETING—Town Hall, DEVONPORT.

Business: a. Reception of Congratulatory Address from Devonport Corporation; b. To appoint place of meeting for 1872, and President-elect; c. Address in Medicine by Dr. GEORGE JOHNSON.

1 P.M.—Adjourn.

2 P.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

9 P.M.—PRESIDENT'S SOIRÉE—Assembly Rooms, Royal Hotel, PLYMOUTH.

THURSDAY, August 10th.

9.30 A.M.—MEETING OF COMMITTEE ON REGISTRATION OF DISEASE—Public Dispensary, Catherine Street, PLYMOUTH.

10 A.M.—THIRD GENERAL MEETING. *Business*: Reports of Committees—Royal Hotel, PLYMOUTH.

11 A.M.—ADDRESS IN SURGERY, by Professor LISTER, F.R.S.—Royal Hotel, PLYMOUTH.

2 P.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

6.30 P.M.—PUBLIC DINNER—St. George's Hall, STONEHOUSE. For Dinner Tickets, an early application (enclosing One Guinea) should be made to P. W. Swain, Esq., F.R.C.S., Stoke, Devonport. The services of the far-famed Band of the Royal Marines have been engaged for this occasion.

FRIDAY, August 11th.

10 A.M.—MEETINGS OF SECTIONS—Royal Hotel, PLYMOUTH.

2 P.M.—CONCLUDING GENERAL MEETING—Royal Hotel, PLYMOUTH.

A RECEPTION ROOM will be opened at the Royal Eye Infirmary,

close by the Plymouth Railway Station. Members and others who require information with respect to the meeting are requested to make application in this room. Information as to Lodgings will be furnished there.

Members are requested to proceed to the Reception-Room immediately on their arrival, to enter their names and addresses, and to obtain the tickets necessary to secure admission to all the proceedings.

HOTELS.—The principal hotels are, at PLYMOUTH, the Royal Hotel, the Duke of Cornwall, the Globe, the Albion, Chubb's Hotel, Farley's Hotel, Harvey's Hotel; at DEVONPORT, the Royal Hotel, Thomas's Hotel, and the Crown Hotel.

The GUIDE-BOOKS FOR DEVON AND CORNWALL are: Murray's *Handbook of Devon and Cornwall*; Black's *Guide to Devon and Cornwall*; Blight's *Week at the Land's End*; Rev. — John's *Week at the Lizard*; and, for Plymouth and the neighbourhood, Brendon's and Luke's Guide-books—both by Ll. Jewitt, F.S.A.

* * * GENTLEMEN INTENDING TO VISIT PLYMOUTH during the meeting are requested to send their names to Dr. Littleton, the Local Secretary, 1, Lansdowne Place, Plymouth.

NOTICES OF MOTION.—The following notices have been given.

The PRESIDENT OF THE COUNCIL: Rule 4. To insert "President-elect", and to omit "Secretary".—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting."—Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary".—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District", and to erase the words "the Secretary of the Association".—Rule 9. To omit the words between "The President of the Council" and "shall be elected".—Rule 10. To omit the words between "The Treasurer" and "shall be elected".—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office". To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting".—Rule 13. To erase the words "Secretary shall call", and to substitute "President of Council shall direct to be called".—Rule 14. Between "shall" and "be recommended", to insert "express his desire in writing, and shall be".—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea". To erase the words after "such member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding".—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association".—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and".

Dr. STEELE (Liverpool): Election of Committee of Council. Every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: "I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed) ———." Together with a nomination-paper signed by six members of the Association, in the following terms: "We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association." The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the BRITISH MEDICAL JOURNAL not later than months prior to the Annual Meeting of the Association.

Mr. NICHOLSON (Hull): To alter Law 16, line 2. For "three", insert "two".

Dr. WADE (Birmingham): In Law 8, Paragraph No. 3, of the duties of Council, to alter "ten" into "twenty-five"; and to omit the words "and one Secretary from each Branch".

INVITATION TO TORQUAY.—The members of the medical profession at Torquay request the pleasure of the company at luncheon, on Saturday, August 12th, at 3 o'clock, of any member of the British Medical Association residing beyond fifty miles from the place. Their object in this limitation as to distance is that of furnishing an opportunity to strangers unfamiliar with Devonshire to become acquainted with Torquay and its immediate neighbourhood. Any member who may wish to favour them with his presence, will oblige by notifying the same at

his early convenience—and not later than on the Wednesday of the Plymouth meeting—to the Honorary Secretary, Dr. Powell, Infirmary, Torquay.

SPECIAL RAILWAY ARRANGEMENTS.—First and second class ordinary and express return tickets issued at any Station on the Bristol and Exeter Railway, or on the South Devon, Cornwall, or West Cornwall Railways, on August 7th and following days, will be available for the return journey to and from Plymouth any day up to and including Monday, Aug. 21st. First and second class return tickets, at single fare for the double journey, available as above, may be issued from any Station on these lines to Plymouth, or from Plymouth to any South Devon, Cornwall, or West Cornwall station, on August 7th and following days to August 21st inclusive, to the *members of the British Medical Association* producing a certificate or the Association card of membership. Unless such documents be produced, return tickets at ordinary or express fares must be issued. When tickets at single fare for the double journey are issued, the booking clerks must write "return" upon them, and place their initials below the word "return". Ordinary tickets endorsed "return" will be available by express trains without payment of the difference of fare. The South Devon, Cornwall, and West Cornwall Railways have also promised to convey any instruments, medical and surgical appliances, etc., for the Annual Museum, at *half the usual fares*, at the owner's risk.

The Great Western Railway will issue Tourist Tickets for Plymouth, available for one month, to individual members of the Association on presentation of the card of membership. In ordinary circumstances, Tourist Tickets are issued only to parties taking two tickets.

EXCURSIONS, ETC.—The Local Committee appointed by "The Three Towns", Plymouth, Devonport, and Stonehouse, to prepare for the annual meeting of the British Medical Association in 1871, have much pleasure in acquainting the members that they have succeeded in obtaining the cordial cooperation and assistance of the civil and military authorities; so that every facility will be furnished them for inspecting this naval and military arsenal; Her Majesty's ships of war in the Hamoaze and Plymouth Sound; Her Majesty's dockyards at Devonport and Keyham; the Royal William Victualling Yard and the naval and military hospitals in Stonehouse; the Breakwater and its lighthouse; the Eddystone Lighthouse; the Plymouth Citadel, the Hoe, and the forts recently erected within a radius of five miles.

By the kind permission of His Grace the Duke of Bedford, the Right Honourables the Earl of Mount Edgcumbe, the Earl of St. Germans, and the Earl of Morley, and other gentlemen, opportunities will be offered to the members of surveying the grounds and the extensive views commanded in the parks attached to their mansions on the banks of the Tamar and Plym; whereby they will be enabled to pass in review the objects before-named, as well as the magazines at Bull Point; Antony House, the seat of W. H. Pole-Carew, Esq., whereat is preserved Holbein's portrait of Dr. Butts, Physician to Henry VIII; Ince Castle, the residence (*temp.* Charles II) of the Wit of Cornwall, Killebrew; St. German's Church, the site of Cornwall's ancient Cathedral, and Port Eliot (the ancient Priory); Trematon Castle, the residence of the Norman Earls of Cornwall; the late Brunel's master-piece, the Royal Albert Bridge at Saltash; Landulph Church; Buckland Abbey, the seat of Drake, the great circumnavigator; Maristowe; Cothele House; Pentillie Castle; Morwell Rocks; Harewood, the scene of the fair Elfreda's treachery; and other objects of interest in a trip of twenty miles by steamboat.

A steamer will be engaged to make short trips daily, and at stated hours, during the visit of the Association, thus enabling those members who may not be desirous of hearing the delivery of certain papers, to spend their time agreeably in viewing the rich scenery of the port of Plymouth.

Other excursions will be arranged, with the sanction of the Directors, etc., of the Railways—to Launceston Castle, the Ancient Cornish stronghold; to the Saxon Abbey at Tavistock; to Endsleigh Cottage; and to the wild and romantic scenery of Dartmoor.

ANNUAL MUSEUM.—The "Annual Museum" of this Association will be open during the four days of the meeting, for the exhibition of:

1. The latest inventions in medical and surgical instruments and appliances of every kind. Also, for the special exhibition of ancient and modern fracture apparatus, or diagrams of such, thus setting forth the history of the treatment of fractures from the earliest records down to the present day.

2. New drugs and their preparations.

3. New articles of diet for invalids.

4. Pathological Specimens; also photographs, casts, etc., illustrating disease.

5. New works on medicine, surgery, etc.

6. Models or drawings of any object of professional interest not included in the above list.

Notice to Exhibitors.—Application should be made as soon as possible; at the same time giving a list of the objects to be exhibited, and mentioning the space required. All objects sent must have a description attached. Parcels for the Museum should be addressed—"British Medical Association, the Assembly Rooms, Royal Hotel, Plymouth; care of H. Greenway, Esq." They must be delivered on or before July 31st, and be removed within three days after the termination of the meeting. Expenses of carriage and all risk must be borne by the exhibitors. All instruments and other articles intended for the Local Museum will be conveyed at owners' risks for *half the usual fares* on the Bristol and Exeter, South Devon, and Cornwall lines of railway. A card, bearing the name and address of the exhibitor, must be enclosed in each package, ready to be fixed on the outside. All communications respecting the Museum to be addressed to "Henry Greenway, Esq., Surgeon, Plymouth", the Secretary for that department.

PAPERS.—The following papers have been promised.

Tilbury Fox, M.D. 1. Hydroa. 2. A Note on Phtheiriasis, erroneously styled Prurigo.

J. Crichton Browne, M.D. Syphilis and Insanity.

J. Althaus, M.D. Paralysis of the Bladder, and its Treatment by the constant Galvanic Current.

T. J. Austin, M.R.C.S. Medical Electrification.

Thomas Littleton, M.B. The Effects of Submarine Descent on Man, and the Limits of his Capability.

William Roberts, M.D. Intemperance as a Cause of Chronic Bright's Disease.

W. H. O. Sankey, M.D. The Relation and Diagnosis between General Paresis and Locomotor Ataxy.

D. De Berdt Hovell, F.R.C.S. 1. The different Therapeutic Indications of Rheumatism and Neuralgia: with Remarks on Rheumatism as a Sequela of Diphtheria. 2. Uterine Truss or Support for *Post Partum* Hæmorrhage.

George Southam, F.R.C.S. Excision of the Tongue.

Edward Lund, F.R.C.S. Antisepticity in Surgery.

Furneaux Jordan, F.R.C.S. The Extension of Inflammation from the Epididymis to the Urethra: with Cases.

Thomas Beatty, M.D. 1. Fibro-cystic Disease of the Uterus. 2. The Radical Cure of Retroflexion of the Uterus.

Robert Barnes, M.D. Hypertrophic Elongation of the Cervix Uteri.

J. Braxton Hicks, M.D., F.R.S. 1. A Rare Form of *Post Partum* Hæmorrhage. 2. The Reduction of Inversion of the Uterus: illustrated by six Cases.

E. J. Tilt, M.D. Hysteria, and the various ways in which it has been viewed by Pathologists.

A. Meadows, M.D. The Treatment of Fibrous Tumours of the Uterus.

J. G. Swayne, M.D. Treatment of Hæmorrhage arising from Retention of the Secundines after Abortion.

Thomas Underhill, M.D. The Treatment of certain Cases of Placenta Prævia and of *Post Partum* Hæmorrhage.

J. G. Davey, M.D. Jenner and his Teachings.

Dr. Merrifield, Ph.D. The Meteorology of Plymouth for the last six years.

Cornelius Fox, M.D. The Estimation of Atmospheric Ozone by means of Aspirators and Acids.

J. W. Eastwood, M.D. Alcohol in Health and Disease.

R. Elliot, M.D. Life-Insurance Offices and Medical Fees.

William Ogle, M.D. Medical Reform personal, not parliamentary.

V. Jagielski, M.D. Koumiss: a Dietetic Remedy.

T. Clifford Allbutt, M.D. The Lesions of Enteric Fever as the Occasional Cause of a Permanent Injury to Nutrition.

C. B. Nankivell, M.D. The Provision of Medical Attendance on Independent Poor by Provident Dispensaries.

Arthur Ransome, M.D. The Respiratory Movements in Health and Disease.

D. T. T. Maunsell, M.B. Poor-law Medical Relief.

J. F. Payne, M.D. The Nervous Origin of certain Cutaneous Affections.

H. J. Alford, M.B. Loose Cartilages removed from Knee-joints.

J. Ingleby Mackenzie, M.D. The Climate of Sidmouth, with Meteorological Observations, 1865-1870.

Charles Steele, F.R.C.S. Excision of the Scapula.

Rawdon Macnamara, M.D. The Mode of Curing Aneurism by Compression; illustrated by the exhibition of Instruments employed for that purpose in Ireland from the earliest date up to the present time.

- George Johnson, M.D. The Pathology and Treatment of Cholera.
 Henry Smith, F.R.C.S. Stricture of the Urethra, and its Treatment by Potassa Fusa.
 Christopher Heath, F.R.C.S. The Treatment of Stone in the Female.
 W. J. Square, F.R.C.S. Loose Cartilages, and the Removal by Subcutaneous Incision.
 William Square, M.R.C.S. The Influence of Nerves on the Repair of Fractures.
 S. M. Bradley, F.R.C.S. The Unity of the Syphilitic Virus.
 J. H. Aveling, M.D. Arsenic in Menorrhagia and Leucorrhœa.
 Robert Barnes, M.D. On so-called Emmenagogues, Abortifacients, and Oxytocics.
 Protheroe Smith, M.D. 1. Supplemental Mechanical Force during Parturition, regulated by a Dynamometer.—2. A Successful Method of Treating certain Cases of Dysmenorrhœa and Sterility.
 A. Wynn Williams, M.D. The Treatment of Cancer of the Neck of the Uterus and Allied Structures by the Injection and Application of Bromine.
 Wilson Fox, M.D. The Successful Treatment of Cases of Acute Rheumatism, with an excessively High Temperature, by means of Cold applied externally.
 Lawson Tait, F.R.C.S. 1. Obscure Effects of Tertiary Syphilis.—2. Diagnosis of Cancer of the Fundus of the Uterus.
 R. W. Crighton, M.D. The Value of the Sulphate of Iron as a Local Application in Phlegmasia Dolens.
 Henry Greenway, M.R.C.S. 1. The Value of Suspension in Surgery.—2. A New Mode of Hospital Construction.
 David Davies, M.R.C.S. 1. The Difficulties and Trials of a Health Officer.—2. The Training, Qualification, and Duties of Nuisance Officers.
 John Murray, M.D. (Inspector General). On Cholera.
 Jonathan Hutchinson, F.R.C.S. 1. Some New Applications of Felt for Splints.—2. Diseases of the Skin following Vaccination.
 Morell Mackenzie, M.D. Laryngeal Growths; the Comparative Advantages of their Removal by Laryngoscopic Treatment and Direct Incision into the Larynx.
 C. A. Gordon, M.D., C.B., Deputy Inspector-General. The Prussian Siege of Paris, in some of its Relations to Hygiene and Surgery.
 J. Hughlings Jackson, M.D. Tumour of the Middle Lobe of the Cerebellum.
 Robert Martin, M.D. Intemperance as a Predisposing Cause of Cholera.
 Benson Baker, M.R.C.S. Improvements in the Poor-Law Medical Service as a means of Economy in the Treatment of the Sick Poor.
 J. A. Bolton, M.D. The Active Treatment of Acute Rheumatism and Gout.
 J. Henry Bennet, M.D. Spain and its West Parts.
 E. Long Fox, M.D. Tuberculous Phthisis.
 William Hope, Esq., V.C. Sewage Irrigation considered in connection with Public Health.
 T. J. Dyke, F.R.C.S. On the Modes of dealing with Outbreaks of Pestilent Fevers, sanctioned by the Health Authorities of Merthyr Tydfil.
 William R. E. Smart, C.B., M.D., R.N. 1. Notes on the Institutions for the Relief of the Sick, Wounded, and Disabled of the Royal Navy.—2. On Injury of the Axillary Artery occurring in Artillery Practice.
 Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Sections in which the paper is to be read. All papers should be forwarded to one of the above named officers on or before the 1st of August.
 No paper must exceed *twenty* minutes in reading; and *all* subsequent speakers must not exceed *ten* minutes.
 All speeches at the General Meeting must not exceed *ten* minutes each.
 T. WATKIN WILLIAMS, F.R.C.S., General Secretary.
 13, Newhall Street, Birmingham, July 15th, 1871.

CUMBERLAND AND WESTMORLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the Cumberland and Westmorland Branch was held at the Bush Hotel, Carlisle, on Wednesday, July 12th, 1871. Dr. I'ANSON of Whitehaven occupied the Chair. Twenty-two members and visitors were present.

New Members.—Dr. MacBean (Annan) was elected a member of the Branch; and Dr. Thos. Sayer of Kirkby Stephen was elected a member of the Association and Branch.

Report of Council.—The Secretary then read the report of the Council as follows.

The Council of the Cumberland and Westmorland Branch of the British Medical Association, in submitting their third annual report, cordially congratulate the members on the prosperous condition of the Branch. At the present time, it numbers seventy members, showing an increase of one member over last year's list. During the past year, six new members have joined the Branch; two have died—Mr. J. B. Wilson, of Whitehaven, and Dr. Blades, of Shap; and three have left the district.

Since the last annual meeting, there have been two general meetings of the Branch—the autumnal meeting being held at Keswick, and the spring meeting at Kendal. As this was the first time that either of these places had been visited by the Branch, the Council were somewhat anxious as to the result, and were much gratified at the successful and agreeable character of these meetings. The meetings were well attended, papers of a high standard of merit were provided, and good discussions followed the reading of them.

Since the last annual meeting, little progress has been made in medical reform. The Bill introduced by the Government last year was withdrawn on account of the opposition offered by the British Medical Association—an opposition in which, it will be remembered, this Branch took an active part. The Bills introduced by private members during the present session were not well supported, and had little chance of success. The Government hope to undertake the charge of the subject next year, and some settlement of the question may be anticipated.

The prizes open to the profession for essays on professional subjects are few in number, and the honour of obtaining one is greatly coveted. The Council have a pride and pleasure in stating that during the past year two gold medals have been awarded to members of this Branch for essays on subjects in Therapeutics. Dr. Clouston having obtained the Fothergillian Medal of the Medical Society of London, and the adjudicators of the Hastings Medal of the British Medical Association have just decided in favour of Dr. J. M. Fothergill. The Council warmly congratulate these gentlemen on their well merited honours.

It is a matter of deep regret that great irregularity prevails in the payment of subscriptions, and that in consequence a large amount of arrears are due to the Association. The subject has been frequently under consideration at meetings of the Committee of Council, and a plan has been approved which the Council of this Branch recommend for adoption. Circulars will be sent out four times in each year intimating to those who are in arrear the amount of their subscriptions due, and it is hoped that immediate attention will be given to the request contained in the circular.

The Committee on Clubs and Benefit Societies, appointed two years ago, has never presented a report.

Treasurer's Statement.—The balance in hand from last year was £5:5:4; subscriptions since received amount to £6:2:6; total, £11:7:10. The expenditure has been £6:16:8, leaving at the present time a balance of £4:11:2.

On the motion of the PRESIDENT, seconded by Dr. HEAD, the report was unanimously adopted.

Votes of Thanks were then accorded to the retiring President, the Secretary, and other members of Council for their services; and the retiring President, Dr. I'Anson, was elected Vice-President.

Office-Bearers.—The following gentlemen were elected as office-bearers for ensuing year, viz.: *President-elect*, T. S. Clouston, M.D. (Carlisle). *Honorary Secretary and Treasurer*, Henry Barnes, M.D. (Carlisle). *Members of Council*: R. Tiffin, M.D. (Wigton); M. W. Taylor, M.D. (Penrith); W. Reeves, M.D. (Carlisle); T. F. I'Anson, M.D. (Whitehaven); W. T. Greaves, Esq. (Penrith); H. Dodgson, M.D. (Cockermouth). *Representatives of Branch on the General Council*: J. M. Fothergill, M.D.; R. Elliot, M.D.; T. S. Clouston, M.D.; and H. Barnes, M.D., *ex officio*.

President's Address.—The retiring President then vacated the Chair, and introduced the President for the year, R. Elliot, M.D., who delivered an inaugural address. Having alluded to the inauguration of the Branch at Carlisle in 1868, by its first President, Dr. Barnes, who genially and graphically contrasted the relative position of the medical profession to the public fifty years ago and now; and having referred to the following general meeting at Penrith, under the presidency of Dr. Taylor, who gave an admirable epitome of the History of Medicine; and to the meeting of last year at Whitehaven, when Dr. I'Anson delivered a valuable address on the principal discoveries and improvements in medicine and surgery during the two preceding years, especially on thermometry and anæsthetics—the Chairman proposed, on this the fourth meeting, to dwell on the aims of the British Medical Association, and on the great influence for good which the profession acquired by such

organisation, particularly in reference to what is termed State Medicine. The Parent Association numbers, he said, 28 per cent. of the profession in Great Britain. This Branch boasts of 63 per cent. of the practitioners in Cumberland and Westmorland, a higher figure than that of any other branch. By the Association's second rule, the object is stated to be twofold; viz., to promote medical art-science, and to maintain the honour and interests of the profession. Under the first of these, may, with pride, be recorded the fact that, this year the Fothergillian Medal has been gained by Dr. Clouston, the President-elect, and the Hastings Prize by Dr. J. M. Fothergill, a representative of this Branch at the forthcoming meeting at Plymouth. Dr. Clouston has published an admirable paper on Neurotics; Dr. Taylor has importantly added to our knowledge of the propagation of infectious disease; and Mr. W. L. Dickinson of Workington has published several cases of trichinosis successfully treated, being the first observed and recorded in Britain, although forty years have elapsed since the first discovery of the flesh-worm in the subjects of a London dissecting-room. The second object, however, is no less important; and it has been not less efficiently exemplified by the organisation of the Parent Association, as well as by that of this Branch. Isolation or seclusion is ruinous to good feeling, just as association is abundantly and lastingly promotive of it. Let the profession in small towns, in this respect, be compared with our brethren in large cities, and the transcendent importance of the Association in obliterating prejudice and establishing friendship becomes undeniable. To the majority, this feature is probably the more important of the two. It may truly be said that, "singly we fall, united we stand!" We can thus consolidate and utilise our influence wherever our case is demonstrably good, so as to influence the public and the legislature. In State Medicine, this is essential. Individuals, unsupported and ununited, are simply powerless in restraining those vilest forms of wickedness by which the public are victimised, and property, health, and life destroyed; all of which social evils it is the object of State Medicine to abate, if not to annihilate. Quackery, the adulteration of food and medicines, and the tacit but obstinate maintenance of agencies, destructive alike of morals and health and life, under the specious plea of "vested interests," are amongst the chief objects against which State Medicine determinedly and philanthropically directs her shafts; these shafts can only be shot from a bow of resistless power—of a power far beyond that of any individual in a free country like ours. A despot, mighty alike in intellect and in will and power, like the great Napoleon, is the rare or unique example of an individual equal to the stupendous effort. In a nation such as ours—"great, glorious, and free"—such feats, by any individual, are plainly impossible. The Gordian knot, however, may be cut by means of organisation, such as that presented by the British Medical Association. Great, then, is the promise of the Association, in reference to the beneficent administration of State Medicine; and greater is the responsibility of those members of our profession who refrain from joining and aiding in this truly great work. The prevention of evil is proverbially better, and in fact it is easier, than the cure. To the wise and the good, a word is enough. Of all professions appertaining merely to this life, it has been wisely and eloquently said by the great Roman orator Cicero, that "man never so nearly approaches the character of the divine, as when giving health to men." This is conspicuously true of our profession under all circumstances, but it is eminently and peculiarly so in our relation to State Medicine; with the lofty and disinterested object of mitigating, and even of extinguishing, those appalling epidemics which, at intervals, decimate a nation; and of removing from our midst, those constant causes of permanent degeneracy and premature decay and death which afflict mankind generally, but most noticeably so in the poverty-stricken districts of large cities. State Medicine is not of recent date. In the Mosaic dispensation it had the highest importance assigned to it. The ancient Romans cultivated it. We are annually more and more appreciating its vital importance. Our peculiar education adapts us for its cultivation, and we must prove ourselves equal to the emergency.

Papers.—I. MR. SINGLETON (Kendal) read a paper on the Treatment of Infantile Convulsions, and endeavoured to show how fallacious our treatment must be if convulsion be viewed as a disease, and not recognised as a mere symptom. Convulsions in children mostly had their source in causes "eccentric" or sympathetic of irritation elsewhere, and there were many symptoms to distinguish the convulsive state so dependent from convulsion due to central causes, the principal being the peculiar form of vomiting. The convulsion caused by the presence of undigested or improper aliment was by far the most frequent and most powerful, and was accompanied with profuse perspiration. The treatment of all forms of convulsions in infants must solely depend on the diagnosis as to the probable cause, ignoring the existing convulsion, save as a symptom merely. Infantile convulsions (due to causes eccentric), excepting teething (when large doses of conium, and not the

gum-lancet, should be employed), and convulsion where a vermifuge was indicated, were best treated by the administration of emetics; the most suitable emetic being ipecacuanha powder. And it was to be observed that ipecacuanha, when given as an emetic to young children, must be given in extremely large doses, as children tolerated the action of this drug relatively to a much greater extent than in adults. Convulsions occurring in tubercular meningitis he treated by counterirritation to the shaven scalp induced by croton oil; and he had observed that belladonna, of all sedatives, was the most reliable, through its power of diminishing the cerebral circulation.

2. DR. MACLAREN (Carlisle) read a paper on the Treatment of Small-Pox by the Local Exclusion of Light. He pointed out that the treatment of this disease by keeping the cases in darkness had been attended with good results in preventing fever primary and secondary, but that it had the disadvantages of making ventilation and cleanliness difficult, and, it was said, of rendering mortality high. It was next stated that, from the time of Rhazes until the present period, the applications which had acquired the credit of preventing pitting were such as excluded light or its actinic rays. As proof that light favoured pitting, the absence of cicatrices in recorded cases of intrauterine variola was alluded to. And in conclusion, the writer mentioned the favourable results in preventing secondary fever and pitting which had attended the use of a light-excluder composed of collodion or gutta-percha and India-rubber dissolved in chloroform, to both of which was added lamp-black; this being freely applied to the parts of the body exposed to light, and it was suggested that sun-light strained through a yellow medium to exclude chemical rays was deserving of trial.

Dinner.—After the discussions on these papers had ended, the dinner hour had arrived, and the meeting was unable to take into consideration the third paper on the list—one by Dr. M'Gregor of Penrith. Eighteen gentlemen sat down to dinner, the President, Dr. Elliot, occupying the Chair, and Dr. P'Anson the Vice-chair.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE nineteenth annual meeting of this Branch was held at the Castle Hotel, Windsor, on Friday, February 14th, at 3 P.M. The Chair was taken by the retiring President, T. HECKSTALL SMITH, Esq.

Report of Council.—Dr. STEWART, one of the Honorary Secretaries, read the following report.

In presenting this Report to the Metropolitan Counties Branch, at this its nineteenth annual meeting, your Council have to state that the numerical strength of the Branch remains nearly the same as it was last year. At the annual meeting in 1870, the number of members on the list was 368. Since that time, nine members have died, and thirteen have retired. Twenty new members have been added, making the total number at present 366.

The members who have died during the year have been: Mr. Lionel J. Beale; Mr. W. J. Clement, M.P. for Shrewsbury; Mr. John Dow; Mr. John Evans; Dr. William Griffith; Dr. John Hatton; Mr. Samuel Norway; Dr. John R. O'Bryen; and Dr. T. H. Tanner. Of these, Dr. John Hatton deserves to be held in grateful memory by the Association, of which he was long a highly meritorious officer, having for fourteen years diligently and efficiently performed the duties of Honorary Secretary to the Lancashire and Cheshire Branch.

Notwithstanding the apparently large number of members of the profession included in the Branch, there are still many members of the Association in the district who have not yet joined our ranks. Your Council would take the present opportunity of impressing on the members of the Branch the importance of individual exertion so as to induce their friends to join. The diffusion of circular letters for the purpose of disseminating a knowledge of the advantages of membership both of the Parent Association and of the Branch does a certain amount of good; but your Council cannot but agree thoroughly with the opinion of the Council of the Birmingham and Midland Counties Branch "that more success is likely to follow the personal representation by its members of the advantages to such professional friends as they can influence, who do not yet belong to the Association and the Branch."

Your Council have little to report on the subject of Medical Reform. The settlement of the question is still unfortunately a thing *optandum magis quàm sperandum*. At the last annual meeting, the Branch resolved that a petition should be presented to Parliament in favour of the Direct Representation of the Profession on the Medical Council, and of the restitution to the Bill then before Parliament of the clause which restricted the medical authorities from conferring their diplomas and licenses to practise independently of the central examining boards which it was proposed to form. The Bill, for reasons which have been

fully explained in the JOURNAL and elsewhere, was soon afterwards withdrawn. Nothing in regard to medical legislation has since occurred to call for action on the part of the Branch. Some of its members have seats in the Medical Reform Committee of the Association; and your Council are assured that these gentlemen will not fail to give warning at the proper time when it may become necessary for the Branch to act in its collective capacity.

In lending its aid to the Direct Representation Committee in its endeavours to secure the amendment of the Government Bill of last session, and so indirectly procuring the withdrawal of that, in many respects, useful measure, the Council feel that they and the members of the Branch who in large numbers signed the petitions of last year, have not incurred any responsibility which they need for a moment hesitate to accept. Those who opposed the Bill have been, and are, freely charged with having taken upon themselves a very serious responsibility in causing the postponement even for a single year of a measure which would have been an incalculable boon to the whole community. To this the ready and conclusive answer is, that the profession and the public have been deprived of this great boon since 1858, when the British Medical Association earnestly strove to confer it upon them, by the influence of those who now reproach us with a selfish and obstructive policy; and that, since these critics have been so long in finding out the virtues of the Association's original measure, and would have been content to do without it still longer, had not the Government compelled them to accept it, the Association is fully justified in preferring a brief additional delay to an imperfect measure which would require amendment or reconstruction a few years hereafter. That the Association many years ago earnestly maintained the very principles which are now held to be the only admissible basis of a satisfactory Medical Act, is surely the best of all practical arguments why the general body of the profession should be directly represented in the Medical Council. And to have consented to the enactment of the Government Bill, which perpetuated the old and faulty constitution of the Council, on the promise of a select committee to inquire into the propriety of granting that which we hold to be a *sine qua non*, would have been in the last degree inconsistent and suicidal.

There have been three ordinary meetings of the Branch during the spring months. The attention of the members and others who attended these meetings was directed on each occasion to questions full of interest and importance, both professional and social. The reading, by Mr. Fairlie Clarke, of a very able paper "On the Medical Aspects of Pauperism," drew together on March 3rd a large audience, and elicited a spirited discussion, in which Sir Charles Trevelyan, Mr. Corrance, M.P., Mr. W. H. Smith, M.P., Mr. Shaw Stewart, and Mr. Alsager Hay Hill took part. The direct result of this meeting was the formation, in connection with the Society for organising Charitable Relief in the Metropolis, of a medical Subcommittee which, in a series of meetings held from week to week, addressed itself to the task, which it has nearly accomplished, of drawing up a code of rules for the guidance of those who seek to establish provident dispensaries both in town and country districts. Dr. J. Ford Anderson, Mr. Fairlie Clarke, Dr. Hawksley, Dr. Heywood Smith, and Dr. Stewart are members of that Subcommittee. That this important social question, and the closely allied one of the remuneration of medical men for the vast amount of hitherto unrequited service rendered by them to the public, will now attract the attention which has too long been denied to them, your Council see no reason to doubt; and they feel that the Branch may fairly congratulate itself on having been so directly instrumental in giving so decided an impulse to a movement which, after having repeatedly gathered strength and languished again during the last thirty years, promises now to be crowned with success. Nor is this either the first or the second time within the last ten years—witness the successful struggle for securing the rights of the medical officers of the United Service, and the movement which ended in the appointment of the Royal Sanitary Commission—that this Branch has had the honour of bearing an early and conspicuous part in the assertion of principles which have, in the long run, triumphed over all opposition. On April 2nd, another large audience assembled to hear a highly instructive and seasonable paper from Dr. Edward Cator Seaton, "On some of the Lessons to be derived from the present Epidemic of Small-pox." That paper, published in the JOURNAL, has been extensively read, and has, your Council have reason to know, been received with gratitude throughout the country. The third ordinary meeting, having been unfortunately summoned on May 24th, and having thus to compete with the attractions of the great Epsom festival, was necessarily limited in numbers; and Dr. Stewart's paper "On Sanitary Organisation as viewed by the Joint Committee of the British Medical and Social Science Associations, the Royal Commission, and the Government," had not the effect which it was hoped it might have, of eliciting from a large concourse of

members of the Branch and of public men, a full expression of opinion in regard to the measures that have been proposed for adoption by the Imperial Parliament.

The Parliamentary Bills Committee is once more, your Council are happy to say, in active operation. Owing to some oversight of the central authority, the non-appointment till late in the spring of the General Committee enjoined by the meeting at Newcastle, rendered necessary the appointment by your Council of a provisional Committee early in the session, to look after those Bills which affected the interests of the medical profession. This Committee, either by itself, or in conjunction with the more recently appointed representatives of the other Branches, has been quietly but effectually carrying out the work committed to its care.

It has been represented by several members, that it would be desirable to make certain alterations in the constitution of the executive body of the Branch, with the view of increasing its efficiency. Your Council have taken the matter into careful consideration at several meetings, and have agreed to recommend for the approval of the Branch alterations in the laws which will, if carried, limit the tenure of office of ordinary members to three years, and will increase their number from twelve to eighteen. Your Council are also of opinion that a new law should be introduced, to give the Branch the power—if such a course should at any time be necessary—of expelling a member proved guilty of professional impropriety or misconduct.

Mr. LORD moved, and Dr. GEORGE WEBSTER seconded—"That the Report of Council now read be received and adopted." Some discussion regarding the proposed alteration in the laws followed, in the course of which it was explained that a special general meeting for their consideration would be called in October. The resolution was adopted.

Treasurer's Report.—Mr. DUNN, Treasurer of the Branch, presented his report. The income of the Branch for the year amounted to £61 : 11 : 9, and the expenditure to £44 : 13 : 9, leaving a balance in hand of £16 : 18 : 0.

Dr. WYNN WILLIAMS proposed "That the Treasurer's report be received, adopted, and entered on the Minutes." Dr. FELCE, in seconding the resolution, thanked the Branch for its donation of five guineas to the Medical Benevolent Fund, which formed one of the items of expenditure for the year. The resolution was carried.

Election of Officers and Council.—The ballot having been taken, the following gentlemen were declared elected the officers and Council of the Branch for the ensuing year. *President*, J. Russell Reynolds, M.D., F.R.S. *President-elect*, Sir William Fergusson, Bart., F.R.S. *Vice-Presidents*: George Johnson, M.D.; T. Heckstall Smith, Esq. *Treasurer*, Robert Dunn, Esq. *Secretaries*: A. P. Stewart, M.D.; Alexander Henry, M.D. *Ordinary Members of Council*: Benson Baker, Esq.; William Bartlett, Esq.; W. C. Begley, M.D.; Samuel Day-Goss, M.D.; J. E. Erichsen, Esq.; G. A. Ibbetson, Esq.; Henry Lee, Esq.; Richard Quain, M.D., F.R.S.; William F. Ramsay, M.D.; C. H. Rogers-Harrison, Esq.; James D. Rendle, M.D.; Joseph Seaton, M.D.

Mr. HECKSTALL SMITH, in resigning the chair as President, said that his duties during the year had not been onerous, but the performance of them had afforded him much pleasure and gratification. He had been highly gratified with the position in which he had been placed by the Branch. All the important points alluded to in the Report of Council affected the Association as well as the Branch. The general interest centred in medical reform. He was one of those who thought that it was best to defer the settlement of the question until a complete measure could be obtained.

Dr. RUSSELL REYNOLDS, on taking the chair, thanked the members for the honour conferred on him, and delivered an address.

Vote of Thanks.—Mr. W. RIVINGTON moved, Dr. W. DICKSON seconded, and it was unanimously resolved—"That the cordial thanks of the meeting be given to the President for his able address, and that he be requested to allow its publication in the BRITISH MEDICAL JOURNAL."

Dr. STEWART moved, and it was carried by acclamation—"That the cordial thanks of the Branch are due to the retiring President, Thomas Heckstall Smith, Esq., for his able and courteous conduct in the chair, and for the warm interest which he has always manifested in the prosperity of the Branch."

Representatives in the General Council.—The following members were chosen to represent the Branch in the General Council of the Association: J. H. Aveling, M.D.; S. Day-Goss, M.D.; Stamford Felce, M.R.C.P.Ed.; C. H. Rogers-Harrison, Esq.; Ernest Hart, Esq.; C. Heath, Esq.; A. Henry, M.D.; Berkeley Hill, Esq.; G. Johnson, M.D.; Henry Lee, Esq.; C. F. J. Lord, Esq.; W. Martin, Esq.; J.

Murray, M.D.; R. Quain, M.D., F.R.S.; G. P. Rugg, M.D.; J. Seaton, M.D.; E. J. Tilt, M.D.; A. W. Williams, M.D.

Dinner.—The members and their friends, to the number of forty-six, afterwards dined together at the hotel; the President, Dr. Russell Reynolds, occupying the chair.

BATH AND BRISTOL ANNUAL MEETING.

THE annual meeting of this Branch was held at the Bristol Museum and Library on Thursday, July 13th, at 4.45 P.M. C. H. COLLINS, Esq., took the Chair in the absence of the President, CHARLES BLEECK, Esq. There were present 43 members.

Mr. COLLINS said that he was sorry to have to inform the meeting that Mr. Bleeck was unable to attend, in consequence of an accident that he had met with some days before. Mr. Collins then resigned the Chair to CROSBY LEONARD, Esq.

President's Address.—After thanking the members of the Branch for the honour conferred on him in his appointment, the President referred to the great numerical increase during the last few years in the Association, and urged upon the members present to endeavour to add to the strength of the Association and its Branches by pointing out and advocating the advantages, both professional and social, which Branch membership afforded. Passing on to short obituary notices of deceased members of the Branch, including four ex-Presidents, he referred at considerable length to the lamented death of Dr. Symonds. Amongst the subjects treated of in the address were: The Sanitary State of Bristol, indicating some of the easily preventable modes of propagation of infectious diseases; Medicine as a Scientific Profession; The Aims and Advantages of Public or State Medicine; Modern Therapeutics; and the Registration of Diseases.

Dr. DAVEY proposed a vote of thanks to Mr. Crosby Leonard for his very able address, which was seconded by Mr. COLLINS and carried by acclamation.

New Member.—Mr. E. Long of Thornbury was unanimously elected a member of the Branch and of the Association.

Report of Council.—Mr. BOARD, the Bristol Secretary, read the following report.

Your Council has much pleasure in being able to lay before you a satisfactory report of the past session. Although the Branch has unavoidably lost several members, its numbers have increased from 176 to 179 since the last annual meeting. Thus fourteen gentlemen have been elected members of the Branch, while five have left the neighbourhood, two have resigned membership, and four have been removed by death.

It is our painful duty to record the deaths of Dr. Symonds, Dr. Irvine Smith of Bath, Mr. Hore, and Mr. Lang. The loss of Dr. Symonds, an ex-President of the Association, is especially to be deplored, not only by the Association, but also by the whole medical profession. By his death the profession and the public lose a physician eminent for his perfect knowledge of his profession, and for his scientific and literary attainments. In him we lose a kind and courteous friend and neighbour, trustworthy in every sense, a jealous guardian of the honour of our profession—one ever eager to stretch out a helping hand to a brother in distress, and anxious, even in failing health, to devote himself unselfishly to the good of the profession. He was the author of many valuable papers read before the Branch; and in 1863, when the General Meeting of the Association was held in Bristol, he discharged the duties of President in a most able manner.

The Bristol Royal Infirmary and the Bristol General Hospital have each lost a former member of their staff in the persons of Mr. Hore and Mr. Lang. We may say for each that he carried on his professional career in the strictest and most honourable manner.

Twenty-one papers have been read during the session, and several have given rise to much discussion.

Mr. Church having retired from the Council of the Bath Branch, Mr. Waugh was elected to fill the vacancy, subject to approval at the annual meeting.

At the last meeting of the Branch, Dr. Davey was elected representative member for this Branch on the Parliamentary Committee of the Association.

The accounts of the Branch are in a most satisfactory condition, there being a balance in hand of £19:5:1. Under these circumstances your Council recommends that the donation of £3:3 to the Medical Benevolent Fund, made last year, be repeated. An appeal on behalf of this valuable charity has been lately circulated through the counties of Somerset, Wiltshire, and Gloucester; and your Council has much satisfaction in stating that many new subscriptions have been received, as well as several donations from individuals who are not members of the medical profession.

The scrutineers report that the following gentlemen have been elected members of the Local Councils; For Bath: Messrs. Lawrence, Waugh, Skeate, and J. K. Spender, M.D.; For Bristol: Messrs. Prichard, W. M. Clarke, C. H. Collins, E. L. Fox, M.D., and W. Budd, M.D.

Mr. R. M. BERNARD proposed, and Mr. R. W. TIBBITS seconded, "That the Report now read be adopted."

President-elect.—Mr. R. N. STONE proposed, and Mr. R. W. COE seconded, "That T. G. Stockwell, Esq., be President-elect."

This was carried by acclamation.

Vote of Thanks.—It was proposed by Mr. P. CHADWICK, and seconded by Mr. S. H. SWAYNE, "That the best thanks of the Branch are due, and are cordially tendered, to Mr. Bleeck, the retiring President, and to the Council of the Branch, for their able conduct of the business of the Branch during the past year."

Dr. HENSLEY proposed and Dr. BRITTAN seconded, and it was unanimously resolved, "That the best thanks of the Branch be tendered to the Secretaries, Messrs. Fowler and Board, for their services as secretaries, and that they be requested to continue in office."

Representatives in the General Council.—The following gentlemen were appointed Representatives of the Branch on the General Council of the Association. F. Brittan, M.D.; E. L. Fox, M.D.; C. Harper, Esq.; C. Leonard, Esq.; F. Mason, Esq.; E. Skeate, Esq.; C. Steele, Esq.; J. G. Swayne, M.D.

The proceedings closed with a vote of thanks to the Committee of the Bristol Museum and Library for the use of the Reading-Room.

YORKSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Infirmary, Bradford, on July 26th.

Report.—The President, Mr. MEADE, after making some remarks on the present state of medicine, called upon the Secretary to read the report, which drew attention to the fact that this was the first year that the annual meeting had been held at other places than York, Leeds, and Sheffield; and it was thought that by the adoption of this plan the usefulness of the Association would be retained and its advantages become more generally known. After the relation of work done during the year in the Branch, and some remarks on the proposed alteration of the Rules at Plymouth, the report went on to state that the Council hoped that members would aid the gratuitous labours of the Secretary in relation to the subscriptions by the payment of them in January of each year. The neglect of this practice materially affected the financial position, and increased the difficulty of managing the accounts, of the Association. After the discussion of some Branch matters of business, it was stated that the numbers of the members in the district amounted to 333, of whom 144 belonged to the Branch. Fourteen members have been added this year, and the vacancies occasioned by resignations and deaths have been eight.

Dr. CLIFFORD ALLBUTT proposed, and Dr. EDDISON seconded, the adoption of the report, which was unanimously agreed to.

President.—It was proposed by Mr. HUSBAND, and seconded by Dr. BOMAR—"That the annual meeting for 1872 be held at Leeds; and that C. G. Wheelhouse, Esq., be elected President for that year."

Branch Council.—On the motion of Dr. HEATON, seconded by Mr. FOSTER, the following gentlemen were elected:—B. Dodsworth, Esq., J. H. Gibson, M.D., W. D. Husband, Esq., W. Matterson, M.D., S. W. North, Esq., G. Shann, M.D.—of York; C. Chadwick, M.D., J. D. Heaton, M.D., S. Hey, Esq., T. Scattergood, Esq., T. P. Teale, Esq., C. G. Wheelhouse, Esq.—of Leeds; J. Benson, Esq., W. Favell, Esq., J. C. Hall, M.D., J. Haxworth, Esq.—of Sheffield; R. H. Meade, Esq., of Bradford; J. Ness, Esq., of Helmsley.

Representatives in the General Council.—The following were elected: C. Chadwick, M.D.; R. T. E. Cooke, L.R.C.P.Ed.; J. C. Hall, M.D.; J. D. Heaton, M.D.; S. Hey, Esq.; S. Holdsworth, M.D.; W. D. Husband, Esq.; W. Matterson, M.D.; R. H. Meade, Esq.; G. Shann, M.D.; T. P. Teale, Esq.; C. G. Wheelhouse, Esq.; J. Hodson Wright, Esq.

Secretary.—On the motion of Mr. TEALE, seconded by Dr. NICOL, Dr. Procter was re-elected Secretary.

Cases and Papers.—1. Dr. CLIFFORD ALLBUTT made remarks, which were illustrated by cases, on some forms of Paralysis.

2. Mr. TEALE read a paper on Mucous Fistula in Ano.

3. Mr. JESSOP exhibited two patients on whom he had performed Adams's operation for Division of the Neck of the Femur.

4. Mr. HAXWORTH communicated a case of Gangrene implicating the Lower Jaw.

Dinner.—The members and their friends afterwards dined at the Victoria Hotel.

CORRESPONDENCE.

THE BRITISH MEDICAL ASSOCIATION.

SIR,—A letter appears in the JOURNAL of this morning, from Mr. Hodgson, of Brighton, of so extraordinary a character, that I cannot allow it to pass altogether unnoticed. I shall not attempt to make any reply to it, but ask you to permit me to request the members of the British Medical Association to withhold their judgment upon the various questions therein raised, or, I may say, charges made by implication against the General Secretary, until the annual meeting.

It is an unheard of proceeding for a member of a Committee to publish any part of the proceedings of that Committee without consulting his colleagues, or at least the Chairman of the Committee. The *animus* of the writer is so unmistakeable, that I feel silence on my part will be wisdom. I am, etc., T. WATKIN WILLIAMS, F.R.C.S.,
General Secretary, British Medical Association.

13, Newhall Street, Birmingham, July 29th, 1871.

ALTERATION OF LAWS.

SIR,—Among the alterations of laws to be considered at Plymouth, I observe that there are some which relate to the Council and Committee of Council; and I wish to call the attention of members—especially those from the metropolis and from Ireland and Scotland, and those belonging to the public services—to the following points bearing on the question.

The Council is now exclusively elected by the Branches, each Branch returning one representative for each twenty members on its roll, making a total of about 120; and so long as all, or nearly all, the associates were affiliated to Branches, this arrangement left nothing to be desired. But this is now far from being the case: a large proportion of members, amounting to about two-fifths, are unconnected with any Branch, and therefore unrepresented on the Council. In the lists published last year I find that the members affiliated to Branches numbered 2520, while the total number of associates (exclusive of foreign and colonial) was 4178. This discrepancy chiefly affects London, Ireland, and Scotland, and the members attached to the public services. Middlesex has 614 associates, while the Metropolitan Counties Branch has only 360 members. Scotland, Ireland, and the public services, supply 353 associates, but (having no Branches) do not send a single representative to the Council. The effect of this is permanently to exclude a large number of our most eminent associates from any share in the management of the Association; and the weight and authority of their names is in consequence, to a great extent, lost to the Society.

To illustrate the working of the present arrangement, I may mention a few well-known names who have been members for years, and who have taken a prominent part in the proceedings of our annual meetings, but who have not now, and, I think, never have had, a seat on the Council: Sir William Jenner, Dr. Gull, Sir W. Fergusson, Dr. Sharpey, Dr. Walshe, Mr. Spencer Wells, Sir H. Thompson, Dr. Sieveking, Mr. Bowman, Dr. Hughes Bennett, Professor Lister, Dr. Gairdner, Dr. Christison, Professor Haughton, Dr. Beattie, etc. On looking over the list of members, I find that almost every known name in the profession in the three kingdoms is enrolled among them, and yet only a thin sprinkling find their way into the Council. I can scarcely think that this state of things is the result of deliberate purpose, but that it arises from an overlooked defect in the method of electing the Council; at any rate, it will scarcely be denied that the Association suffers both in influence and in usefulness from the circumstance.

One of the alterations to be proposed by the President of the Council will slightly tend to diminish this anomaly; namely, that in which it is proposed to give seats on the Council for life to the Vice-Presidents of the Association. But this remedy only touches the fringe of the anomaly; and I would suggest that all the proposals relating to the Council be for the present postponed, and that a subcommittee be appointed at the Plymouth meeting to consider and report generally on the election and duties of the Council and Committee of Council, with a view of suggesting to the annual meeting of next year such a change in the laws as will remedy their defects. It would be easy to suggest means whereby the most glaring of them would be corrected. It might, for instance, be enacted that the readers of addresses, the presidents, vice-presidents, and secretaries of sections, shall have seats on the Council *ex officio*. Power might also be given to the Council to add a certain quota of names to its own numbers, either by its own authority or with the sanction of the general meeting. But I will not discuss these suggestions any further. If an opportunity be given me, I shall be ready to propose

the appointment of a subcommittee to consider the matter, as an amendment to the proposal of the President of the Council on Rule 7.

There are two other alterations of quite minor importance that clearly require to be made in Rule 8, which relates to the duties of the Council; namely, in Sections 5 and 6, which enact that the Council shall nominate the readers of addresses at the ensuing annual meeting, and that it shall determine the order of business at the general meetings. Both these functions are evidently more appropriate to the Committee of Council, and are, I believe, now so performed, the law to the contrary notwithstanding.

I am, etc.,

Manchester, July 29th, 1871.

WM. ROBERTS, M.D.

THE MEDICAL DEPARTMENTS OF THE BRITISH AND AMERICAN NAVIES.

THE following correspondence, which has been handed to us for publication, will be read with interest.

Navy Department, Bureau of Medicine and Surgery,
June 15th, 1871.

DEAR SIR,—I have been culpably negligent in not complying with the wishes of the United States Naval Medical Corps, earnestly urging me to make, on their part and my own, grateful acknowledgment to our brethren of Great Britain, and to you, sir, in particular, for the cordial, earnest, and effective support given in our struggle to secure in the Naval Service the just recognition due to our honourable profession. My only excuse for the delay of an agreeable duty has been the hope of seeing, as the confusion of the contest disappeared, clearly where we are. We know that in the legal recognition of true principles we have gained much, not only for our own good, but also for that of the service generally. We flatter ourselves that there is an increasing tendency to fraternity, and to give a just practical expression to the principles which have been established. This is the natural result of eliminating false and inharmonious principles from any organisation. If we have further difficulty, it will be because some fragments of wrong are yet left in the machinery.

Notwithstanding the very clear and definite testimony of the Hon. Captain W. J. Ward, R.N., Attaché of the British Legation, laid before the Senate Naval Committee, we failed, by some misconception, to reach the perfection of the Royal Navy as regards the first lieutenant or second executive officer; and in this failure lies the source of disturbance, unless it be met with that discretion upon all sides which cannot always be expected.

Your support gave us encouragement, and the assurance that we were not advocating a narrow and local interest, but one which interested the self-respect of all scientific and professional men labouring in military service.

Your sympathy was not the outspoken of professional brotherhood only, but of that unconquerable instinct common to both our peoples, everywhere resisting to the end, and at all sacrifices, wrong and aggression, asserting our kinship of race, and aiding the progress of civilisation. I have every hope and confidence that in all such labours of progress we will be found working, as in the present cause, with all the earnestness and power of fraternal union.

Repeating the thanks of the United States Naval Medical Corps to yourself, and to all our brethren of Great Britain who gave us their friendly aid,

I am, Sir, with great respect, your very truly,
WM. M. WOOD, Surgeon-General U.S. Navy.

Dr. Fred. J. Brown, Rochester, England.

Rochester, England, July 17th, 1871.

DEAR SIR,—It is with much satisfaction that I reply to your letter dated June 15th, acknowledging the sympathy and support afforded by officers of the British Navy and myself to our brethren in the United States Navy in their struggle for the rights of the medical profession. I am authorised by my brethren to accept these gracious acknowledgments, and to express through you, to the medical staff of the United States Navy, our hope that the profession may soon attain to its rightful status in the sea-service of the Great Republic.

I have the honour to be, dear Sir, yours truly,

FREDERICK JAMES BROWN.

To Dr. Wm. M. Wood, Surgeon-General U.S. Navy, Washington.

BOARDING-OUT OF PAUPER CHILDREN.—Thirty-one Committees have been formed, and Secretaries appointed, for providing homes with foster parents for orphan or deserted pauper children beyond the limits of the unions to which they are chargeable, under the provisions of the General Order of the Poor-law Commissioners, dated November 25th, 1870.

OBITUARY.

CHARLES NEILSON, M.D., KILLALA, IRELAND.

DR. NEILSON died on July 15th, aged 74. He was a native of County Down, and received his education at the seminary of his grandfather, the Rev. Moses Neilson, D.D., Redemon. He early manifested a talent for languages, having been familiar with the Greek Grammar at the age of seven years. He had also a similar aptitude for medical science; and, when only twelve years old, he was able to amputate a limb in the Dundalk Hospital, where he was initiated in surgery under the late Dr. Noble. He studied in Dublin, and in 1824 took out his diploma in the Royal College of Surgeons. He was elected a Fellow of the College in 1844. He began as a practitioner in Killala, and, on the establishment of the Poor-law system in Ireland, became the medical dispensary officer of the Killala Union. During the lengthened period of forty-six years' practice, Dr. Neilson was most successful in each department of his profession, having won the confidence of all classes by his skilful treatment of disease; while his urbanity of manner, combined with a genial and liberal disposition, endeared him to a large circle in the community, who now mourn his removal. In the years 1832 and 1849, when cholera ravaged the district, he was most active and successful in his treatment of that terrible epidemic. He always manifested literary and scientific taste of a high order, and kept up an extensive reading in medical, theological, and modern literature. For several months past he suffered severely from acute disease of the heart, which terminated in his death.

JAMES HESTER, M.D.

DR. JAMES HESTER, who died at Wangaratta in Australia on May 1st, was the son of Mr. James Torry Hester, formerly surgeon to the Radcliffe Infirmary, Oxford. His early professional life was passed under the guidance of his father at the Infirmary; after which he was sent to St. Bartholomew's Hospital, where he gained and retained the esteem of the staff and many of his fellow-pupils. Having completed his education and passed his examination, he studied for some months in Dublin, residing at the Rotunda; and subsequently passed six months attending lectures and practice in Paris. On his return, finding his health precarious, he resolved to go abroad, and took charge of a ship to Australia. Having returned home, he for a short time joined his father in Oxford; but, his health again giving way, he went to Buenos Ayres. Not liking the place, he returned to England, and obtained an appointment in the Peninsular and Oriental service. He had a very severe attack of dysentery, and relinquished this appointment in about two years. He returned to England, and went to India, where he obtained a valuable medical appointment; this he was induced to leave in consequence of suffering very severely from jungle-fever. He then settled at Albany, Australia, where he was very successful; he returned, however, to England about three years ago, and, after spending a short time in this country, went to Switzerland, where he obtained the degree of Doctor in Medicine and Surgery—being, it is believed, the first Englishman who succeeded in doing so. In 1870, he again went to Australia, and settled at Wangaratta, where he made many friends, and was succeeding admirably in his profession, when he died, apparently of some intestinal obstruction terminating in rupture of the bowel. In his character, he evinced the greatest amiability. Wherever he went, he made friends; and he was esteemed by all who knew him.

HERBERT CHALMERS MILES, L.R.C.P.ED.

RECENT intelligence from India brought to his family the painful intelligence of the death of Dr. Herbert Chalmers Miles, Surgeon Royal Artillery, aged 38. He was the only surviving son of John Miles, M.D., of Eastbourne, late of the Charterhouse. The deceased was educated at the Charterhouse School; and, after receiving his professional education at St. Bartholomew's Hospital, entered the army in 1854, and has since been in much active service. He was engaged during the Crimean war and during the Indian mutiny, receiving a gun-shot wound at the siege of Neemuch, whilst under fire. He had the honour of being presented with three medals. After returning to England for some months, he was ordered to Nova Scotia, where he passed nearly two years. In December 1867, he was again ordered to India, where his short career terminated at Colaba, Bombay, on June 16th, 1871, after twelve days of severe illness. He was buried with military honours at Sewree Cemetery, on June 17th. His funeral was attended by the Royal Artillery and many officers of the 49th and 19th Regiments, besides many friends.

MEDICAL NEWS.

VACCINATION UNDER CONTRACT.

THE annexed revised Instructions to Vaccinators under Contract have just been issued by order of the Lords of Her Majesty's Council.

1. Except so far as any immediate danger of small-pox may require, vaccinate only subjects who are in good health. As regards infants, ascertain that there is not any febrile state, nor any irritation of the bowels, nor any unhealthy state of skin; especially no chafing or eczema behind the ears, or in the groin, or elsewhere in folds of skin. Do not, except of necessity, vaccinate in cases where there has been recent exposure to the infection of measles or scarlatina, nor where erysipelas is prevailing in or about the place of residence.

2. In all ordinary cases of primary vaccination, if you vaccinate by separate punctures, make such punctures as will produce at least four separate good-sized vesicles, not less than half an inch from one another; or, if you vaccinate otherwise than by separate punctures, take care to produce local effects equal to those just mentioned.

3. Direct care to be taken for keeping the vesicles uninjured during the progress, and for avoiding afterwards the premature removal of the crusts.

4. Enter all cases in your register on the day when you vaccinate them, and with all particulars required in the register up to column 9 inclusive. Enter the results on the day of inspection. Never enter any results which have not been inspected by yourself, or your legally qualified deputy. In cases of primary vaccination, register as "successful" only those cases in which the normal vaccine vesicle has been produced; in cases of re-vaccination, register as "successful" only those cases in which either vesicles, normal or modified, or papules surrounded by areolæ, have resulted. When the vaccination of an unsuccessful case is repeated, it should be entered as a fresh case in the register.

5. Endeavour to maintain in your district such a succession of cases as will enable you uniformly to vaccinate with liquid lymph directly from arm to arm; and do not, under ordinary circumstances, adopt any other method of vaccinating. To provide against emergencies, always have in reserve some stored lymph;—either *dry*, as on thickly-charged ivory points, constantly well protected from damp; or *liquid*, according to the method of Dr. Husband of Edinburgh, in fine, short, uniformly capillary (not bulbed) tubes, hermetically sealed at both extremities. Lymph, successfully preserved by either of these methods, may be used without definite restriction as to time; but with all stored lymph caution is necessary, lest in time it have become inert, or otherwise unfit for use. If, in order to vaccinate with recent liquid lymph, you convey it from case to case otherwise than in hermetically-sealed capillary tubes, do not ever let more than eight hours intervene before it is used.

6. Consider yourself strictly responsible for the quality of whatever lymph you use or furnish for vaccination. Never either use or furnish lymph which has in it any, even the slightest, admixture of blood. In storing lymph, be careful to keep separate the charges obtained from different subjects, and to affix to each set of charges the name, or the number in your register, of the subject from whom the lymph was derived. Keep such note of all supplies of lymph which you use or furnish, as will always enable you, in any case of complaint, to identify the origin of the lymph.

7. Never take lymph from cases of re-vaccination. Take lymph only from subjects who are in good health, and, as far as you can ascertain, of healthy parentage; preferring children whose families are known to you, and who have elder brothers or sisters of undoubted healthiness. Always carefully examine the subject as to any existing skin-disease, and especially as to any signs of hereditary syphilis. Take lymph only from well-characterised, uninjured vesicles. Take it (as may be done in all regular cases, on the day week after vaccination) at the stage when the vesicles are fully-formed and plump, but when there is no perceptible commencement of areola. Open the vesicles with scrupulous care to avoid drawing blood. Take no lymph which, as it issues from the vesicle, is not perfectly clear and transparent, or is at all thin and watery. From such a vesicle as vaccination by puncture commonly produces, do not, under ordinary circumstances, take more lymph than will suffice for the immediate vaccination of five subjects, or for the charging of seven ivory points, or for the filling of three capillary tubes; and from larger or smaller vesicles take only in like proportion to their size. Never squeeze or drain any vesicle. Be careful never to transfer blood from the subject you vaccinate to the subject from whom you take lymph.

8. Scrupulously observe in your inspections every sign which tests the efficiency and purity of your lymph. Note any case wherein the

vaccine vesicle is unduly hastened or otherwise irregular in its development, or where any undue local irritation arises; and if similar results ensue in other cases vaccinated with the same lymph, desist at once from employing it. Consider that your lymph ought to be changed, if your cases, at the usual time of inspection on the day week after vaccination, have not, as a rule, their vesicles entirely free from areolæ.

9. Keep in good condition the lancets or other instruments which you use for vaccinating, and do not use them for other surgical operations. When you vaccinate, have water and a napkin at your side, with which invariably to cleanse your instrument after one operation before proceeding to another.

N.B.—Supplies of lymph are furnished to medical practitioners on personal application at 3, Parliament Street, London, S.W., between the hours of 12 and 2; or by letter (unstamped) addressed to the Medical Officer of the Privy Council, 3, Parliament Street, London, S.W. (National Vaccine Establishment.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on July 27th.

Allen, Marcus Henry, Brighton (St. Bartholomew's)
Aylen, Thomas Vaughan, Southsea, Hants (St. Bartholomew's)
Barrow, Henry John Walter, Woolwich (Guy's)
Brookfield, John Storrs, Halifax, Nova Scotia (Edinburgh School)
Cartwright, John Peplow, Oswestry, Shropshire (St. Bartholomew's)
Davies, David Arthur, Swansea (University College)
Elkington, Ernest Alfred, Birmingham (Birmingham School)
Hadley, Clement, Birmingham (Birmingham School)
Hazel, William Francis, Oakley Square, N.W. (King's College)
Hill, Charles Hamor, Teddington (St. Bartholomew's)
Latimer, Henry Arthur, Plymouth (Guy's)
McDonald, Michael Sweeny, Glasgow (Hull School)
Marley, William Lane, Padstow, Cornwall (Middlesex)
Mayne, Thomas, Stonehouse, Devon (University College)
Meredith, William Appleton, Wimpole Street (University College)
Monks, Frederick Aubin, Hoxton (Guy's)
Morgan, Edward Rice, Swansea (King's College)
Payne, George Speke, Hartfield, Sussex (St. Bartholomew's)
Phillips, George Arthur, Whitwell, Herts (St. Bartholomew's)
Rees, Albert Barnes, Swansea (St. Bartholomew's)
Saunders, Arthur Rich, Haverfordwest (University College)
Slack, George Frederick, Montreal (Charing Cross)
Thrupp, James Godfrey, Marylebone Road (St. George's)

Five candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their hospital studies for six months.

Admitted members on July 28th.

Adcock, Hugh, Hunstanton (Guy's)
Benham, William Thomas, Bristol (Bristol School)
Bland, William Charles, Notting Hill (St. Bartholomew's)
Bodman, Francis Henry, Devizes (St. Bartholomew's)
Chambers, John Louis, Hackney Road (London)
Clark, Henry Edward, Glasgow (Glasgow School)
Coleman, William Franklin, Toronto (Canadian School)
Gibson, Charles Henry, Dublin (Edinburgh School)
Grayson, Francis Dorrell, Henley-on-Thames (Guy's)
Hincheliff, Edwin, Victoria, Australia (Edinburgh School)
King, William Louis, Great Malvern (University College)
Lucas, Thomas Pennington, Leominster (Westminster)
Noad, Henry Carden, Hereford Road, W. (St. George's)
Ransom, Frederick Parlett Fisher, Elmham, Norfolk (King's College)
Robertson, Hugh, Toronto (St. Thomas's)
Warren, George Milton, Toronto (St. Thomas's)
Watson, Walter George, Talbot Road, W. (St. Mary's)
Williams, Richard, Farnham, Surrey (Glasgow School)

Five candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their hospital studies for six months.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentleman passed his first professional examinations during the July sittings of the examiners.

Ritchie, Thomas George Gordon, Prestonpans

The following gentlemen passed their final examinations, and were admitted Licentiates of the College.

| | |
|-------------------------------------|------------------------------------|
| Ferguson, Daniel, Glasgow | Parry, Lloyd Davenport, Argyle |
| Gibson, George, Dublin | Sanderson, T. Drummond, Edinburgh |
| Lombe, George, St. George, co. Down | Scott, William Gifford, India |
| Mahony, Philip, India | Strathy, F. R. Lee, London, Canada |
| Moore, Samuel William, London | Trimble, James, Enniskillen |

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examinations during the July sittings of the examiners.

| | |
|-------------------------------------|-------------------------------------|
| Arnold, Howard, Antrim | Goodenough, Wm. Hessman, Carlisle |
| Baird, James, Alloa | Jackson, Richard, Lancaster |
| Chambers, Theodore Stewart, Jamaica | O'Hanlon, W. Palliser, Bandon, Cork |
| Flamstead, William, Bengal | Steedman, D. M'Kenzie, Cape Town |

The following gentlemen passed their final examinations, and were admitted L.R.C.P. Edinburgh and L.R.C.S. Edinburgh.

| | |
|------------------------------------|-------------------------------------|
| Anderson, William, Glasgow | Oliver, William, Coleraine |
| Bonnar, Thomas Walker, Dunfermline | Pentland, Henry T. de M., Quebec |
| Clarke, Arnold, Cavan | Pickering, Thomas Fenna, Cheshire |
| Hindle, James, Lancaster | Renton, William, Knaresborough |
| Jackson, Alfred, Yorkshire | Rutherford, R. Acheson, co. Leitrim |
| Kane, John, Adelaide | Stafford, John Francis, Wexford |
| Keys, Robert Atchison, Strabane | Stewart, George James, Craignish |
| Leadman, Alexander D. H., Bradford | Todd, James John, Rathfriland |
| M'Kay, John Hector, Nova Scotia | Wallace, Samuel Lane, Londonderry |
| Mackie, John, Roxburghshire | Young, William Edward, Belfast |
| Nixon, Thomas, Lincolnshire | |

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, July 27th, 1871.

Britten, Frederic George Morris, Wansford, Northamptonshire
Clarke, John Clelland, Coleraine, Ireland
Hartridge, Gustavus, Yalding, Kent
Norman, George, Stockwell Park Road, Brixton

The following gentlemen also on the same day passed their first professional examination.

Birch, Robert, King's College
Groves, Matthias, St. Bartholomew's Hospital
Langley, Frank, Guy's Hospital
Maclean, Allan, St. Thomas's Hospital
Oates, James Pimlott, General Hospital, Birmingham
Strugnell, F. W., St. Bartholomew's Hospital
Vennings, Edmund, University College
Waylen, George S. A., St. Bartholomew's Hospital

APOTHECARIES' HALL OF IRELAND.—The following gentlemen, having passed their professional examinations, obtained the licence to practise on July 21st.

Barber, Alexander, Coleraine
Mason, William, Dublin
Palmer, Joseph M., Armagh
Rice, Thomas David, Tralee

MEDICAL VACANCIES.

The following vacancies are announced:—

BATTERSEA, Parish of—Two Medical Officers of Health.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon.
BRIXWORTH UNION, Northamptonshire—Medical Officer for District No. 2.
DALRY IRON-WORKS, Ayrshire—Surgeon.
EDINBURGH VETERINARY COLLEGE—Professor of Zootomy or Comparative Anatomy; Professor of Cattle Pathology.
GREAT NORTHERN RAILWAY—Surgeon for the Grantham District.
HEREFORD GENERAL INFIRMARY—House-Surgeon.
HUDDERSFIELD and UPPER AGRIGG INFIRMARY—Physician.
KINGTON UNION, Herefordshire—Medical Officer for the Eardisley District.
MIDDLESEX HOSPITAL—Physician; Assistant-Surgeon.
PLYMOUTH INCORPORATION OF THE POOR—Medical Officer for the Northern District.
SOUTH DUBLIN UNION—Medical Officer, etc., for the Palmerstown Dispensary District.
SOUTH WESTERN PROVIDENT DISPENSARY—One Attending Medical Officer.
UNIVERSITY OF DURHAM—Medical Tutor at the Newcastle-upon-Tyne College of Medicine.
UNST, Shetland—Parochial Medical Officer and Public Vaccinator.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*DICKSON, J. Thompson, M.A., M.B., elected Physician to the Infirmary for Epilepsy and Paralysis.
*MURRAY, John, M.D., appointed Assistant-Physician to the Hospital for Sick Children, Great Ormond Street, *vice* *J. F. Payne, M.B., resigned.
SYMONS, Henry, Esq., appointed Demonstrator of Practical Physiology at St. Bartholomew's Hospital Medical School.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

ADDENBROOKE.—On July 28th, at Kidderminster, the wife of *E. H. Addenbrooke, Esq., of a son.
FURNISS.—On July 26th, at Hudworth Cottage, Castle Eden, the wife of *J. Junius Furniss, L.K.Q.C.P.I., of a son.

DEATHS.

BANKIER, James, M.D., Staff-Surgeon R.N., at Glasgow, aged 66, on July 26th.
GRAHAM.—On July 8th, at Embleton, Northumberland, aged 43, Eleanor Jane Isabella, wife of Robert B. Graham, Esq., Surgeon.
GRAHAM, Robert Buchanan, Esq., Surgeon, at Embleton, Northumberland, aged 41, on July 13th.
LOMAX, Arthur Robert, Esq., Surgeon, at Eardisley, aged 50, on July 20th.
*SHIPMAN, Robert, Esq., Surgeon, at Grantham, aged 54, on July 25th.
WHITE, John, Esq., Surgeon, at Storey's Gate, aged 73, on July 28th.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.
 WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.
 FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
 SATURDAY...St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. W. F. MORGAN'S attention is called to the announcement as to cards of membership printed in large type over the leader last week, and repeated on the face of the JOURNAL to-day.

MR. SWAIN (Devonport), DR. AVELING (London).—All names of authors intending to read papers at the annual meeting, which were received at the office up to the time of going to press last week, were duly announced in the JOURNAL. The packet containing the additional names referred to, having been delayed in the post-office in its transmission from Birmingham, was not received until Friday, when the JOURNAL was printed, and in course of distribution. The names appear this week.

THE TREATMENT OF GANGLION.—We have received a note from Dr. Pirrie, of the Aberdeen Royal Infirmary, which came too late for previous insertion in the reports from this Infirmary, in which he states that he invariably treats ganglion by forcible rupture with the thumb, and when that fails, by subcutaneous puncture and pressure with the thumb. He has never seen any untoward results, or any return under these methods of treatment.

ANTISEPTICS AND DISINFECTANTS.

SIR,—I must beg you to allow me a small space in the JOURNAL to reply to Mr. C. Calvert's letter on my paper on disinfectants. In the first place, I must express my extreme regret that anything I said in that paper appeared to Mr. Calvert to be of a personal character, for nothing was further from my thoughts. The paper was but a fragment of a much larger one on the various uses of carbolic acid, another portion of which is now in your hands for publication, and was written at a time when I thought Mr. Calvert was in practice as a physician in London. The abruptness of the style is due to my having "cut a long tale short" at your request, and the very points which I omitted are now being arrayed against me by Dr. Sansom and Mr. Calvert.

Mr. Calvert complains that I did not discuss his experiments in a scientific form, but this is merely echoing my objections to his experiments. The substances employed, and the circumstances under which they were placed were so various, that no scientific deduction could be drawn from them. Mr. Calvert does not appear to have considered all the bearings of his experiments, for he says that if I had repeated them, I should have found that the solution of carbolic acid he employed was not strong enough to coagulate albumen, forgetting that it was the *vapour* of carbolic acid, and not the watery solution, that he was testing as to its antiseptic powers. His experiments consisted simply in this: he suspended a piece of meat in an atmosphere containing carbolic acid vapour, an atmosphere containing a little chlorine, and several pieces in simple atmospheric air. Near these latter, it is true, some well known antiseptics and disinfectants were placed, but as they were not volatile, they did not preserve the meat, and were therefore declared to be not true antiseptics!

With regard to disinfecting linen and cotton goods by *boiling*, I find on inquiry—and in this I am confirmed by Mr. Holland, of the Burial Board—that in most laundries, and in almost all colleges, the linen is not boiled at all. The custom is to put a large mass of linen into a washing-tub, and pour hot water upon it. The probability is that even the outer layers of linen are never raised to the boiling temperature, and before the inner ones are reached the water has sunk many degrees in temperature.

I know by experiment that sulphur ointment made with sulphur which has been highly impregnated with sulphurous acid, is a more powerful remedy for itch than simple sulphur ointment.

I know by experiment that a quantity of sulphurous acid which is hardly recognised by the sense of smell, and which reddens litmus paper but does not bleach it, is sufficient to suspend fermentation, and destroy various vegetable and animal parasites.

CHARLES ROBERTS, F.R.C.S.

Rotten Row, July 31, 1871.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

WE have in hand at this moment a large accumulation of papers—some read at Branch meetings, and others from members of the Association who have contributed them without passing them through the Branches, and many of them quite worthy of publication. The almost simultaneous occurrence of so many annual meetings of Branches, and the forthcoming annual meeting of the Association, throw an especial strain upon the JOURNAL at this time of the year. It may be worthy of consideration, looking to the natural desire of members for the early appearance of papers read at these meetings and marked for the press, whether some modification is not desirable of the periods of annual meeting of the various Branches, so as to allow their literary products to be forwarded in sequence rather than simultaneously.

RAILWAY ARRANGEMENTS FOR THE ANNUAL MEETING.—Dr. Bryan (Northampton) writes: I have corresponded with the manager of the Great Western Railway, and have obtained the concession from him to relax so far the tourist regulations as to allow a single tourist ticket to be issued to any of our members separately on the production of his card of membership; and he has given directions accordingly. Hence, for one month from Paddington to Plymouth, the fares will be, first class, 66s.; second class, 46s. According to the printed rules, tourist tickets are only issued to parties taking two tickets—which would have shut out many persons travelling singly.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, July 29th; The New York Medical Record, July 20th; The Boston Medical and Surgical Journal, July 20th; The Madras Mail, May 20th; The Shield, July 29th; The Philadelphia Medical Times, July 12th; The Philadelphia Medical Independent, July 15th; The Birmingham Morning News, July 28th; The Northamptonshire Herald, July 29th; The Carlisle Express and Examiner, July 29th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Mr. C. Roberts, London; Dr. Madge, London; Dr. Aitken, Edinburgh; Dr. Falconer, Bath; Dr. J. Thompson Dickson, London; Dr. Hutchinson, Scarborough; Mr. T. Watkin Williams, Birmingham; Mr. G. F. Hodgson, Brighton; Mr. Anthony Temple, Kington; Mr. T. Collier, Ripon; Dr. H. Charlton Bastian, London; Mr. Venman, London; Dr. T. Clifford Allbutt, Leeds; The Rev. Dr. Haughton, Dublin; Mr. W. F. Morgan, Bristol; Mr. G. Cowell, London; Dr. C. Kidd, London; Dr. J. Roth, Northampton; Our Berlin Correspondent; Mr. Seymour, Brighton; Dr. P. Eade, Norwich; Mr. W. P. Swain, Devonport; Dr. Angus Mackintosh, Callington; Dr. R. Lord, Crewe; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Ford, Mains Riddell, by Dumfries; Mr. Hele, Aldeburgh; Dr. Procter, York; Dr. F. J. Brown, Rochester; Dr. Underhill, Great Bridge, Tipton; Dr. J. J. Phillips, London; Mr. J. N. Stevens, Plymouth; Our Dublin Correspondent; Dr. Wade, Birmingham; Mr. J. K. Kenyon, Wroughton; Mr. J. Monteith, London; Mr. B. Armitage, Stafford; The Medical Officer of the Privy Council; Mr. R. W. Goldie, London; Dr. Ransome, Bowden, Manchester; Dr. Althaus, London; Mr. J. Sampson Gamgee, Birmingham; The Secretary of the Sydenham Society; Messrs. A. and C. Black, Edinburgh; Dr. F. T. Bond, Southampton; Mr. B. Scott, Stamford; Dr. W. Squire, London; Dr. Tilbury Fox, London; Mr. Richard Davy, London; Dr. Jameson, Aberdeen; Mr. James Lane, London; Mr. A. T. Norton, London; Dr. Bryan, Northampton; Dr. R. Barnes, London; Dr. Smart, C.B., R.N., Penge; The Medical Officer of the Privy Council; Dr. Radcliffe, London; Mr. Berkeley Hill, London; Captain Burgess, London; Dr. T. T. Maunsell, Dublin; Mr. Benson Baker, London; Dr. L. Sayre, Bern; Mr. W. J. Square, Plymouth; etc.

BOOKS, ETC., RECEIVED.

A Guide to the Treatment of Diseases of the Skin; with Suggestions for their Prevention. By Thomas Hunt, F.R.C.S. Ninth Edition. London: 1871.
 The Physics and Physiology of Spiritualism. By W. A. Hammond, M.D. New York: 1871.
 Galvano-Therapeutics: the Physiological and the Pathological Action of the Current upon the Acoustic, Optic, and Sympathetic and Pneumogastric Nerves. By W. B. Neftel, M.D. New York: 1871.
 On the Physiological Effects of Severe and Protracted Muscular Exercise; with special Reference to its Influence upon Excretion of Nitrogen. By Austin Flint, Jr., M.D. New York: 1871.
 A Treatise on the Diseases of the Nervous System. By William A. Hammond, M.D. New York: 1871.
 Preliminary Report and Table of the Population and Houses enumerated in England and Wales, and in the Islands in the British Seas, on 3rd April 1871.
 Brain Exhaustion. By Frederick Needham, M.D. London: 1871.
 St. Moritz as a Health Resort. By R. Whitfield Hewlett, M.D. London: 1871.
 The Baths of Bormio. By R. Whitfield Hewlett, M.D. London: 1871.
 The History of the Small-Pox Epidemic in South Shields, 1871. By Andrew Legat, M.D. Edin. South Shields: 1871.
 On Bone-setting (so-called), and its Relation to the Treatment of Joints Crippled by Injury, Rheumatism, Inflammation, etc. By Wharton P. Hood, M.D. London and New York: 1871.
 An Experimental Research on the Antagonism between the Actions of Physostigma and Atropia. By Thomas R. Fraser, M.D. Edinburgh: 1871.

PRESIDENT'S ADDRESS,

DELIVERED AT

THE THIRTY-NINTH ANNUAL MEETING OF THE
BRITISH MEDICAL ASSOCIATION,*Held in PLYMOUTH, August 8th, 9th, 10th, and 11th, 1871.*

By JOHN WHIPPLE, F.R.C.S.,

Consulting Surgeon to the South Devon and East Cornwall Hospital.

WITH an inaugural address of this description there must ever be a certain amount of difficulty in the selection of a subject. So many branches of science invariably present themselves to the mind's eye, on either of which it would be tempting to dilate, that it becomes a bewildering task, if not an invidious compromise, to discriminate between their respective claims. That dilemma, which involves the option between—what may technically be termed infringing another's patent—a presumptuous encroachment on ground already appropriated by abler occupants—and cultivated by more skilful hands, and a persistent restriction to the limits of a sphere either specially or professionally one's own, at the risk of appearing conventional to some, and of really proving tedious to many more, can only be successfully evaded by the simple process of rejecting both alternatives, and by wandering away to other scenes where may be found some neutral spot unassailable by either objection. Surely no one can cavil at the soundness of that political economy which recommends emigration to a more distant locality, when the homestead is overstocked and the neighbouring district tenanted by more enterprising and better qualified competitors. Should any other apology for my selection of Plymouth as the subject of this address be deemed necessary, I shall simply rest it on personal and professional grounds. I would pay a grateful tribute alike to the town itself and to the strangers it now welcomes, by reminding them that they are now treading on historic soil, and that there are many special features of interest associated with its past history which are too often forgotten in the whirl of present sensation, or are shorn of their real value by the curious yet fashionable propensity that is so rife among us—of subordinating home scenes and English antecedents to those of a purely foreign extraction. On the other hand, professional experience abundantly testifies that the mind cannot bear too heavy a strain, or digest at once more than a fair proportion of substantial or stimulating diet. Keeping this in view, I find my course more accurately defined. It is to send you forth to the duties and details of your respective sections with your digestive faculties unwearied, and your mental grasp unimpaired by any homœopathic treatment of my own. If it be true that the science of agriculture depends much on a due application of the rotation of crops, we shall not be far wrong in adapting a similar principle to an analogous field—the human mind. In both cases the sure condition of an ultimate return is a judicious appreciation of, and a proper deference to, those elements which may not inaptly be termed the surface and hidden depths of their respective systems. As with the field so with the mind—a summer's fallow may have its advantages, and the crop of sprightly tares turn out no mean preparation for an ample yield of weightier cereals. Unlike the mushroom creations of modern days, Plymouth has a pedigree which will bear inspection. If we explore the myths and legendary lore of antiquity—those volatile but yet portentous clouds on the horizon of history which have such a hazy indefinite attraction for so many of us—we shall find that on this spot giants fought, and were vanquished in the most approved manner by champions of lesser calibre; whilst tradition even goes so far as to affirm that it is from such encounters we may trace the first germs of a characteristic presumed, with slight exceptions, to be peculiar and indigenous to the West. At all events, we can easily understand why the science of wrestling found such enthusiastic adherents in the county of Devon, when we remember that here provincial prowess scorned other and more artificial weapons than the thews and sinews of manhood in its conflicts with these doughty assailants. In such a school the mysteries of such a science could not fail to be well taught and amply illustrated, whilst any proficiency attained in it must have been intensely practical, and not likely to be forgotten.

Leaving, however, these gleanings from the region of romance, let us pass on to firmer, because less debatable, ground. In Domesday Book we have something tangible, though after all it is but a microscopic glimpse of Plymouth under the name of Sutton or South Town, when

it formed part of the royal domains. It was doubtless very small and insignificant at that time; for we learn from Leland that even in the reign of Henry II it had made but little progress. Nevertheless there were germs of vitality in the place which he termed “a mene thing as an inhabitation of Fischars”, which only needed time for development, and eventually proved to be of rapid growth. Westcote thus alludes to this epoch: “It was sometime called Sutton or South Town, and being the land of Valletort, had that adjunct, Sutton-Valletort, or Sutton-Vautor. These were but two poor fishing towns at first, and of little regard; but when the convenience of the harbour, the commodious situation, and pleasant and salubrious habitation, was vulgarly known, it enticed many to repair hither, and increased so suddenly that of two or three small villages was made, by conjunction of them, this one spacious, populous, and rich Plymouth.” Its magnificent and commodious harbour seems to have been the chief cause of its material progress; for “the first important historical fact of which we have any record as connected with the town, is the assembly there, about the year 1287, of a large fleet of ships—325 in number—under the command of the Earl of Lancaster, brother of Edward I, which sailed for Guienne”. But prosperity has its disadvantages. It provokes the reprisals from which insignificance or mediocrity are comparatively safe, and is a challenge which envy and enmity will in rare instances pass by unnoticed. Thus with Plymouth. No sooner had it become a place of mark in the history of the nation than it had to bear the brunt of national disaster. In 1339, Plymouth was unmistakably the scene of a French invasion. Nor was this a mere exceptional instance. It simply proved the forerunner of a series of attacks, some more serious than others, which occurred during the subsequent century. That they were invariably repulsed is a matter of history; but that they were attended with much suffering to the unfortunate inmates of the town, involving at one time the destruction by fire of six hundred houses, is no less notorious. And yet a critical appreciation of historic facts, however much it may deplore, cannot exactly condemn, such a catastrophe as being altogether unmerited. Looked at in the light of a retributive act, Plymouth had certain special claims to the chastisement it received. In its case there was a peculiar anomaly which could invite no other result. In the first place it was comparatively defenceless; in the second it was superlatively aggressive. Without fortifications, it was a tempting bait for hostile reprisals; and as a standing menace to the French coast, from having been the headquarters of the Black Prince in his operations against that country, it justified, if it did not necessitate, their infliction. Under such a combination of circumstances, Plymouth at that crisis in its history learned a lesson which has lately been reproduced with startling effect at Sedan. As with individuals so with nations, aggressive tendencies will often prove costly experiments, unless the science of self-defence be thoroughly mastered and minutely applied before their development. Adversity, however, unfortunately for the optimists of the present day, is very often the only school in which wisdom is acquired; and, like the burnt child which dreads the fire, Plymouth took its burning to heart. “These continual attacks of the French upon the town,” we are told, “caused it to be selected as a national point of defence when in 1442 it was decided to have upon the sea continually eight ships from Candlemas to Martinmas.” If we smile at this proof of a national idiosyncrasy, which fails to lock the stable-door until after the steed is stolen, we try to find a guarantee for present security in the reflection that to be forewarned is to be forearmed—that it is our province to keep aloof from foreign complications, not merely until we are presumed to be in a position to enforce our view of the difficulty under solution, but until, humanly speaking, we are prepared for every emergency—contingencies of evil as well as those of prosperous omen.

Passing with a brief survey that tempestuous epoch of civil strife, when the houses of York and Lancaster strove for the ascendant, let me simply remind you that here Warwick landed, and commenced that victorious march which, successful from its suddenness, won for Henry VI the kingdom for a little interval, and subsequently culminated in the irreparable disaster at Barnet; that here Margaret of Anjou on that same day of evil augury also landed, to blanch the Red Rose's lustre on the fatal field of Tewkesbury. Then we come to an eventful period in the history of Plymouth—the reign of Elizabeth. Hear Camden's testimony to its repute at that time: “The town is not very large; but its name and reputation is very great among all nations, and this not so much for the convenience of the harbour, as for the valour and worth of its inhabitants.” Very specific on this point was Carew, from whom I also quote: “Here mostly have the troops of adventurers made their rendezvous for attempting new discoveries and inhabitations; as Thomas Stukeleigh for Florida, Sir Richard Grenville for Virginia, Sir Humphry Gilbert for Newfoundland, Sir Martyn Frobisher and Master Davies for the North-west Passage, Sir Walter Raleigh for Guiana.” Thus in the field of geographical exploration *facile princeps*, Plymouth might

well rest satisfied with such associations were there not other considerations, practically of greater value, which really outvie them. If it be a far higher effort of genius to consolidate the fruits of victory than to organise a superficial and resultless triumph over hostile combinations, the pioneers of our colonial system—those men of iron will and daring hardihood who first settled in the newly-discovered continent—must ever occupy a loftier niche in the temple of fame than even those hardy adventurers who ploughed a pathway through the waste of waters to its unknown shores. It was from Plymouth, and under the auspices of Devonshire men in the reign of Elizabeth, that the first colonising expeditions set sail; and though they were not successful in the attempt to form permanent settlements, yet it is from these sources that we trace those subsequent results which have had such a marked influence on the destiny and civilisation of the whole world.

But not only in the comparatively peaceful field of adventure did Plymouth win its laurels at this era. These were portentous times—times without a doubt when British alarmists had no unsubstantial grounds for gloomy prognostications. And the thunder-crash came at last. England must be annihilated; and with the haughty arrogance of assured victory the gigantic Armada was launched forth for its destruction. I need not dwell on the oft-told tale of ambition crushed, and the Invincible destroyed. That well-worn page in a nation's history needs no reopening here. Let me rather introduce you to a scene which, striking in itself, may, from its local associations, not be so familiar as the sterner details of history to the majority among you. In the year 1588, there was a great gathering at Plymouth. Men had not met together then as now, to wander hand in hand in peaceful rivalry over the fertile field of science. They had met for action, sharp, prompt, and decisive; and there was an unmistakably rough and ready look about them which was exactly in keeping with their purpose. If we fail to detect it here at this present moment, let us rather congratulate ourselves on an alteration of circumstances, than indulge in querulous repinings on the evidence of national decay. But the Armada was expected then, and the British Fleet was lying in Catwater. For a nation that somehow has the reputation of never being exactly ready for an emergency, it is satisfactory to remember that on this occasion a fleet was actually prepared and impatiently waiting for the expected collision. Here were assembled all those great captains of the age whose renown is imperishable. Here were Raleigh and Sheffield, Grenville and Howard, Francis Drake and John Hawkins, Martyn Frobisher, John Davis, and a host of others on the watch for earliest information with respect to the movements of the hostile armament. Somewhere about the site of the present citadel there stood in those days the "Pelican Inn," very likely so-called after Drake's famous ship wherein he circumnavigated the world. The presumption may be hazarded that it was neither so commodious nor complete in its arrangements as the Royal Western Yacht Club which you will now find on the Hoe; but be this as it may, it seems to have answered the purpose of its naval frequenters sufficiently well. Behind it was a small bowling-green, where in friendly pastime they could wile away the long, tedious hours of their protracted suspense; whilst in front of it they could command a magnificent view of the Sound, and descry the earliest approach of friend or foe on the distant horizon. And here it appears that the men on whom England relied in her hour of extreme peril were actually collected—that thus were they engaged when the long-anticipated intelligence of the Armada's approach at length arrived. How they acted in the emergency is aptly illustrated by Drake's terse rejoinder—"There is time enough to play the game out first, and thrash the Spaniards afterwards." I am aware that such-like waifs and strays from local history are often entirely lost sight of amid the more engrossing conflict of imperial interests. This is a result which cannot be sufficiently deplored. Surely straws like these are faithful indications of a nation's temper. Without effort they mark its changes, without pretence they define its bearings. Immaterial as it may appear to many, Drake's reply is a clue to Drake's success, and the scene on the bowling-green of the Pelican a solution of the Spanish disaster. Such indomitable coolness in the hour of danger more than any other characteristic has conduced to make England what it is. Less pretentious than the fiery enthusiasm which we misname valour, it is a truer courage. Alike provident and self-reliant, if it fails to obviate a reverse, it knows how to endure it; if it must experience a disaster, it is not so inconsistent as to challenge it.

That we are not wrong in anticipating that characteristics like these must leave their impress on a nation's history the sequel amply testifies. Passing on to the time of the civil war, we find the spirit of Drake still pervading the town of his adoption. All throughout those days of fratricidal strife Plymouth gave a stubborn and consistent support to the Parliamentary cause. If your Royalist proclivities are somewhat startled by this claim to reputation being seriously advanced, there is

one consideration which will considerably modify your strictures on its development. However much mankind may differ on abstract theories, there seems to be a common consent among all parties to admire persistent energy and indomitable resolution when brought to the support of cherished principles; and it is absolutely refreshing, amid the political trimming and tergiversation of a later stage, to point to that unswerving tenacity of purpose which, having adopted its line of policy, steadily pursued it under difficulties without compromising the duties it involved or evading the responsibilities it assumed. Whatever side we may take in a vexed question, we can all concur in rendering our tribute of praise to the unwavering fidelity which shrinks from no sacrifice in the support of the one it maintains. If in all cases the end to be attained does not justify the means which are used for that purpose, it is no less true that there are instances presumable wherein the prestige of the end in view is considerably enhanced by the means employed to promote it. And without a doubt Plymouth at this time may claim, even from the bitterest antagonist of the course it pursued, this spontaneous acknowledgment—that what it did it did thoroughly. Unquestionably it battled for the constitution against despotism, but it was no half-hearted allegiance that it gave to the cause it espoused. With all the earnestness that denotes a cherished conviction, it took its stand on intelligible ground; and neither by intimidation nor cajolement, by actual suffering or protracted suspense, was it induced to waver in its resolution, or constrained to shift from its position. Imbued with much of the old Puritan spirit, reverses only seemed to harden it for sterner endurance, and, trained in the school of adversity, it learned how to command, if not to deserve, success. For four long and dreary years, bearing the brunt of constant assaults, for many months closely blockaded, exposed to the severe pressure of a siege and the intermittent surprises of desultory reprisals, it nevertheless held its own, unconquered and undismayed. When Essex was vanquished, and the whole of the West overrun by the Royalists, its persistent defence was alike proof against the blandishments of the king and the valour of his troops. It neither yielded to force, nor succumbed to that deteriorating process then, as now, so insidiously contagious—a veering round as fortune changes to claim an identification of interests with the side that is successful. As it commenced, so it closed that eventful epoch—a consistent supporter of the cause it had at first embraced. And if successful, were not the elements of success inherent in it? Probably we shall not be far wrong in assuming that they were so—that they were the result of a combination of characteristics rather complimentary to the town than derogatory to its assailants.

The last historical association to which I shall but briefly refer is the connection of Plymouth with William of Orange. Still keeping up its old reputation for decision of character, it immediately declared in his favour; and here, after its leader's successful landing in Torbay, his fleet found shelter for the winter. This coincidence appears to have had considerable influence upon its subsequent destiny. It was at once an appeal to a monarch's good graces, and his introduction to a town of which he was far too sagacious not to recognise the capabilities. And so Plymouth, which since the Restoration had been assiduously engaged in commercial pursuits, began again to dabble in the arts of war. And after a time Plymouth Dock, from the impetus given to it by stormy times and belligerent propensities, expanded into Devonport; and as the enterprising daughter absorbed the purely naval elements, so its bereaved parent, burying the memory of old regrets in the fond congratulations of maternal pride, was content to become identified with the strictly mercantile interests of this great port. Thus we present the pleasing spectacle of how possible it is for national and private interests not only to have a separate and contemporaneous existence, but also to develop simultaneous progress, and cultivate reciprocal relations, without clashing and without confusion, within the confines of the same harbour. Figuratively, the wolf and the lamb are wandering promiscuously over the same pastures without detriment on the one side, or deterioration on the other. Analogously the disputed point as to whether foxes and pheasants can be co-occupants of the same preserve, finds here its solution in the affirmative.

Time will not permit me to dwell at greater length on those collateral details, without which the history of any town must necessarily be incomplete. I can neither pause to pay a passing tribute to the men of mark who have enhanced the reputation of Plymouth, nor, usurping the functions of a provincial guide, to point out to strangers the special features of interest they are likely to find here. All such matters are, however, lucidly arranged and graphically described in Worth's *History of Plymouth*,* a book lately published by an author to whose research I myself am personally indebted for much information, and with whom you may explore pleasantly, and I doubt not profitably also, many a

* *History of Plymouth from the Earliest Period to the Present Time.* By R. N. North. W. Brendon and Son 26, George Street.

fertile field where I have not ventured to trespass. And if you find, as doubtless you will find, that here the sword has proved more trenchant than the pen; that art also as associated with Plymouth has completely distanced literature in the race for precedence; that, in fact, with one or two notable exceptions, its literature is, comparatively speaking, a failure when contrasted with the bright array of its artistic talent, I would fain hope that your presence here may stimulate us to remedy this deficiency. Such an assemblage as the one before me must leave its mark on the future history of Plymouth, if it be instrumental in calling our attention to those shortcomings, of which we are wilfully ignorant or tacitly conscious. Once recognise our defects, and a most important step has been taken towards their amelioration. That there is nothing so successful as success is a truism we cannot refute; but success, be it remembered, is never so permanent as when it is evoked from the ruins, and established upon the basis of an admitted failure. If this result be attained by your co-operation, either in awakening our emulation or in giving an impetus to latent talent, as yet crippled and confined from its never venturing to soar beyond mere local associations, or from its shunning the friction which can only give it an enduring polish, it will add the element of permanency, though not an increase of cordiality, to the welcome which I now bid you to Plymouth.

ADDRESS IN MEDICINE,

BY

GEORGE JOHNSON, M.D., F.R.C.P.,

Professor of Medicine in King's College, London; Physician to King's College Hospital; etc.

NATURE AND ART IN THE CURE OF DISEASE.

MANY of those whom I have now the honour to address, will remember how great an interest was excited when, about fourteen years ago, the late Sir John Forbes published his book on *Nature and Art in the Treatment of Disease*. The author of that little volume, in clear and vigorous language, with pitiless logic, characteristic truthfulness, and fearless candour, pointed out the evils resulting from what he calls the over-active perturbative treatment and the mischievous polypharmacy which were then prevalent. Sir John Forbes lamented that in his day a purely expectant treatment of disease was rarely practised, except under other colours and under other names; and he referred to the results of homœopathic treatment, which he, with reason, looked upon as simply inert, in proof of the proposition that, "the power of Nature to cure disease is infinitely greater than is generally believed by the great body of medical practitioners and by the public. So great, indeed, is this power," he goes on to remark, "and so universally operative, that it is a simple statement of facts to say, that of all diseases that are curable and cured, the vast majority are cured by Nature independently of art; and of the number of diseases that, according to our present mode of viewing things, may be fairly said to be curable by art, the far larger proportion may be justly set down as cured by Nature and art conjointly." He elsewhere remarks that cases recorded by young practitioners in the medical journals afford additional evidence of a yet stronger kind, by showing not simply the power of Nature to overcome natural disease, but to overcome this and the artificial disease superadded by what he very unpolitely calls "the energetic ignorance of the practitioner."

To the same effect, many years before, Lord Byron, when half-dead of a fever in Greece, wrote what he intended to be his own epitaph:

"Youth, Nature, and relenting Jove,
To keep my lamp in strongly strove;
But Romanelli was so stout,
He beat all three, and *blew* it out."

After all, however, he recovered on that occasion, and he adds: "That Nature and Jove being piqued at my doubts, did, in fact, at last beat Romanelli, and here I am well, but weakly."

Since the publication of Sir John Forbes's book, and partly, no doubt, in consequence of that publication, our views as to disease and its treatment have undergone a very great change. A purely expectant treatment is now as common as then it was rare. It is now fashionable and orthodox to trust to the curative powers of Nature, and to doubt the therapeutic power of art. The pendulum has swung from one extreme to the other. At that time it was said, "that according to the vulgar notion, the function of the physician consists in little else than the prescription or administration of drugs, and the function of the patient in little else than swallowing them." Now, on the contrary,

that which was once said satirically, has come to be an almost accepted rule of practice; namely, that "the chief business of the physician is to amuse the patient while Nature performs the cure."

Now it is a very noteworthy fact that, simultaneously and side by side with this firm belief in the almost all-sufficiency of Nature and the impotence of art, there notoriously exists an extreme unwillingness to admit that any phenomena of disease can rightly be considered as having a conservative or curative tendency. The writer of an article "On the Pathology of the Microscopic Arteries," in the April number of the *British and Foreign Medico-Chirurgical Review*, had good reason for the statement which he there makes, that to speak of pathological processes as curative efforts of Nature, "is a mode of looking at the phenomena of disease always suspiciously cross-examined at the present day."

This statement suggests the inquiry whether a suspicious cross-examination is not uncalled for and out of place when the object is to arrive at truth, and not merely to gain a verdict. For the discovery and appreciation of scientific truth, the judicial impartiality of the bench is certainly more effective than the zealous and sometimes not over-scrupulous partisanship of the bar.

Surely, there is, *à priori*, good reason to believe that in the curative processes of Nature there is an orderly method of procedure, of which, by a diligent search, we may gain some useful knowledge. That marvellous reparative power which cures a fever or an inflamed lung as thoroughly as it heals a wound or mends a broken bone, must certainly work after a definite plan in each class of cases. The characteristic manner in which, during the progress of acute febrile and inflammatory diseases, the temperature rises, fluctuates, and finally falls, within a period which, for each disease, has a more or less exact limit, is one amongst other indications of such a definite plan and order. And as conservative surgery has been much advanced by a careful study of Nature's method of healing wounds and repairing injuries, so it can scarcely be doubted that a thorough analysis of the more obscure phenomena of internal diseases, and an investigation of their physiological sequence and relationship, may afford us great assistance in our endeavour to conduct our patients safely through the storm of a dangerous sickness. Indeed, I hope to carry you with me in my attempt to show that much knowledge of this kind is already available and ready for daily use.

We are all too apt to forget that disease is a natural, although an abnormal condition of the body; that pathology is, in fact, a department of physiology, and that the phenomena of disease result from the action of the normal structures and forces only modified by morbid conditions. To take an extreme case, the time, perhaps, is not far distant when we may be able to give a physiological interpretation of even that destructive deviation from the normal processes of nutrition which results in the disease recognised as cancer. Meanwhile, much aid to scientific pathology and practical medicine is to be expected from the improved teaching of physiology, to which so much attention is now being given. Unquestionably there is a great call for improved and extended physiological training; for there are manifest signs of a lamentable ignorance of the subject not only amongst otherwise highly educated laymen, but amongst medical writers who publicly discuss physiological questions, and who therefore subject themselves to public criticism. You will not have forgotten that a very influential newspaper lately endeavoured to excite the sympathy of its readers and to bring discredit upon an eminent professor, by commenting on the supposed sufferings of a decapitated frog, whose automatic movements were assumed to be the result of volition and to be indicative of pain. Then, if any one desires to test the physiological acquirements of certain writers on pathology, let him study, as I have done, the copious literature of cholera. He will find, amongst other anomalies, that one writer of great eminence considers that he has sufficiently explained the collapse of cholera when he pronounces it to be the result of "paralysis of the sympathetic nerve." Another writer on cholera having satisfied himself by experiment that the disease is communicated by the poisonous discharges from the alimentary canal, maintains that the poison does not become absorbed so as to enter the circulation, but that it has a purely local action upon the epithelial lining of the bowel.

Now the rapid absorption and diffusion of all known poisons as an essential condition of their operation is one of the best established of physiological doctrines. The interesting observations of Dr. Bence Jones demonstrated, not only the rapidity of absorption from the alimentary canal, but also the rapid diffusion of the absorbed materials out of the vessels even into the non-vascular tissues. These physiological doctrines, as well as the numerous facts which go to prove the absorption of the cholera poison, are ignored by the author of the theory to which I have referred, and if we accept his teaching we are required to believe that in the case of the cholera poison a general law of physiology is suspended.

I propose now to refer to some very obvious and well-known phenomena as examples of morbid processes having a conservative or curative tendency. Let us take, for instance, the case of a patient who is jaundiced in consequence of mechanical obstruction of the duct by a gall stone. His urine is charged with bile, the result of a vicarious excretion of bile products by the kidneys. It will scarcely be denied that the elimination of bile through the urinary channels is, on the whole, a wholesome conservative process, tending, as it does, to free the blood from impurities, the retention of which might be injurious, and even fatal. Yet, this vicarious excretion is not effected without some functional disturbance, and even temporary structural change in the kidney. An examination of bilious urine often discovers in it desquamated renal epithelium, tube casts, and sometimes albumen—pathological conditions which quickly pass away when the bile, resuming its natural course, ceases to be excreted by the kidneys.

Again, in a case of diabetes there is an abundant secretion of saccharine urine. Now, whatever may be the primary seat and essential cause of diabetes, it is certain that the free elimination of the excess of sugar by the kidneys is essentially a beneficial and life preserving process. Yet this continued secretion of sugar not unfrequently induces structural changes which ultimately lead to a fatal result. The persistent elimination of sugar by the kidneys has the effect of changing the structure and the vital properties of their secreting cells, so that, in adapting themselves, as it were, for the secretion of sugar, they gradually become unfitted for the discharge of their own proper function, namely the secretion of urine. The renal gland cells at length become opaque, and are found to contain a large amount of finely granular material with oily particles. The circulation through the kidney becomes impeded, the gland is congested, its secretion is albuminous, and suppression of urine is the immediate cause of death in a large proportion of cases of diabetes.

I believe that the familiar facts to which I have here briefly referred afford a good illustration of a principle which admits of a very extensive application to the interpretation of morbid phenomena. A large number of diseases are caused by, or at any rate associated with, some form of blood-poisoning. The morbid poisons and their products are eliminated through various excretory channels, more especially through the kidneys, the liver, the skin, the lungs, and the mucous membrane of the alimentary canal. In many instances the elimination of the morbid poison causes much functional disturbance and structural change in the excretory channels through which the poison escapes, and these structural changes constitute the most striking outward signs and diagnostic marks of the diseases with which they are associated. Thus we have the cutaneous eruptions of the acute exanthemata, the gastro-intestinal symptoms of cholera, the bowel disease of dysentery and enteric fever, the hepatic disease which results from excess of alcohol or from the influence of malarious poisons, the renal disease, which may also be caused by an excess of alcohol, by the poison of scarlet-fever, and by various other morbid poisons which I need not now stop to particularise.

Here let me say that I am perfectly well aware that by a certain class of pathologists the doctrine of the elimination of morbid poisons is ridiculed as a vestige of a by-gone unenlightened age, well enough adapted to please the fancy of old women and ill-educated laymen, but quite unworthy the acceptance of scientific physicians. One of this very advanced school lately intimated to me privately that, as a supporter of this exploded notion, he looked upon me as the priest of a decaying faith. Now it is a remarkable fact that the opponents of the doctrine in question not unfrequently render it ridiculous by misrepresenting it; the misrepresentation being, of course, unintentional and apparently an unconscious result of confusion of ideas in the minds of the critics. Thus, quite recently in one of the medical journals, an eminent provincial physician asks what we mean by the term disease, and he replies by saying,—“In old times people used to think that a disease was some actual entity or thing which had got into the body in some way and was there lying hidden and secreted, and was to be cast out. We know that there are a few instances of this kind of thing. For example, we know that some disorders depend upon the presence of a tape-worm in the intestines, and that to cure them we must hunt the worm out of the body. This idea, which we know to be true only in a few specific instances, was at one time general. The germ of this idea still runs through a great many of our conceptions of the nature of disease. This is more particularly the case in the pathological conceptions of ill-educated laymen, but many traces of it are still to be found amongst ourselves also.”

I venture to suggest that the writer of the passage which I have here quoted confounds, as others equally eminent have done before, the idea of disease with that of a morbid cause. If anyone maintains, or ever did maintain, that *disease* is an entity having an existence apart

from the living body, I am not here to defend so manifest an absurdity. I apprehend that what we all understand by disease is an abnormal condition of the living body. The causes of disease are almost infinitely various. Some diseases have their origin in purely mental, emotional, or nervous influences, but the cause of many diseases is as certainly, if not as obviously, a separate entity as the ovum of a tape-worm. For instance, the disease which we call lead-colic is the pain with constipation experienced by a man who has been poisoned by lead. The colic, of course, can have no existence apart from the sufferer, but the metallic poison which causes the colic was introduced from without, and may be again ejected from the system. We know that small-pox and scarlet-fever can exist only as phenomena of living bodies, but the cause of each of these diseases is a material and portable poison, which, being thrown off from the bodies of the sick, conveys the disease to the healthy. The theory of contagion as generally accepted, and the practice of disinfection as commonly adopted, both imply a belief in the elimination of morbid poisons. This doctrine of the elimination of morbid poisons is, of course, quite consistent with a belief that in part they may be decomposed and destroyed within the system, although we can have no proof of the actual occurrence of this destructive process.

I almost feel that I owe you an apology for occupying your time by insisting upon such obvious elementary truths. It is strange that at a time when so much discussion is going on as to the nature of morbid poisons, when germs and dust and fungi, their nature and origin and operation upon the living body, and the best mode of preventing or neutralising their effects form the subjects of fierce controversy, there should occasionally be heard a confused utterance which seems to imply that the whole controversy is utterly unpractical and unmeaning; that while a tape-worm is an undoubted fact, morbid poisons are the phantom products of a disordered brain. As an illustration of this kind of unreasonable scepticism, I may remark that a recent writer on cholera in India, Mr. Macnamara, denies the existence of a blood-poison in that disease because Dr. Thudichum failed to obtain *chemical* evidence of such a poison. As if Dr. Thudichum had chemical proof of the existence of any of the morbid poisons of whose reality and destructive activity the evidence, other than chemical, is only too conclusive.

And now to return to the subject of curative efforts of nature and the conservative tendency of certain morbid processes. There are few diseases which afford more striking illustrations of the principle in question than the various forms of Bright's disease when traced through all their stages from their origin to their termination. Excluding from consideration those cases of albuminuria which are caused by a mechanical impediment to the circulation, the result, usually, of cardiac or pulmonary disease, it may be held as a doctrine generally true that the primary cause of Bright's disease in all its forms is a morbid condition of blood, and that the structural changes which the kidney undergoes are the result of a conservative effort to excrete noxious materials from the circulation. In cases of transient blood-poisoning, scarlet-fever for example, the structural changes in the kidney and the functional disturbance may be only temporary and the recovery complete. But in other instances, as, for example, cases of chronic alcoholism—a very frequent exciting cause of Bright's disease—the continued passage of noxious products through the secreting structures of the kidney gradually destroys the tissues, and the gland either wastes and contracts, or becomes so structurally changed as to be unsuited for the discharge of its functions. There is then a secondary blood-contamination, a result of retained urinary excreta, and this uræmic condition may in a variety of ways bring about a fatal result. In illustration of our present subject, it may be observed that when the renal disease has reached an advanced stage life is often prolonged for a time by the vicarious elimination of urinary excreta through the mucous membrane of the alimentary canal. It is probable, too, that the dropsical symptoms which often complicate renal disease are the result of a conservative effort to free the blood from an excess of water, whose retention within the vessels would be more detrimental than its accumulation in the subcutaneous tissue and the serous cavities.

I wish to avail myself of the present opportunity to protest against a purely theoretical, although professing to be an anatomical, division of cases of Bright's disease, which originated with Virchow, and which has been accepted by some subsequent writers apparently without inquiry, and certainly without proof. A German theory appears sometimes to be as irresistible in this country as a German invasion has been found to be elsewhere. The theory to which I refer is this: That there are three forms or classes of cases of Bright's disease; in one class of cases the uriniferous tubes are the seat of structural change; in a second class the blood-vessels of the kidney are primarily and chiefly implicated; while in a third class the essential structural change consists in what is eupho-

niously called hyperplasia of the connective tissue between the tubes. Now this is a question of anatomical fact, and I am prepared at any time to demonstrate, as I have often done before—first, that in every case of Bright's disease both the uriniferous tubes and the renal blood-vessels are always structurally changed; secondly, that in no cases of Bright's disease does the essential structural change consist in a so-called hyperplasia of the connective tissue between the tubes. There is one insuperable objection to the connective tissue theory, and it is this, that the best anatomists agree in opinion that there is no connective tissue between the uriniferous tubes of a healthy kidney. It is difficult, therefore, to believe that hyperplasia or overgrowth of that which has no existence can constitute the essential anatomical character of any form of Bright's disease. Moreover, this theory compels those who adopt it to disregard very obvious structural changes within the tubes, changes which are not explained by the theory, and which are inconsistent with it.

In further illustration of conservative morbid processes, let me direct your attention for a moment to certain changes of almost constant occurrence which are found in the heart and in the minute arteries, after death from chronic Bright's disease. In the first volume of the *Guy's Hospital Reports*, Dr. Bright pointed out the fact that in a large proportion of cases of chronic Bright's disease there is considerable hypertrophy of the left ventricle of the heart, even when there is no obvious mechanical impediment to the circulation, the cardiac valves and the large arteries being free from disease. Dr. Bright, not being infected by the modern heresy which forbids us to seek for design in morbid processes, believed that this hypertrophy of the left ventricle had a physiological significance, and he suggested as a probable explanation of the phenomenon that "the altered quality of blood might so affect the minute and capillary circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system." About four years since I had the satisfaction of being able to demonstrate as an anatomical fact, that which Dr. Bright had long before suggested as a reasonable hypothesis. I will state briefly the steps by which I was led to this result. It has been conclusively proved that the force which propels the blood through the systemic arteries is derived from the contraction of the muscular walls of the left ventricle of the heart. The force of elastic resiliency in the walls of the large arteries is derived from the muscular contraction of the heart as obviously as the elastic power of an archer's bow has its source in the muscles which bend the bow. The elastic walls of the arteries, distended by the injecting force of the ventricle, contract when that force ceases to act. The resiliency of the arterial walls, reacting upon the blood during the diastole of the ventricle, gradually converts the intermitting jet of blood from the heart into a continuous stream in the minute arteries and capillaries, just as the net-covered India-rubber ball in the ether-spray apparatus converts the intermitting current of air into a continuous stream in the tube beyond. The larger arteries have their walls mainly composed of yellow fibrous tissue, with but a small proportion of muscular fibre; on the other hand, the walls of the smallest arterioles which terminate in the capillaries are mainly composed of muscular tissue. These minute arteries, with their muscular walls, under the influence of the vaso-motor nerves, regulate the blood-supply to the various tissues and organs. By the contraction of their walls the arterial canals are narrowed, and the blood stream is in a corresponding degree lessened; on the contrary, relaxation of the arterial walls enlarges the canals, and a fuller stream of blood is permitted to pass. The minute muscular arteries, therefore, perform the function of stop-cocks; they exert a regulating, but not a propulsive, influence upon the blood stream.

Now let us proceed to apply these well established physiological doctrines in explanation of the hypertrophied left ventricle in cases of chronic Bright's Disease. It occurred to me as in the highest degree probable, that if, as Dr. Bright long ago suggested, the morbidly altered blood is impeded in its passage through the smaller blood-vessels, the cause of this impediment must be an excessive contraction of the muscular walls of the minute arteries. Then, if this were so, the continued over-action of the arterial walls should result in hypertrophy of their muscular tissue, and the degree of over-action would be found registered in the thickened arterial walls. The next step was to search for this hypertrophy of the arterial walls in cases of chronic Bright's Disease, when *post-mortem* examination showed that hypertrophy of the left ventricle existed, without disease of the valves or the large arteries to explain its occurrence. Accordingly we sought for it, and found it unmistakeably present, not only in the minute arteries of the kidney, where I had often seen it many years before, but also in those of the pia mater, the skin, the intestines, and the muscles. It will probably be found to exist in the arteries of other tissues which we have not yet examined. There is good reason to believe that the undue contraction of the arteries which results in hypertrophy of the walls is excited by

the abnormal quality of the circulating blood, while the hypertrophy of the left ventricle is a natural result of the increased action required to force the blood through the resisting arterioles.

Now it is obvious that, in order to maintain the exact balance between the propulsive force of the heart and the regulating power of the minute arteries, there must be a nice relationship between the hypertrophy of the ventricle and that of the arterial walls in each tissue. It is manifest, too, that if the arteries in any tissue are relatively less hypertrophied and strengthened than those in other parts of the system, the capillaries of that tissue must be liable to be over-distended, and even ruptured, by the injecting force of the hypertrophied heart. In accordance with this view, we found that in one case of chronic Bright's Disease, complicated with cerebral hæmorrhage, the minute arteries of the brain were certainly less hypertrophied than those of other tissues in the same subject. In another case of hæmorrhagic effusion into the retina, the arteries of the retina presented no appearance of hypertrophy, while those in other tissues were as obviously hypertrophied as were the walls of the left ventricle.

In these days of specialism, when the tendency is to dis sever the various organs of the body, and to forget their physiological relationship to each other, it is interesting and instructive to find that the deterioration of the blood which results from the degeneration of one organ—the kidney—may induce hypertrophy not only of the walls of the heart, but also of the walls of the minute arteries in every tissue throughout the system. A good illustration this of the very ancient doctrine that, "if one member suffer, all the members suffer with it."

Time will not permit me to comment upon the various symptoms of Bright's Disease, which receive their explanation from the anatomical changes which I have described. There is, however, one phenomenon to which I must make a passing reference. A full, hard, resisting radial pulse, with increased arterial tension, as indicated by the sphygmograph, is commonly observed in cases of chronic Bright's Disease. The explanation is obvious, by reference to the two antagonistic forces, that of the strong left ventricle, and that of the equally strong, resisting arterioles. So that, when the history of a case and the chemical and microscopical characters of the urine are insufficient to determine the question whether the renal disease is chronic or of recent origin, the physical signs of hypertrophy of the left ventricle, with increased arterial tension, afford important confirmatory evidence.

Before I pass on to the next division of my subject, I wish to say another word in defence of the teleological argument as applied to the structure and functions of the living body, whether in health or in disease. It is sometimes asserted that we can learn nothing of causation, or purpose or design, and that our sole business is to study the sequence of phenomena. Yet it is notorious that some of the greatest discoveries in natural science have been made by men who have followed up, step by step, the evidences of design and purpose in the structure of organised beings. By this process of observation and reasoning, Harvey made the grand discovery of the circulation of the blood. Mr. Darwin, acknowledged even by those who differ from him to be one of the greatest and most philosophical of living naturalists, is indefatigable in his endeavour to discover and to explain the purpose and the design displayed in the structure of animals and plants. Thus, with reference to the wonderful ball-and-socket ornaments on the wing-feathers of the Argus pheasant, Mr. Darwin says: "No one, I presume, will attribute the shading, which has excited the admiration of many experienced artists, to chance—to the fortuitous concourse of atoms of colouring matter. That these ornaments should have been formed through the selection of many successive variations, not one of which was originally intended to produce the ball-and-socket effect, seems as incredible as that one of Raphael's Madonnas should have been formed by the selection of chance daubs of paint made by a long succession of young artists, not one of whom intended at first to draw the human figure" (Darwin's *Descent of Man*, vol. ii, p. 141). He argues that those who deny that this beauty of plumage is designed to captivate the female bird, will be compelled to admit that the extraordinary attitudes assumed by the male during the act of courtship, by which the wonderful beauty of his plumage is fully displayed, are purposeless; and he adds, "this is a conclusion which I, for one, will never admit."

Now this surely is a teleological argument. Obviously then Mr. Darwin sees no inconsistency between teleological reasoning and the theory of evolution, of which he is so powerful a supporter, and so eloquent and able an exponent.

Again, the writings of John Hunter abound in the most ingenious suggestions as to the physiological purpose of morbid processes. For example, he gives a reason for the cessation of the circulation when the respiration is suspended. He says it depends upon "the sympathetic connexion which exists between the heart and lungs (one action ceasing, the other also ceases); which sympathy is established, because if

the heart were to continue acting, it would send improper blood into the body, by which it can be supported only a little while. The right auricle and ventricle also cease acting, although not so early, and for the same reason; because on the cessation of the function of the lungs, the blood cannot receive any benefit in passing through them. These actions and cessations are all dependent on life and the connexion of one action with another." (Palmer's *Hunter*, vol. iii, p. 78.)

We now know that the immediate cause of the arrest of the circulation following upon apnoea is the resistance to the passage of blood offered by the contraction of the minute pulmonary arteries, and not the cessation of the heart's contractions as Hunter supposed; but we may still believe that the final cause or purpose of the arrest is that which Hunter suggested—namely, that when respiration is suspended, nothing would be gained by sending the blood through the lungs, or by supplying the tissues with unærated blood.

During the time which remains to me to-day, my purpose will be to show that, as practitioners of medicine, we have something more to do than to watch the phenomena of disease as passive spectators, and that in our endeavour to prevent, to mitigate, and to cure disease, we have a better guide than mere empiricism.

Obviously, one of the most essential conditions for the successful treatment of disease is an exact diagnosis. If diseases essentially different are confounded together, it is impossible to arrive at any trustworthy conclusion as to the effect of particular remedies or plans of treatment. Nor does it suffice for successful treatment that a disease be correctly named and referred to its right place in a nosological system. I need only refer to the group of cases which are designated epilepsy to illustrate this proposition. There is reason to believe that the immediate cause of an epileptic convulsion is, in all cases, identical—namely, a sudden and extreme anæmia of the brain; but the remote and exciting causes of this cerebral anæmia are numerous and very diverse. It may be a result of failure of the general circulation consequent on profuse and rapid hæmorrhage, or a plug of fibrine (embolism or thrombosis) in the pulmonary artery; or the pulmonary, and consequently the systemic, circulation may be rapidly arrested by one of the various forms of apnoea; or by the accidental admission of atmospheric air into the veins during the performance of a surgical operation at the root of the neck or in the axilla. But in most cases of epileptic convulsion the arrest of the circulation and the cerebral anæmia are probably due to a sudden and extreme contraction of the minute intracranial arteries. The exciting causes of this arterial contraction are very various. It may be the result of a purely nervous or reflex influence acting, through the vaso-motor nerves, upon the cerebral vessels. Examples of this form of epileptic convulsion are afforded by cases in which the determining cause is emotional excitement or mental anxiety, syphilitic or tuberculous inflammation of the brain or its membranes, painful dentition, the irritation of intestinal worms. In another class of cases, blood-poisoning is the immediate cause of the arterial contraction. To this group belong cases of uræmic convulsions—convulsions the result of alcoholism, and the convulsions which sometimes occur during the initiatory fever of the acute exanthemata. If the treatment of epileptic convulsions is to be successful, or even harmless, we must do something more than give the disease a name and prescribe bromide of potassium, valuable as that remedy is in many cases of this terrible disease.

We are sometimes told that our chief duty as practitioners is to treat symptoms, and to leave pathological theories to those who have nothing better to occupy their time and attention. A patient consults us for aphonia; shall we prescribe for this symptom without looking into the larynx to ascertain its cause? Loss of voice, more or less complete, may be a result of a transient functional nervous derangement; it may be caused by the pressure of an aneurism, or of a cancerous or other tumour, upon the pneumogastric nerve or its recurrent branch; it may be a direct result of a simple or a malignant tumour within the larynx, or of the swelling or ulceration which results from the various forms of inflammation to which the larynx is liable. For the practical purposes of prognosis and treatment, it is not sufficient to be able to say of a disease that it is laryngitis; we have further to ascertain to which of the three large groups of cases it belongs; namely, the catarrhal, the strumous, or the syphilitic form of laryngitis.

Again, when it is said that we are to treat symptoms, is it meant that we are to make it a rule of practice to endeavour to repress all the symptoms of disease without reference to their origin, their physiological significance, or their probable conservative tendency? Such a rule would lead to the repression of the eruption of scarlet-fever and small-pox by external cold, to the abrupt arrest of choleraic discharges by opium, and to the weakening of a strongly pulsating hypertrophied heart associated with valvular disease by low diet and depletion—modes

of treatment condemned alike by pathological science and by the results of experience.

In estimating the results of treatment, the ultimate appeal must obviously be to experience; experience, however, has notoriously proved, in many instances, a fallacious guide—*experientia fallax* is a maxim which we shall all do well to keep continually in mind.

But, of all the delusive guides in practice, a false theory of disease is the most to be dreaded. It was an erroneous theory that suggested the antiphlogistic treatment of delirium tremens and the narcotic and alcoholic treatment of cholera; and theory alone prevented the more speedy discovery and rectification of these practical errors.

A knowledge of the causes of disease, and of their *modus operandi* in the production of morbid phenomena, may be made practically useful in many and various ways. The evidence obtained within the last few years of the manner in which cholera and enteric fever spread through the contamination of the air and drinking-water by the intestinal discharges, has greatly increased our power of preventing these destructive diseases. The ascertained influence of comparative dryness of soil and of atmosphere, resulting from improved drainage, in diminishing the mortality from phthisis in various parts of America and in this country, forms another important contribution to practical and preventive medicine.

To discover, and if possible to remove, the exciting cause, may sometimes suffice for the cure of a disease of most formidable nature and of obscure pathology. In illustration of this statement, I am tempted to relate very briefly the following case. A boy suffering from tetanus came under my care in the hospital. The symptoms, which had existed for rather more than a week, had commenced about ten days after the infliction of a wound in the upper part of the thigh by a sharp piece of wood. The wound had healed; but I found that the cicatrix was remarkably hard and tender when pressed. While examining the case, I remembered two fatal cases of traumatic tetanus referred to by Dr. Taylor in his book on *Poisons*. In both cases, the wound had healed; but in one there was found after death, beneath the cicatrix, a piece of iron; and in the other a splinter of wood. Thinking it not unlikely that some foreign body might be present in my case, I gave the boy chloroform, and requested the house-surgeon, Mr. Whitmore, to cut through the cicatrix. In doing so, he found neither iron nor wood beneath the skin, but a piece of woollen stuff of about the size of a small pea. The stick which wounded the boy's thigh had pierced his cloth trousers, and, carrying with it a piece of wool, had left it in the wound. The tetanic symptoms gradually subsided. Repeated small doses of chloral apparently assisted the recovery; but, if the foreign body had remained under the skin, it is probable that neither this nor any other remedy would have prevented a fatal result.

There is a numerous and important class of cases in which suppressed action of the skin by cold or by some unknown atmospheric influence is the exciting cause of disease in internal organs: for example, cases of acute renal dropsy, whether occurring during the progress of scarlet fever, or unconnected with that disease; cases of catarrh and bronchitis; cases of acute pneumonia; and some cases of acute rheumatism. Now there is a principle of practice common to all these cases, which is this: that if, at the very commencement of the disease, a free action of the skin can be promoted, the malady may often be cut short; or, if not entirely and promptly arrested, it will be greatly mitigated. It is notorious that an ordinary catarrh may almost certainly be cured by free diaphoresis at the very commencement of the attack. I have myself gone into a hot-air bath suffering from headache, pain in the limbs, and other indications of a severe incipient catarrh, which, if allowed to run its course, would probably continue for a period of from one to two or three weeks; and in the course of half an hour the symptoms have been entirely removed by the action of the bath. The same treatment by hot-air or blanket baths is certainly very efficacious in the early stages of acute renal dropsy, more especially when cold has been the exciting cause of the disease. The object of the diaphoretic treatment in these cases is not, as some writers appear to imagine, to sweat urine through the skin, but, by diverting a large amount of blood to the surface, to lessen the congestion of the kidney—as dry cupping over the loins does in a less degree—and thus to increase the secretion of urine. The objection which has been made to this sweating practice—that it tends to waste a portion of the water which is required to wash morbid products from the uriniferous tubes—affords a good illustration of the insufficiency of mere physics to explain physiological phenomena.

In connexion with this diaphoretic practice, I have a few words to say on the treatment of catarrhal pneumonia. With reference to the treatment of pneumonia, two very distinct stages of the disease must be distinctly recognised—first, a febrile prepneumonic stage; second, the stage of pneumonic exudation. The commencement of an attack which

results in pneumonia is usually marked by rigors, a high temperature, quickness of pulse and breathing, not unfrequently vomiting or diarrhoea, or both. Then follow the signs of exudation into the lung; and as a rule, in an uncomplicated case, when the lung-tissue is consolidated, the temperature quickly falls, and the pulse and respiration become less frequent. Then, more or less rapidly, the inflammatory exudation is expectorated, and the lung is restored to its normal condition. I maintain that pathologically there is an analogy between the pulmonary exudation of pneumonia and the cutaneous eruption of small-pox, in so far as the initiatory fever abates when the exudation occurs—in the one case into the lung, in the other into the skin. Both are febrile and eruptive diseases; in one disease the eruption being pulmonary, and in the other cutaneous. Now I believe that, by treatment promptly applied during the febrile prepneumonic stage, the amount of subsequent exudation may be greatly lessened. The treatment suggested by theory and approved by experience consists in the prompt restoration of the suppressed cutaneous secretion, by hot air or water or wet sheet and blanket baths, an emetic of antimony or ipecacuanha when there is nausea without vomiting, and a calomel and colocynth pill, followed by a saline purgative. I have no doubt that by these means, adopted at the very commencement of the febrile stage, the severity of the disease may be very much mitigated; whereas, after the pulmonary exudation has occurred, the time for active treatment has passed: rest and food are then the chief requisites. To discuss the treatment of pneumonia without reference to the stage of the disease, is to include, under one name, pathological conditions essentially unlike.

It remains for me now to sum up in a few sentences the main points which I have had the privilege to bring before you.

I have suggested that a belief in the power of Nature to cure all curable diseases is inconsistent with a disbelief in the existence of morbid processes having a conservative or curative tendency. I have indicated various pathological phenomena the conservative tendency of which appears to me indisputable; and I have endeavoured to show that, by a careful study of the functional and structural changes which result from disease, we may obtain most valuable indications for treatment—learning thereby both to do that which may aid Nature and to avoid such means as may tend to thwart and hinder the natural curative processes.

Again, I have intimated that it is difficult, and, as it seems to me, impossible, to reconcile a disbelief in the elimination of morbid poisons with a belief in the spread of disease by contagion. Confirmatory evidence as to the elimination of morbid poisons is afforded by the disastrous results of repressive methods of treatment. To take all possible precautions to exclude the cholera-poison from the system, and then, when once it has gained an entrance, to endeavour to retain it there by opiates and astringents, are practical modes of procedure utterly inconsistent with each other; unless, indeed, the object of this repressive treatment be to sacrifice the individual for the public good—to prevent the patient, at the peril of his own life, from scattering the seeds of disease and death amongst the community.

I believe that the success of our attempts to cure and to prevent disease depends mainly upon an exact diagnosis and discrimination of the various forms and shades and stages of disease; upon a correct interpretation of pathological processes and symptoms; a careful avoidance of erroneous and misleading theories; and, lastly, upon a prompt recognition of the exciting causes of disease, some of which may be avoided, some removed, while the influence of others may be in a greater or less degree counteracted by the timely employment of suitable means.

THE USE OF IRON IN SCARLATINA.

I AM desirous of drawing the attention of the profession to the use of iron in scarlatina. I have given it for the past two years with great success; so much so, as to induce me to believe that in it we have a powerful remedial agent for that disease. I have found, if it be given as soon as the disease makes its appearance, that not only does it shorten and lessen the severity of the attack, but it also fortifies the patient against the after-consequences—dropsy, etc. The form which I have mostly used has been the liquor of pernitrate of iron, in syrup or glycerine, in doses of ten minims every three hours for children of from one to six years, increasing, according to age, to fifteen, twenty-five, or thirty minims. During convalescence, I have given citrate of iron and quinine, ammonio-citrate of iron, or syrup of phosphate of iron, according to circumstances. This, with the exception of warm fomentations to the neck in cases of scarlatina anginosa, is all the treatment I have adopted, and, as I have before stated, with better result than has followed any other. I hope soon to give cases; but in the meantime I ask my professional brethren to give my suggestion a fair trial, and I believe they will be well satisfied with the results.

RUSSELL ALDRIDGE, M.D.

CHOLERA:

ITS DIFFUSION, PROPHYLAXIS, SYMPTOMS, AND TREATMENT.*

By JOHN MURRAY, M.D.,

Inspector-General of Hospitals, Indian Medical Service.

As cholera is regularly advancing from India through Russia and the Baltic ports towards England, and as the disease has pursued this course on several previous occasions, its arrival here may be shortly anticipated. As August and September are the months during which the last three epidemics prevailed in England, it is now time for every precaution to be taken to guard against its attack. As I have had opportunities of seeing this disease in India every year since 1833, I have been requested to relate the results of my experience in that country; and I willingly do so in the hope that it may be useful.

It is important that information should be given regarding the early symptoms of cholera and its treatment, as a delay of two or three hours will in many instances allow the disease to advance to a stage where those remedies will prove powerless, which, if exhibited sooner, would have controlled the disease and saved the life of the patient.

Much of the difficulty in understanding cholera has arisen from writers only acknowledging the presence of the disease when it has reached the third stage or collapse. I beg to state that the opinions to which I shall call attention on most of the important points in this disease are supported by a very great majority of the medical officers now in India, as shown in a recent report submitted by me to the Indian Government, in which the opinions of 505 medical officers are carefully tabulated.

In no malady are there more marked and characteristic symptoms than in cholera; but the symptoms, which are only found in one stage, are so dissimilar to those induced by the poison in an earlier stage or mild attack, that the connection has by many been overlooked. The value and importance of the early detection of the presence of the poison cannot be over-estimated, as we all know that, after a certain stage, the vital organs are rendered, by the absent or diminished absorption of the stomach, little sensible to the action of remedies; their functions are paralysed by the presence of the poison. It is in preventing the supervention of this stage that most life has been saved; and the physician who can soonest detect the presence of the poison will be most successful in his practice.

The earliest symptoms that can be recognised are those of *malaise*, viz., depression of spirits, want of appetite, torpidity of the bowels, and desire for stimulants. That the *malaise* I have described is caused by the presence of the poison of cholera is an opinion strengthened by the fact that, during an epidemic attack, when this feeling exists, the action of a purgative—especially salts—will almost always be followed by the other symptoms of cholera, and the circumstance of the frequent occurrence in men who have left the infected locality in apparent health and have been attacked within one or two days.

To the symptoms of *malaise* succeed *diarrhoea*, nausea, and vomiting; the urine is scanty; the stools light-coloured, then colourless, like rice-water, with occasional cramps, heart-burn, and slight headache. The countenance is dark and the eye-balls congested. This is followed by *collapse*, great prostration of strength, burning in the epigastrium, congee or rice-water vomiting and purging, with cramps and suppression of urine; cold clammy perspiration, feeble pulse and cold breath, broken voice and shrunk and livid face. When reaction takes place, the burning pain in the epigastrium disappears, the restlessness subsides, the stools become coloured, urine is secreted, warmth returns to the palms of the hands, the colour improves, the pulse becomes stronger, and sleep ensues.

In many instances the disease does not progress beyond the stage of *malaise* or *diarrhoea*. The poison appears to be digested or eliminated by the *vis medicatrix nature* through the natural functions of the system—hence the great importance of supporting these, and avoiding their being overtaxed, exhausted, or depressed.

Cholera is a specific disease, caused by the presence of a specific poison in the system; it multiplies or is reproduced; it must be vital and amenable to the ordinary laws which regulate other specific poisons, modified by the peculiar structures of the body which are chiefly affected. It must enter the body through some of the ordinary channels. Before health can be restored, it must be eliminated either in a vital state or after being decomposed or digested. Although we are unable, in many instances, to trace the manner in which the poison enters the system,

* Read in the Medical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

yet in others the channel is evident and the source clear. The instances where cholera has appeared after drinking water contaminated by cholera discharges from wells, streams, tanks, or cisterns, are numerous and well authenticated. The most convincing case which has come under my own notice occurred during the Hurdwar epidemic of 1867, when a pilgrim arrived at Joogh Kullin in the Punjab, on the 28th April. He was taken ill with cholera near a well and died next day. He had bathed, and his soiled clothes were washed in an adjoining pond. Other parties who afterwards visited the well and the pond for water and ablution were attacked two days afterwards; and up to the 15th May, fifty-three were attacked in that village, of whom twenty-seven died. There had been no cholera there for the previous twenty-four years.

I have witnessed numerous cases and heard of many more where the poison must have entered through the lungs; those attacked having been in the vicinity of cholera patients, or of their evacuations. It is difficult to show that the skin is the channel of communication, because the poison may be disseminated in the surrounding air, and thus enter by the lungs. But there are many instances on record of the disease appearing after the wearing of clothes worn by cholera patients; and Dr. MacLean mentions that the last case that occurred in the attack at Malta in 1865, was that of a washerwoman who stole a soiled shirt and wore it.

The poison leaves the body through the same channels by which it enters; viz., the bowels, the lungs, and the skin. Its presence in the discharges from these organs is recognisable in most instances by the smell—a mawkish, sickening odour, well known to those who have seen much of the disease. In the earlier stages the poison appears to be destroyed, or digested, without exciting any active symptoms, and this is the safest way of nature getting rid of it. The first active symptom is diarrhoea; and here we can be useful, as the system during this stage is amenable to remedies.

I shall now allude to some facts that are important in a practical point of view, as tending to promote or restrain the diffusion of the disease. I carefully examined the Records in the Medical Department in Calcutta from the year 1814, and found that, with the exception of the Delta of the Ganges, where the disease is never absent, its appearance in an epidemic form is limited to certain seasons and extending over three months in the year, and that this period of the year varies in different parallels of longitude; but there were sharp occasional attacks at other seasons.

The period of observation in Europe is shorter. It is probable that the disease may have appeared in former ages under the general names of plague, black death, or sweating sickness; but all the ordinary symptoms of what are called sporadic cases have frequently been found. The epidemics of 1849, 1854, and 1866, occurred in August and September; and we may infer that the arrival of the disease which is now gradually advancing therefore will be at the same season, and it becomes our duty to prepare for its advent.

All experience of the course of the disease teaches us that it rages with the greatest intensity, and proves most fatal where people are collected in great numbers—where there is crowding and filth, defective ventilation and impure water; and that it is aggravated by want and bad food. It is here that the circumstances of civilisation bear on the propagation of the disease.

Great benefit has arisen from a careful attention to the laws of sanitation, which have been assiduously studied of late years by many zealous investigators of this branch of medical science. Sanitation is of the greatest importance in the precautionary treatment of this epidemic, in ameliorating the virulence of the attack, restraining its dissemination, or warding it off entirely. On sanitation there is no difference of opinion; and both the medical profession and the public are aware of its importance, and its direction is in good hands.

There is another point of no less importance in the precautionary treatment, on which the profession was not in former years so unanimous: I allude to the contagious nature of the disease, meaning thereby the transmissibility, directly or indirectly, of the specific poison from a sick to a healthy person. I am unable to state the exact proportion of those who consider cholera as non-communicable in Europe or America; but in India there were only five out of five hundred and five medical officers who stated that it is not communicable. There is a slight divergence of opinion regarding the channel through which the communication takes place, and the changes undergone by the poison after leaving the diseased person, but none as to a diseased person being a source of danger if admitted into a healthy locality. The precautionary measures indicated by this opinion consist in the exclusion and isolation of the affected, and the removal of the healthy from the infected locality.

There has been a great diminution of mortality from epidemic cholera in India, particularly amongst the European troops, and in the gaols, since precautionary measures founded on these indications have been

carried out. In many cases, cantonments and prisons have remained free from attack whilst the disease has raged amongst the population of the surrounding districts, and the mortality has been materially diminished in most of the stations where it did break out; still, in several stations and gaols where the sanitary arrangements have been carried out by most efficient officers, there have been very severe and fatal outbreaks of the disease under my own superintendence, particularly in the cantonments of Peshawur, Kohat, Allahabad, and Gwalior, and in the Central Prison at Agra, which has long been celebrated for the completeness of its sanitary arrangements.

There was great difficulty in carrying out measures for its exclusion even from the gaols and cantonments; and it is questionable if they were ever strictly observed in large towns. In England the disease must enter by the sea-ports; and the admission of ships with the disease on board is more under control, and should be restricted, and the cases treated on board special cholera hospital-ships. I question the possibility of perfect isolation of any hospital on land, unless it be an island. When the disease has once appeared in a port or town, special cholera hospitals should be established, with which there should be no unnecessary communication. Small detached buildings, tents or huts, are best for cholera cases: the air is purer, and the depression from the sight of the suffering and death of other patients is diminished.

The removal of troops or prisoners is a simple process in India. The supply of tents and means of carriage is ample, and the surrounding country open. In small villages the inhabitants desert their homes and live in the open air; and many who have the means leave the large towns. The precautionary arrangements in towns have been limited to the construction of special cholera hospitals and the general distribution of medicines. People have generally a great aversion to leaving their homes and entering a cholera hospital; but these hospitals were generally filled with travellers and poor people. Restrictions were occasionally attempted in infected localities in the towns, but it is questionable if they did any good. The free use of disinfectants applied to the evacuations has been employed with marked advantage.

In thus prominently calling attention to the communicable nature of cholera, I do not wish it to be inferred that I think it as communicable as many other diseases, or that there is *very* great danger in attending on the sick, especially in Great Britain, where decomposition is comparatively less rapid than in India. I have attended thousands of cases, and only contracted the disease three times, which yielded readily to early treatment. The exemption of hospital attendants, where prompt treatment is available, is remarkable; and the number of relatives and friends who attend in private houses and escape, or only have very slight indisposition, is generally observed. This should encourage all to neglect no duty to suffering humanity, while at the same time all unnecessary exposure should be avoided and every means used to prevent the disease being disseminated to others.

I now come to the most important branch of the subject—the medical treatment, in which the practice has been most uncertain in late epidemics, whilst some are of opinion that it is of little or no use in the advanced stages. This latter statement is not correct, and has a most injurious tendency by depressing the spirits of the patient and destroying his confidence in the physician. This confidence is a most powerful means of supporting hope when life is wavering in the balance. I have seen a patient's life hang on the expression of my face when, in deep collapse, his pulse was imperceptible at the wrist.

My object in giving in detail the symptoms of this well known disease is to enable the early presence of the poison in the system to be recognised, as it is here that medical treatment is most efficacious. It is of little importance that analogous symptoms may be induced by other causes if remedies used be not injurious to health, and they check the further development of this disease, which in an advanced stage is almost beyond the control of medicine. It is our duty to assist Nature and to relieve pain. In the stage of *malaise* the poison is thrown off without any violent or very prominent symptoms by the natural functions of the system. Our task here is to support the strength, avoid indigestible food and depressing causes. The only medicine that I have found useful in this stage is a little quinine every day. The subsequent indications of the treatment are to remove the abnormal symptoms as they appear, of which the most early is *diarrhoea*. The first indication is to check this and restore the case to the stage of *malaise*, then remove the cause and restore the natural secretions. Irritating or indigestible food in the bowels is the most frequent cause of diarrhoea; and should this not previously have been discharged in the evacuations it should be removed and a recurrence of the looseness guarded against, as I have always found it the most powerful exciting cause of collapse. I have found this best carried out by a combination of opium with carminatives in the form of a cholera pill, composed of one grain of opium, two of black pepper, and three of assafoetida. It appears to check the

looseness and stimulate the secretions. This pill does no harm if needlessly administered. It should be repeated should the looseness continue. It will cure most cases, and in all restrain the symptoms until regular medical advice can be procured. This is a most important point in the use of this simple remedy. It may be distributed to every house and be available in a few minutes, whereas the delay of a few hours may allow the disease to advance beyond control. I know no better remedy for this stage. These pills have been distributed in tens of thousands in the towns and villages of India with most satisfactory results. Some surgeons prefer red to black pepper, and others add camphor to the opium and assafoetida, and report favourably of the combination. They are distributed in the dispensaries, and are placed in the charge of the police in India. In this country, similar arrangements might be made.

In collapse, our power is limited by the circumstance that the vital organs are insensible to the ordinary action of medicines. Experience shows that opium, astringents, and alcohol, lie inert in the collapsed stomach, though these are the ordinary remedies for pain, looseness, and debility. It is also my experience that the free use of these remedies at this stage causes death, either by preventing reaction, or by causing local complications should reaction appear.

There is another cause of death which is not generally understood, but which it is in the power of all sufferers or attendants on the sick to check or to prevent. I allude to the extreme danger of assuming the erect posture, or even of sitting up in bed, during collapse, or the earlier stage of reaction. I have seen myself, and I have heard of many cases, where fatal syncope instantly followed sitting up in bed or rising to go to stool.

It must be borne in mind, while indicating the treatment in this stage, that the poison of the disease is contained in the congee evacuations in an active form, and also that the first sign of reaction is coincident with the appearance of bile in the evacuations. The dilution of the irritating contents of the bowels and the restoration of the watery particles of the blood are indicated and best fulfilled by frequent small quantities of cold water, to which a little soda or carbonate of ammonia may be added with advantage. In protracted cases I have seen decided benefit from the use of Liebig's extract of meat, made fresh and given frequently. I have also seen most marked benefit from the exhibition of hot saline enemata given after each motion. In some instances it has acted like magic, the symptoms subsiding after one injection, but in many others they have been powerless. I have thought that the artificial supply of Nature's own remedies in the stage of *malaise*, the secretion of which is suspended by the action of the poison as the disease advances to collapse, might be useful, and the results in a few cases in which they were used previous to my departure for India were highly satisfactory; seven out of nine having recovered, and the two fatal cases having been pulseless and dying before the remedies were used: these remedies were gastric juice and bile, in the form of acidulated pepsine, fifteen grains, and inspissated bile fifteen grains, given alternately every hour. The first dose of bile was followed by vomiting; but bile soon appeared in the evacuations, and mild reaction set in gradually. Shampooing with warm turpentine liniments gives relief to the cramps, and mustard poultices on the epigastrium restrain the vomiting. I think I have used a little quinine with advantage when Nature made an effort at reaction.

I have only time to allude to some of the other remedies which have been highly recommended. I found bleeding unsuccessful in 1833, and I have seen no reason to change my opinion. The practice is generally condemned in India. Calomel I have found inert in collapse, both in large and small doses, and consider that the benefit attributed by many to its use arises from its being employed instead of spirits or strong remedies. There is danger of its being accumulated in large quantities when reaction takes place. Sulphuric acid and acetic acid are less dangerous; but I have not seen decided benefit from their use. I have not found advantage from ammonia, except when added in small quantities to the cold water. I found, in 1833, the transfusion of saline fluids into the veins caused most hopeful reaction; but it was only temporary, and this is the general result of numerous trials made by other medical officers in India. Brandy I consider dangerous in proportion to the quantity given in the stage of collapse, and opium as decidedly poisonous in this stage. Chloroform, though it may give temporary relief, tends to induce dangerous head symptoms on reaction. Astringents are not beneficial. Purgatives are dangerous in the earlier stages, and not useful in collapse; they are generally condemned in India. Heat has been extensively tried by warm baths, but the fatigue entailed is dangerous. It has been tried in the form of hot-air baths, but the result has not been encouraging.

When reaction takes place, rest and careful nursing will complete the cure where collapse has not lasted long; but in protracted cases,

in addition to these remedies, medical treatment may be required for low fever, uræmia, or local complications, regulated by the ordinary rules.

One of the inducements which have led me to write this paper is the hope that the confidence in the treatment of cholera, particularly in its earlier stages, which my long experience has given to me, may be imparted to others through this National Association; and be extended to the people of this country, and help to ward off panic when the disease appears amongst us. I also wish to condemn the use of violent remedies in cases that appear to be hopeless, knowing the dangers they induce, and to recommend the milder expectant treatment which has in many instances been followed by favourable results.

REPORT OF THE COMMITTEE ON THE OBSERVATION AND REGISTRATION OF DISEASE.

THE following report was read at the annual meeting of the British Medical Association at Plymouth, August 1871.

The past year has been full of promise of the ultimate success of the efforts of this Association to bring about a national registration of disease. At the general meeting, held at Newcastle-on-Tyne, on August 12th, 1870, it was resolved—"That a deputation from the Association should seek an interview with the President of the Poor-law Board, to represent to him the views of the Association with respect to the registration of disease, and that Dr. Rumsey, Dr. Sibson, Dr. A. P. Stewart, Dr. Morgan, and Dr. Ransome be requested to form the deputation."

In accordance with this resolution, the above named gentlemen waited upon Mr. Göschen, in conjunction with a deputation on the same subject from the Poor-law Medical Association, and several other gentlemen interested in the question. After a careful inquiry into the views of the deputation, Mr. Göschen said that the arguments in favour of the registration of disease were very clear and strong, and that every one must accept them. The chief points to be considered were by what machinery it could be carried out, how rapidly, and at what cost. He thought, however, that the question was one for the Government, and not for his department, and he remarked that it would be undesirable to go into the matter until the report of the Royal Sanitary Commission had been considered by the Government.

The report of this Commission appeared in the spring of the present year, and contained very important and conclusive arguments for a registration of disease, apparently in every respect identical with that proposed by this Association. We append an extract from this report, from which it will be seen that the Commissioners were fully impressed with the importance of the subject, and with the necessity both of obtaining speedy returns of new cases of diseases occurring amongst large bodies of the population, and of making these returns immediately available for the suppression of epidemic disease. It does not appear, however, from the recommendation of the Commission, that any definite plan for obtaining these objects is put forth, nor any arrangement made for transmitting the records through a local officer of health. Your Committee recommend, therefore, that a memorial be addressed to Her Majesty's Government, praying that in any measure of sanitary reform this most valuable aid to the suppression of disease should be fully provided for, and that arrangements should be made by which health officers could make immediate use of the returns of disease before they are transmitted to the central offices of the Government.

Your Committee regret that they have to announce the discontinuance of the returns made for the last four years by the Northumberland and Durham Medical Society. Although those made at Manchester and Salford, St. Marylebone, and Birmingham still continue, the fact that this influential body is unable to carry on the undertaking is only another proof of the need of a truly national registration of sickness.

But, however complete the registration of deaths may be, it cannot give a fair estimate of the grief and poverty occasioned by sicknesses that are not fatal; it cannot indicate where or how these are to be prevented or remedied; it cannot tell the cost which is worth incurring for their diminution. To these ends, the first step must be a registration, so far as may be practicable, of all the cases of the most prevalent and injurious sicknesses among such portions of the population as may suffice for an estimate of the general state of the public health, and especially of the health of the working classes, and of those for whom sanitary arrangements are most urgently needed.

All the witnesses examined by us on the point have spoken strongly of the need of this registration of sickness. Among the chief purposes it would serve are these:—

1. It would keep the public, and especially the Central Sanitary Authority, constantly aware of the state of the public health in every part of the country. A certain amount of knowledge of this kind is obtained from the registers of deaths, and it would be hard to over-estimate the good service they have done; but the greatest knowledge they can supply is, not only scanty, in comparison with what is wanted and can be had, but is often too late to be useful. In nearly all cases of epidemic and contagious diseases time is lost before the deaths, few in comparison with the cases, begin to attract attention. In many instances weeks have elapsed,

before the existence of widely prevalent and preventable diseases has become known to any efficient Sanitary Authority. Thus, the best opportunities have been lost both of ascertaining the origin of epidemics, and of preventing or limiting their spread. The chances of suppressing an outbreak of disease are in direct proportion to the speed with which it becomes known to a Sanitary Authority; and it is only by a systematic registration of all cases, whether fatal or not, that the speediest information can be attained. The advantage of obtaining such information has been proved in Ireland, where the medical officers of districts, in which epidemic or infectious diseases appear, are bound to report them to the Poor Law Commissioners in Dublin, who at once send down inspectors and, if necessary, assistant medical officers.

2. The registration of sickness would teach more than we can yet guess of the magnitude of the grief and poverty caused by disease. This is very incompletely shown by a register of deaths. For example, in an epidemic of scarlet fever, the deaths are rarely more, and often less, than ten per cent. of the cases. But, reckoned by its money cost, a non-fatal case may be more costly than a fatal one; for, in the one, the cost ends with burial, in the other it has to be borne through the whole period of sickness, and of the often tedious convalescence. Moreover, after every epidemic of scarlet fever, whether it has been very fatal or not, thousands are left disabled for long periods, or for life, with diseases of the ears, or bones, or joints, the glands, or other parts; and the great majority of these are a burden on the working power of the healthy.

What is thus true of scarlet fever is equally true of other epidemics. Their mortality is no sufficient measure of the importance, whether for the sake of humanity or of economy, of preventing or limiting them. In an epidemic of relapsing fever not more than one or two of every hundred cases may appear on the register of deaths; but the cost of the other ninety-eight in every hundred must be enormous, seeing that every one of them has to be expensively maintained for many days or weeks.

Moreover, it has often been observed that an epidemic, even when very fatal, does not add largely, if at all, to the total mortality of a few years. When many die of one epidemic, fewer die of others, or of all other forms of disease. But there is no such counterbalance for the cases of sickness and disability that are left as the residue of an epidemic. These are costly so long as they continue; they are a dead loss.

Terrible as epidemics are, when we count the thousands that have died quickly in them, and guess at the misery consequent on the deaths of those who worked for others, they would seem much more terrible, if we could count the consequences of the necessity of maintaining the many more thousands, who are disabled for months or years from working either for themselves or for others.

3. It is probable that the registration of sickness would show more urgent need than is yet felt for diminishing, if possible, many diseases that, being neither epidemic nor often fatal, are commonly regarded without concern. Ague is very rarely fatal, it counts for little on a register of deaths, yet ague in all its various forms, and its long abiding, is a great hinderer of work, a great burden on the wealth of the nation, a burden which good sanitary arrangements could remove, and probably would remove if it were shown to be worth the cost.

And so of scrofula, of rheumatism and bronchitis, and of many other disabling maladies. We cannot doubt that a registration of sickness would show that not only the personal misery, but the public loss caused by these diseases is enormous. Thousands suffer either constantly or through a large portion of the year. Many of them suffer and are thus disabled year after year, and during all their sufferings they are maintained wholly or in part by the labours of others. It is probable that, on the whole, these diseases are much more costly than the most terrible epidemics; certainly they are so, if we reckon their influence on the progeny of those who suffer. And yet to what amount they are costly, or what cost ought to be incurred for their diminution, we can scarcely guess without a registration of sickness.

4. Another class of cases, of which the death registers do not nearly indicate the importance as affecting the working power of the country, are those of diarrhoea, influenza, and other widely prevalent maladies which, though often trivial to the individual, are very impoverishing in their effects on the people generally. The deaths caused by them are not felt as causes of poverty, for they are fatal to very few except children and invalids and old persons; they are often too few to attract any attention, and every year thousands suffer and are unobserved by any Sanitary Authority. Yet the cost of these diseases in loss of work is so great that it can scarcely be estimated.

5. The registration of sickness would further show whether and in what degree legislation is needed for the prevention of diseases dependent on occupations and social habits. Much has already been done in this direction, by the inquiries directed by the medical officer of the Privy Council, but the effects of many occupations on health are still unknown.

The effects of social vices and vicious habits of life, whether any of them are sources of such sickness, poverty and decay, as to justify on public grounds a considerable expenditure of money and of executive force, cannot be known without registration.

6. In all these, and in many other instances, a registration of sickness would supply a comparatively full knowledge of the prevalence and magnitude of diseases which are imperfectly indicated in the register of deaths, but of which a fuller knowledge might be expected to teach the means of prevention. Equally it would correct some errors which are scarcely avoidable in deductions from the death registers. In these, for instance, each death is registered at the place at which it occurs, whether the fatal illness commenced there or elsewhere. Yet it is obvious that, for the prevention of disease, we ought to know where it began, rather than where it ended. The registration of sickness would tell the former—that of death tells the latter.

The errors hence arising are not trivial. Large classes of persons, including domestic servants and "workers on premises," usually leave the places in which they reside as soon as they fall severely ill. The places in which they die are thus made to appear more unhealthy, and those which they leave less unhealthy, than they truly are.

Similarly, the insane, and many other persons who have been long invalided with one disease, often die of another, and this is registered as the cause of death. Yet that which it was more important to prevent, because it was the more costly, and wasted, though it did not quite destroy, life, was the earlier and longer disease which would have appeared in a register of sickness, but takes a subordinate, if any, place in a register of deaths.

7. A registration of sickness is essential as a test of the fitness of institutions for the reception of the sick and poor. The registration of deaths in various hospitals and workhouses is important; yet it may tell little more than the proportions of cases of every severe disease admitted into them. That which ought to be known is the number and character of the cases of sickness that begin in each hospital, *e.g.*, of fever, of erysipelas, &c., springing up among those admitted for other ailments.

8. And it may be hoped that a registration of sickness would bring to light not only many unknown liabilities to disease, in various places and among various classes, but some immunities, from the study of which means of improving the public health might be derived. There is reason to believe, for instance, that workers in brass are

insusceptible of cholera, that people bred in rural districts are less liable, than those who live in towns, to the blood-infections following injuries. And, if these are facts, it is not likely that they are the only facts of the kind; there must be many more, which a registration of sickness would help to detect.

On all these grounds we recommend that authority and sufficient means should be given to the Registrar-General for a registration of sicknesses, under the direction of the Central Sanitary Authority. But questions may arise as to how far the registration should be carried.

It would be unwise to attempt to register all cases of sickness in the whole population. The number of cases severe enough to disable from work, or to require medical help, is probably in England and Wales not less than thirteen millions a year. The cost of registering so vast a number of facts, however simply, would be far beyond its value.

It would be impossible to register all cases in private houses.

The diseases constantly registered should be those which affect large numbers of the population, which may be considered as, in a greater or less degree, preventable by sanitary arrangements, and which are usually not difficult of discrimination. The registration of other diseases than these should be by a single entry of the total number of "other diseases," but an exact registration of any of them might be from time to time directed by the Central Sanitary Authority.

The registration would, in the first instance, include only or scarcely more than those among whom sickness is, for various reasons, already registered. These would be sufficiently numerous for a general and speedy estimate of the prevalence, in every part of the country, of the diseases which are the greatest causes of misery and the most likely to be prevented by due care. They would include all the sick attended under the poor law; the inmates of nearly all charitable institutions; patients at hospitals, asylums, and dispensaries; the workmen in some mines, factories, and other large establishments in which great numbers of persons are under the care of medical men who are obliged to make returns of all the sick they treat.

In all these cases some sort of record is made of sicknesses; but, however useful the records may be for private or local purposes, they are useless for any general or national purpose, being without uniformity, and therefore unfit for either summary or comparison. In many instances these local records include more particulars than would be necessary for a general registration; such as the name of the disease in every case, the name, residence, occupation, &c. of the patient. Details of this kind would be usefully preserved for local purposes; but the general purposes of the registration of sicknesses would be sufficiently served by a central registration of only the few most important facts, and by the Central Sanitary Authority and his officers having access to all local registers.

The method of registration may be safely left to the department of the Registrar-General. The subject has already been carefully considered in his office; and a member of his staff, Mr. James Lewis, has shown that returns for such a registration as suggested may be collected from all parts of England and Wales, and arranged and published weekly, so as to be at once accessible to both the Central and Local Authorities.

The practicability of such a registration is proved by its having been carried out by the medical authorities in the army, and by private exertions in Newcastle-on-Tyne, in Manchester and Salford, and, for a time, by the London medical officers of health. The system maintained, for the registration of the contagious diseases of animals, in the veterinary department of the Privy Council, a registration, not only of the first occurrence, but of the progress of every case, may be taken for a model of that which, it may be hoped, will some day be maintained for the registration of preventable diseases among men.

If the registration of sickness be added to the work of the Registrar-General's Office, it will make the relations of that office to the public health so much larger than to any other subjects, that it would be advisable that the office should be a department under the proposed Central Sanitary Authority.

DRAFT REPORT OF THE PARLIAMENTARY BILLS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

YOUR Committee have to report that, owing to an oversight of the Committee of Council, they were not duly constituted in accordance with the resolution of the annual meeting until the greater part of the parliamentary session had passed. Prior to this, however, the Metropolitan Counties Branch had endeavoured to partly fill the blank by nominating its Parliamentary Bills Committee as formerly. Thus most of the measures introduced into Parliament affecting public sanitary questions or the interests of the medical profession, have in some form received consideration from officers of the Association.

Energetic opposition was made, through the intervention of Mr. Ernest Hart, to clauses in the Coroner's Bill threatening to deprive Poor-law medical officers and others of their fees for *post mortem* examinations conducted for inquests. That Bill was withdrawn. The Committee had great pleasure in warmly seconding Sir Dominic Corrigan's amendments to the Lunacy Regulation Bill (Ireland), and preventing the imposition on the Poor-law surgeons of Ireland of onerous duties without fee or reward. They warmly approve of Sir Dominic Corrigan's Lunacy Bill introduced this session, proposing to afford just remuneration to the Irish Poor-law medical officers for certifying dangerous lunatics, and for improving the superannuation of the medical officers of Poor-law medical asylums. This measure will be reintroduced early next session; and your Committee propose in concert with its author, to give it their warmest support, with whom they are in cordial communication. They have likewise thought it right to give their support to the principle of the measure introduced by Mr. Donald Dalrymple, M.P., for the Restraint of Habitual Drunkards; and Mr. Dalrymple attended a meeting of the Committee, and explained the

scope and provisions of his Bill; and your Committee was represented at the deputation which waited on Mr. Bruce, and elicited the promise of a Select Committee early next session to consider the whole subject.

Your Committee have also supported the appeal for the consideration of measures intended to lessen the present destruction of infant life, and especially the regulation of Baby-farming. The subject was referred to a Select Committee, whose deliberations were much influenced by the disclosures made in the *BRITISH MEDICAL JOURNAL* three years since, and the remedies then suggested. Among the most important evidence taken was that of three members of the Select Committee—Mr. Ernest Hart (the editor of the *JOURNAL*), Mr. Curgenvin, and Mr. Benson Baker; and your Committee rejoice to add that the report of the Select Committee generally concurs in their views and adopts their suggestions. It is believed that the Government will introduce a measure based upon these recommendations early next session.

The amelioration of the condition and the improvement of the system of the Poor-law Medical Service have largely engaged the attention of your Committee. They supported Mr. W. H. Smith's motion, which had at least the effect of bringing on an interesting debate, and obtaining an important declaration from the Government of their intention to consider the propriety of introducing considerable reform or amendments. Mr. F. S. Corrance, M.P., has attended a meeting of your Committee, and has expressed his intention of introducing, on the first opportunity, a measure for the purpose of applying to England some parts of the Irish Poor-law medical system. He was accompanied by Dr. Rogers, the President of the Poor-law Medical Officers' Association. That Association seconds Mr. Corrance's intentions; and your Committee, after consideration of the scheme advocated, believe that it will be beneficial, and propose to support it at the proper time.

The larger questions of Poor-law Medical Reform, and of Medical Reform properly so called, as well as of State Medicine, belong to separate Committees of the Association, and have not, therefore, been dealt with by this Committee.

Mr. Stansfeld's Bill for consolidation of the public departments of Medical Relief, Poor Relief, and Public Health, came under consideration. Some objections were urged from quarters deserving respect. Your Committee, however, felt it their duty to support the measure as one of immediate and obvious advantage.

The Pharmacy Acts Amendment Bill and the Licensing Bill came under consideration on two occasions. Both have subsequently been withdrawn; but your Committee made some representations to Government as to necessary amendments, which were promised due consideration, and which will be repeated, if necessary, should those measures be revived.

As to the Vaccination Acts Amendment Bill, the Committee objected to the principle that any one should be allowed to purchase immunity from the operation of the Act by payment of a small monetary fine. They rejoice to find that the Bill proposes to authorise district medical officers to vaccinate those liable to take small-pox in houses where the disease is present, and to make payment to them as though they were public vaccinators. This clause was pressed upon the Government prior to the passing of the Bill by a deputation of the Poor-law Committee of the Association, acting in conjunction with a deputation of the Poor-law Medical Officers' Association.

Thus the session has afforded ample scope for the activity, and evidence of the usefulness, of this Committee of your Association. There is no other body possessing a similar representative character charged with the duty of watching over legislative measures affecting public sanitary interests and the interests of all classes of the medical profession. Your Committee, recognising the importance and responsibility of the task, will continue, if reappointed, to perform the duty with care and diligence. They wish to impress upon the associates at large, and upon members of the profession generally, the importance of freely communicating with them upon all measures introduced into the legislature affecting individual or collective professional interests.

DRAFT REPORT OF THE POOR-LAW COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

YOUR Committee have to report that, having been convened at the request of the Chairman of the Poor-law Medical Officers' Association, they have met the Council of the Association in conference on two occasions, and have made representations to Ministers which have not been without effect.

On October 14th, they met to consider a scheme of reorganisation of the Poor-law Medical Service which had been carefully considered by Dr. Rumsey, Dr. Ransome, and other authorities, bearing partly upon this general question, and partly upon the question of Registra-

tion of Disease. This memorandum they presented, through a numerous and influential deputation, to Mr. Goschen, then President of the Poor-law Board. Dr. Sibson, Dr. Farr, Dr. Ransome, Dr. Morgan of Manchester, Dr. Phillipson of Newcastle, Dr. Stewart, and other influential members of the Association, expressed their views. The result of the deputation is reported at length in the *BRITISH MEDICAL JOURNAL*, October 22nd, 1879. It was highly favourable to the general views of the Association, and promises substantial results.

On a second occasion, your Committee met the Committee of the Poor-law Medical Officers' Association in conference on the subject of the Vaccination Regulations, and had a lengthened interview with Mr. Simon, Medical Officer of the Privy Council. The special subjects discussed were the consolidation of vaccine statements, the regulations as to gratuities, and the desirability of relaxing the rigid rules as to stationary vaccination. The deputation was received with great courtesy by the Medical Officer of the Privy Council, who discussed with them in detail the points at issue. As results of this deputation, they may point to the clause in the Vaccination Amendment Act authorising district medical officers to vaccinate in houses where small-pox is present, and to claim payment for the same. The medical officer also announced his intention of codifying and publishing the regulations concerning gratuities to public vaccinators.

Your Committee regret that they have not been constituted and called together in a more regular manner. They believe that it will be to the advantage of the profession that they should be reconstituted, in order that the Association may continue to lend its powerful aid to the officers of the Poor-law Medical Service.

They regard with satisfaction the present organisation of the English and Irish Poor-law medical officers, and trust that the Association will continue to assist with all its influence the efforts of those Associations to elevate the status of the service and increase its public usefulness.

ERNEST HART.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF HYDATID TUMOUR OF THE LIVER, WITH ICTERUS.

(Under the care of Dr. DUCKWORTH.)

THE notes of this case were kindly supplied by Mr. G. Bagot Ferguson.

Emma R., aged 25, married five years, was admitted on May 1st, 1871. She had one miscarriage three years ago. She was born in, and had always lived in, London. She could lie without discomfort in any position. The face was considerably jaundiced, as also was the body generally, the chest being most deeply stained. The jaundice commenced about four months previously, increasing, with intermissions, up to the time of admission. The ocular conjunctivæ were deeply stained. The lips were dry; the tongue clean and moist, fissured longitudinally. There was no oedema of the feet and legs. Her liver was palpably much enlarged, the right lobe reaching within about three inches of the crest of the ilium in the mesial line to about two inches above the umbilicus; the left lobe reaching far into the left hypochondrium, and about four inches below the cartilages. The upper limit of the liver was normal. The abdomen over the liver was tense; and, on percussion, the so-called hydatid fremitus was evident, chiefly over the enlarged left lobe. The abdominal tension was greatest, and the prominence most marked, in the mesial line, about two inches below the ensiform cartilage. A rounded mass at the lower right border might possibly have been the distended gall-bladder. Her girth in the widest circumference was thirty-two inches. There was no ascites, and no enlarged abdominal veins were visible. The appetite was fair; no thirst; bowels open. The urine was extremely dark in colour; it had been thus only a few days. The catamenia were regular and normal. She complained of pain at the seat of the tumour, and a cramping sensation and feeling of weight. She slept badly, and suffered much from nightmare. The tumour had increased mostly during the last three or four years; but she thought it was there, though small, as long as seven or eight years ago, because of uncomfortable sensations of weight in its present site, and from the great tendency which she had to nightmare. Its growth had been attended by no actual pain. At a place where she lived as housemaid six years ago, three dogs were kept, which she petted much; she did not know if they had worms.

May 14th. She was tapped by Mr. Holden with a Thompson's

trocár, slightly beneath the ensiform cartilage, through the linea alba; and less than half a pint of light yellow slightly turbid fluid was drawn off. Microscopic examination revealed hooklets in the fluid, and granular *débris* of hydatid cysts, of specific gravity 1009. Trace of albumen and abundant chlorides were found. She suffered little from the operation, or afterwards, but felt relieved by it. Next day, the jaundice was less.

May 19th. She was tapped again by Mr. Holden, with a similar trocar, about an inch to the left of the linea alba. Nothing escaped, the trocar having been plugged by two cysts somewhat larger in size than a pea, lifeless and degenerating. She experienced afterwards and during the night a good deal of pain diffused over the abdomen, but was better next day. She had been put under the influence of opium.

May 24th. She was feeling very well. The jaundice was considerably less; girth thirty-one inches.

June 2nd. She was tapped again by the aspirator between and below the punctures, and about four ounces or more of fluid removed; it contained fragments of membranes, and a few shrunken and bile-stained hydatids, of specific gravity 1009. She suffered severe pain for about half an hour, and experienced some pain even next day. The girth was reduced to thirty inches.

June 10th. The girth was thirty-one inches. The urine was now natural, but became darker lately for one day.

June 12th. She was discharged at her own urgent request, and ordered to be an out-patient, and to be readmitted again at some subsequent date. She is still somewhat jaundiced.

REMARKS BY DR. DUCKWORTH.—The occurrence of jaundice with a hydatid tumour is a much more rare occurrence than might reasonably be expected. In fact, the absence of this symptom is generally a point in the diagnosis of hepatic tumours due to hydatids. In this case, although the enlargement had existed for a long time, certainly four years, and possibly more, the jaundice only came on about four months before admission. It is also noted that it has increased, with intermissions, up to the present time. When this symptom first appeared, there were no indications of rupture of the cyst into a branch of the gall-ducts; nor was there any history of biliary colic, such as would certainly have supervened had some of the secondary cysts entered the common bile-duct. The tumour did not suppurate; for no pus was found in the fluid withdrawn from it at any time, and no constitutional signs of such an event occurred. There was a slight bilious tinge in the liquid, however; and, although it could hardly be supposed that the tumour communicated directly with the biliary ducts, yet products of hepatic secretion had found access to the cysts, and may have had a share in promoting their degeneration, which was certainly in progress. It is, therefore, fair to presume in this case that, with the increase in the growth of the tumour, or of a portion occupying, or rather implicating, the lobus quadratus specially, the common duct had become much obstructed. There were no signs of catarrhal icterus; and the probable enlargement of the gall-bladder, the absence of distended abdominal veins and of ascites, would show that the ducts in the fissure of the liver were not particularly implicated.

UNIVERSITY COLLEGE HOSPITAL.

SKIN DEPARTMENT.

SEBORRHŒA SICCA VEL SQUAMOSA.

(Under the care of Dr. TILBURY FOX.)

SEBORRHŒA, or sebaceous flux, is not generally recognised by medical practitioners, but is confounded mostly with eczema. In some instances, the altered sebaceous secretion may be of an oily character; in others, hard and even corneous; and in some, again, it may form small plates or scales on the surface. The latter form of disease was well exemplified in a case which has come under Dr. Fox's care. The patient was a young woman aged 17, who, save being fat and flabby, was otherwise in good health. Two or three years previously, she had been in King's College Hospital with some lung-disease; otherwise she had never been ill. There was nothing of importance to note as regarded her family history. The disease had attacked both sides of the face—indeed, its whole surface, save the lower part of the nose and around the mouth; and had existed in a state similar to the present for the last four months. It commenced as a little red spot on the right cheek; this went away in a few days, and then the whole face became hot, red, and scaly; and in a week both sides became affected. The earliest appearance of the disease was like that of a burn. There was no "discharge" at first, and there had been none since; the surface had not been even moist, but only dry and hot. On admission, the whole of both cheeks were covered by small flat plates of the size of a split pea, very much

like those of ichthyosis squamosa; and they were stuck rather firmly in the face, but could be detached readily. They then showed a dry and red surface beneath, and a patency and prominence of the sebaceous follicles. The face had not been so freely covered until recently, because the girl always washed away the scales each day, but had allowed them to accumulate of late. She had always noticed that the scales were more rapidly and freely produced after exposing the face to the sun. The same condition of things as that just described existed on the top of the head. The glands on the neck were enlarged.

REMARKS.—No mistake ought in such a case to occur in the diagnosis. The negative evidence was strongly against the idea of the disease being eczema. It was clear that there was no discharge. The scales were fatty. The glands of the skin were seen to be enlarged, congested, and patent. On placing some of the scales under the microscope, they were seen to be made up of roundish well formed cells, and a large amount of fatty matter, mostly granular, intermingled with oily particles. There was no "blastema" or other evidence of true "inflammatory action". The treatment in the present case consisted of saline aperients at first, followed by the mineral acids, lotions of carbonate of soda and borax, and subsequently *huile de cade* ointment, with cod-liver oil internally.

UNIVERSITY HOSPITAL, BERLIN.

CASES FROM THE SURGICAL CLINIC.

Under the care of Dr. B. VON LANGENBECK.

(Reported by Mr. R. W. PARKER.)

I. HYDRONEPHROSIS.—A child named Hiller was brought to the hospital on May 12th, with a left single hare-lip. There was also fissure of the hard palate and velum. The child had a large abdomen, but otherwise appeared healthy. It was operated on by Professor von Langenbeck the day after its birth, and in six days the wound was quite healed. Meanwhile the child seemed to have great difficulty in swallowing, which rather increased than diminished. The child grew weaker, and finally died on the eighteenth day.

Post Mortem Examination, May 30th.—The cleft had healed, and the wound cicatrised. On opening the abdomen, the whole track of intestines was normal, but empty and contracted. The liver and spleen were healthy. On removing these organs, there remained in the abdomen an irregular mass of thin-walled intercommunicating cysts of various sizes; on dissection, they were found to be in connexion with the kidneys. The left kidney had become converted into a thin-walled fluctuating bladder, six centimètres long by four centimètres broad. From the hilus there passed an ureter as large as the small intestine, and, after many unusual windings and convolutions, entered the bladder in the normal position and manner, having resumed its usual size about three centimètres before its insertion. It was found, however, that there was a stricture of the ureter, so that the urine had difficulty in entering the bladder. On cutting into this kidney, it was found to consist of a very much enlarged pelvis, into which opened the enlarged calices. The whole was surrounded by a thin layer of gland-substance three or four millimètres thick. On the right side, in the normal position for the kidney, near the spine, nothing was found. The right kidney was situated much more anteriorly; it was converted into a mass of convoluted cysts, with thin fibrous walls, without any trace of gland-substance. From the hilus proceeded the ureter, which at its commencement was of the size of a child's stomach; it gradually narrowed, and, after much unusual winding, was inserted into the bladder. But in the bladder was found a septum dividing it unequally; and within this shut-off portion of the bladder was found the orifice of the right ureter. There was no communication with the rest of the bladder; so that the accumulation of the urine in the bladder and ureter will account for their distended condition, as also for the condition of the right kidney. From the absence of any very special symptoms, this condition of things was not in any way suspected during the infant's life. The brain and eyes were normal.

II. SPINA BIFIDA: ABSENCE OF CEREBELLUM.—The child (a girl) at the time of its birth had a soft small swelling immediately below the occiput. It was not brought to the hospital until four weeks later, at which time the swelling was of the size of a large walnut. The child, with the exception of slight hydrocephalus, was healthy and well proportioned. No active treatment was advised; but the mother was cautioned to protect the tumour from blows, and as much as possible from friction. Eight weeks later, the tumour had grown very rapidly and was as large as an ostrich's egg; the skin was tense, thin, semi-transparent, and inflamed (more especially on the under surface, wher

the tumour rested on the neck); and the superficial veins were congested. As rupture seemed imminent, it was now tapped with an exploring trocar, and about four ounces of a thin straw-coloured serous fluid were drawn off, after which the cannula was withdrawn, and the wound closed with adhesive plaster and collodion. In spite of this, however, the fluid continued slowly to ooze out, and the tumour became daily less, as also did the head. The operation produced no special effect on the child at the time; but three days later it became restless, and was seized with convulsions. It died on the fourth or fifth day.

Post Mortem Examination.—The spine, cord, and membranes, from the sacrum to the fifth cervical vertebra, were normal and healthy. There was neither infiltration nor congestion, and no trace of inflammation. The arches of the upper five cervical vertebræ were not closed, there being a median fissure about one *centimètre* wide; the laminae terminated in button-like processes. The covering of the tumour was found to consist of—1, integument; 2, dura mater; 3, a serous, gelatiniform, infiltrated areolar tissue; 4, a thin fine vascular membrane—a prolongation of the pia mater. The cyst contained a coagulated fibrinous straw-coloured mass. The fissure led into the central canal of the cord itself; this canal was enlarged to the extent of one-half or three-quarters of a *centimètre*. The anterior pillars of the cord were of normal size; the posterior, on the contrary, were distended and thinned to about one *millimètre* in thickness. The calvarium was abnormally large. The posterior fossa of the base of the skull was very flat. The posterior half of the foramen magnum, instead of being semi-circular, was directed backwards to a sharp angle, forming a triangle with a somewhat rounded base—as though the foramen had also partaken of this arrest in development. The tentorium cerebelli was absent, and the transverse sinus present only as far as the pars petrosa, where it terminated in a kind of *cul-de-sac*. The cerebellum was entirely absent. The pons Varolii was normal, as were also the crura cerebri. The nerves were in full number. The tuber cinereum was very thin. The third ventricle was filled with serous fluid.

III. SARCOMA OF SUPERIOR MAXILLARY BONE: EXCISION.—A man named Kilpin, aged 28, was operated on in March 1870, by Professor von Langenbeck, for a tumour in the right canine fossa, which extended also to the alveolar process. The tumour was dissected off from the jaw, and a triangular piece of the alveolar process was removed by bone-forceps. He did very well, and served as a soldier during the last war.

He had the first symptoms of recurrence during January of this year, while bivouacking out in the cold in France. He had pain in the old cicatrix, and remarked a swelling in the same place. Shortly afterwards a swelling appeared also in the right half of the hard palate. He got his discharge from the army, and was taken into the hospital. On closer examination, a swelling of the size of a walnut was found in the canine fossa. The right nostril was closed, and the right eye was also a little displaced upwards. On the hard palate there was a rounded hard swelling, accurately bounded by the median line; it was not ulcerated. On May 24th, Dr. Langenbeck removed the whole of the superior maxillary bone, including the anterior half of the floor of the orbit. In the course of the operation, it was found that the bone was very hard. The antrum was enlarged, and filled with the tumour. The floor of the orbit was pushed upwards, and perforated in two places. The external wound all healed by first intention in about six days. The man is entirely free from pain now, and doing very well. On cutting into the tumour, it was found to be of a white opaque colour. Under the microscope, it was found to belong to the fibro-nucleated tumours, consisting of closely interlacing bundles of long spindle-shaped cells, with large oval nuclei, but no stroma.

Professor Langenbeck's incision for excision of the jaw commences at a point corresponding with the junction of the nasal and frontal bones, and is carried obliquely downwards and outwards as low as the angle of the mouth (which is not touched), then upwards and outwards to a point corresponding to the centre of the zygomatic process; thus making a broad round-ended oval flap, which is dissected upwards, so as to expose the whole of the bone to be excised.

I am indebted to my friend Dr. Busch, Senior Assistant-Surgeon at the Royal Klinikum, for much help and kindness in getting these notes.

REVIEWS AND NOTICES.

PUERPERAL TEMPERATURES AND TEMPERATURE. VARIATIONS IN THE DISEASES OF CHILDREN. By W. SQUIRE, L.R.C.P. London: J. and A. Churchill, 1871.

No one in this country has devoted more attention to the subject of temperature in the diseases of children than Mr. SQUIRE; and credit is

especially due to him from the fact that all his observations have been made, and that accurately, while engaged in a busy practice. He has shown that family practitioners have no lack of opportunities, if they choose, to avail themselves of the thermometer as a valuable clinical aid, and furthermore to collect a mass of information regarding temperature in disease, which is not so easily gathered in hospital practice. The first of the two pamphlets which Mr. Squire has just issued, that on puerperal temperatures, is devoted chiefly to the natural history of ordinary labours, in which the following conclusions are drawn by the author: "That some elevation of temperature arises in natural labour; that there is afterwards a considerable fall of temperature which is favoured by sleep; that there is a subsequent exaltation of temperature which has for its natural termination the secretion of milk." It is also shown that the diet in childbed should not be of a toast-and-water character, but that substantial alcoholic beverages may be in some cases advantageously added to substantial food. Some remarks on the use of chloroform and chloral, which are worthy of attention, conclude the pamphlet. In noticing the work on *Temperature Variations in the Diseases of Children*, we would observe that some of the results given come from carefully investigating the stage of invasion in certain diseases; thus, the period of the actual beginning of measles can be recognised and fixed so as to enable timely separation to be effected: in the same way, the early stages of whooping-cough and diphtheria. The diagrams show at a glance how measles may be said, as a disease, to end with the eruption, while scarlet fever is only beginning with it. In speaking of varicella, a diagram is given in which it is shown that the day preceding the rash the temperature is even below normal, the true beginning, in fact, of the disease; while in small-pox there is always two days' illness, and fever often as high as 105 deg. before the spots appear. Moreover, the tendency to high temperature in varicella is seen to be on the second day; and, though it may then run higher than in the case given, it has been known to be 104 deg. at its highest; and mumps has been higher still, at its acme also on the second or third day; yet it soon subsides and becomes normal by the sixth day, when no more spots appear. The incubation periods and times of infection of these complaints are considered. In treating of the value of temperature observations in diagnosis, it is shown that the temperature variation of infants follows the same rules, and is within the same limits, as that of adults, and therefore becomes as serviceable for purposes of diagnosis. Mr. Squire alludes to the low range of temperature in some children, which is, he believes, explained by a dislike to, or deprivation of fatty food. A rather singular confirmation of this has been recently afforded by the fact, that the low temperature found by Dr. Finlayson amongst the children at the Manchester Workhouse was precisely at the time when Dr. E. Smith was compelled to call attention to the insufficiency of the diet-table. Space has no more than allowed us to touch on the valuable and interesting contents of Mr. Squire's pamphlets. We confidently recommend their careful perusal and study.

REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

STEAM-SPRAY INHALER FOR SMOKE OR VAPOUR.

MESSRS. KROHNE AND SESEMAN, surgical instrument makers to the London Hospital, have just adapted, at Mr. Bird's suggestion, the principle of his inhaling-pipe for smoke or vapour to Dr. Siegle's patent steam-spray inhaler, of which they are the proprietors. This inhaler has proved eminently successful for the employment by inhalation of medicated artificial sprays in the treatment of various diseases of the throat, nose, larynx, bronchi, etc., to which all *liquid* substances in the form of spray were applicable. By combining the principle of Mr. Bird's inhaling-pipe for smoke or vapour, the products of combustion, and diluting them by the steam-jet instead of air, as in Mr. Bird's ingenious little instrument, the most valuable results are obtained. The smoke of opium, stramonium, hemlock, pellitory, tobacco, lettuce, or any kind of pectoral herbs, either alone or in combination, as well as the fumes of sulphur, nitre, iodine, or mercurial preparations that require combustion to volatilise them, may be inhaled with the greatest comfort and facility by the most debilitated or nervous persons; while the temperature and the dilution by the steam-jet is so complete, as to render even the most acrid smoke or vapour perfectly respirable and most soothing and agreeable.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 12TH, 1871.

THE ANNUAL MEETING, 1871.

THE meeting of the Association during the present week was anticipated with great interest by a very large number of members, and for varied reasons. The *locale* of the meeting promised largely that holiday element which is an inseparable characteristic of such peripatetic annual gatherings, whether brought together in the name of medicine, of science, of sociology, or of archæological research. The programme indicated discussions of great importance for the votaries of that young Hercules of modern medical birth—State Medicine. Politicians saw in the Report of the Committee on Medical Reform vistas of a warm political discussion; and lovers of a general scrimmage (of which there are always, in a great Association, some active amateurs and many amused spectators) had the prospect of a freely announced "business" debate, which, it was declared, would be decidedly militant. Outside all these extraneous considerations was the fact that the Association, growing annually more numerous and widely spread, is becoming also more united and powerful; and that its annual meetings deal now with questions so large and numerous, and grasp them so firmly and steadily, that its meetings have an importance which cannot but grow. The better part of the anticipations of the meeting have been fully realised; the worse have not. In point of numbers, the assembly will rank among the most numerous on our record. The variety and beauty of the objects of local interest, the warm and anxious desire shown by the resident members of the profession in demonstrating them to their visitors, the general air of holiday and contentment, completed the satisfaction of those who seek relaxation at this as a great professional fête.

The important business of the first night of meeting passed over with what might be characterised as almost uninterrupted harmony; for the dissent from the report and recommendations of the Council and Committee of Council was confined to so few (some half-dozen gentlemen voting against the whole mass of the meeting), that practical unanimity was attained. It is pretty generally understood that the business management should be where the business itself is; and that, as the business lies in London, except at the meetings of the Committee of Council and the annual meetings, the business manager should be there. It was not much to the purpose to remind the Committee of Council that they had not before accepted propositions of reform; for no such proposition as this, which is the evident and essential reform, had ever been placed before them. And, looking to early provincial associations of office, it is unlikely that anything else than a small catastrophe, such as the total neglect of the business of the Association from March 1869 to October 1870, such as Mr. Hodgson described, and the consequent defalcation of an unsupervised clerk, would ever have made acceptable the change now proposed. Acceptable, how-

ever, it proved to be; and it was carried by an overwhelming majority. The subsequent proceedings were characterised by something more than mere harmony—a general desire to recognise every kind of merit, and to do justice to good qualities and good services, too apt to be forgotten in periods of temporary eclipse. In this course all parties agreed; and in this unanimous agreement to forget unpleasant facts in the past, to remember only what it is useful to remember, and to profit by them in the future, there may be seen the happiest augury for the future conduct of affairs.

The first night passed—and passed so happily—the rest of the meeting went merrily as marriage-bells. Two excellent Addresses; compliments from the Corporations; sectional meetings, not overloaded with papers or audiences, but still well attended; general compliments; fine weather; sea-excursions; the *Agincourt*, with its broken plates and its crest fallen; the turret-ship; reviews; visits to Dartmoor, to Torquay, and a round through notable points of Cornwall in view,—these were more than enough to furnish forth a physical and intellectual feast. The business of the meeting is still progressing; and, thanks to the exertions of Mr. Whipple, Mr. May, the Mayor of Devonport, Dr. Littleton, Dr. Hogarth Clay, Mr. Swain, Dr. John Rolston, Dr. Row, and others whose names we shall be enabled to give in further detail next week, the accessory arrangements of the meeting have been carried out in laborious detail to a point of great excellence, and there is every reason to anticipate that the meeting will terminate without any kind of drawback to mar its perfect success.

CHOLERA AND THE TYNE.

THE several authorities for administering the Nuisance Removal Acts on the Tyne have held a meeting at Newcastle, and have decided to act together for the purpose of carrying out the recent Order of Council, made with the view of preventing the introduction of cholera into this country, as will be seen from the following resolutions, which were passed at that meeting.

1. That in the opinion of the meeting an inspection should be made of vessels arriving from suspected ports, and that one or more medical officers, with such assistance as may be requisite, should be appointed to act in conjunction with the officers of Her Majesty's Customs.
2. That a floating hospital should be at once provided for the reception of all cases of cholera occurring afloat.
3. That application be made to the Tyne Improvement Commissioners to lay down, in the Narrows, moorings for infected vessels and the floating hospital.
4. That all necessary steps be taken, and requisite assistance and appliances provided, for carrying out the preceding resolutions and the disinfecting of vessels.
5. That the expenses to be incurred along the whole course of the river, with reference to cases occurring afloat, should, in whatever nuisance authority they may arise, be defrayed by the contribution of every nuisance authority on the banks of the river in proportion to the rateable value of each district.
6. That a Committee, consisting of the Mayors of Newcastle, Gateshead, Tynemouth, and South Shields; the Collectors of Her Majesty's Customs at Newcastle, Tynemouth, and South Shields; the Deputy Master of the Trinity House; the Chairmen of the different local authorities; three members of the Newcastle Corporation, and one from each of the other boroughs, with the different Town Clerks and Clerks of Local Boards, be appointed such Committee, and that they be requested to appoint sub-working Committees to carry out the preceding resolutions.
7. That the meeting be adjourned until the 10th day of August instant, at two o'clock, and that the different local authorities be then prepared with the names of the persons to represent them respectively, and with their written assent to the mode in which the expenses are proposed to be defrayed.

MR. THOMAS COOKE has, by a large majority, been elected Assistant-Surgeon to the Westminster Hospital.

IT is proposed to establish a cottage hospital at Southend, to cost £800. It is intended to be quite simple and cottage-like.

AMONGST the sixteen Communalist prisoners now being tried at Versailles are M. Rastoul, a physician, and M. Jourde, a medical student.

A STATUE of Sir Humphrey Davy is to be erected in Penzance, the town of his birth. The total cost of the statue will be, it is estimated, about six hundred pounds.

A REMARKABLE case of hydrophobia, in which the symptoms became developed four months after a bite from a dog, proved fatal a few days ago in London. The patient was a girl, ten years of age, and died in University College Hospital.

THE NEW BARONET.

THE honour of baronetcy has this week been conferred on James Paget. That distinction has long been anticipated by the unerring verdict of his profession. *Laudatus à laudatis*, Sir James Paget has long held a foremost place in the hearts and minds of his brethren. Many words are out of place; and it is not in a man's lifetime, and, so to say, in his presence, that it is most fitting to say all that is good in him and of him. Gifted with the highest endowments and charms of intellect, his scientific eminence has only made the more remarkable the wide range of virtues and sympathies which adorn his character.

THE BARNES CONVALESCENT HOSPITAL.

THE foundation-stone of the Barnes Convalescent Hospital at Cheadle was laid on July 28th by the Bishop of Manchester. Mr. Barnes has already given £26,000 towards its erection, and it is probable that a further sum of from two to three thousand pounds will be required before it is completed. It will be an imposing-looking building, with a frontage of 105 yards. A large winter-garden, roofed in with glass, 100 yards long and 70 wide, will occupy the centre, and afford ample light for the side wings. There will be a cubic space of 3,300 feet for each patient. The hospital is eight miles from Manchester, and has an admirable situation upon a sandy soil in one of the prettiest parts of Cheshire.

CHOLERA.

ON board three of the steamers from Cronstadt to Hull there have been fatal cases of cholera; but the health of Hull was never better than at the present moment, the death-rate for the fortnight ending on Wednesday being only 18.9 per 1,000 of the population. The Sanitary Committee of the Local Board of Health have taken the most prompt action with a view to prevent any importation of the dreadful malady. The chairman of that committee, Mr. Alderman Mayfield, first heard that cholera had occurred on board a Hull steamer, the *Burgos*, on Friday last. He at once conferred with the Mayor and the Board's Law clerk, and the same day, before the arrival of the new order in Council relating to cholera, he appointed temporarily a medical officer to board every ship arriving from Cronstadt, and put the sanitary inspector in motion, ordering the preparation of the Cholera Hospital—a wooden building, erected when the town was threatened with the cholera in 1866. At a meeting of the Sanitary Committee, held on Wednesday, the chairman's action was approved, and the following among other resolutions carried:—"That the Local Board, as the nuisance authority, hereby directs that the master of every ship arriving within this district from a place infected with the cholera, having on board any person affected with the cholera, or the body of any person dead with the cholera, must anchor at a place in the Hull Roads at a distance of not less than one hundred and fifty yards eastward of the Humber training ship *Southampton*, in order that all persons on board such ship may be examined and certified, as required by the order." The committee next appointed a medical practitioner, Mr. J. F. Holden, to visit each ship arriving from an infected port. A resolution was also passed to circu-

late among shipmasters copies of the Order in Council. It was also resolved that the law clerk write to the admiralty, asking for the loan of an old war vessel, to be fitted up and used as a hospital ship in the Humber. It was further resolved that the surveyor be empowered to take all necessary steps to place the public and private sewers and ditches within the Board's district in a thoroughly sanitary condition. Other resolutions of a like nature were also adopted.

THE NEW HALIFAX INFIRMARY.

THE new Infirmary to be erected at Halifax will contain 217 beds when it is fully completed. At present, the portion accommodating eighty-four beds will only be built. The total cost per bed is estimated at £150.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, LONDON.

DR. HANDFIELD JONES has been appointed Lecturer on Clinical Medicine, in the place of Dr. Sibson; and Mr. Spencer Smith to the lectureship on Clinical Surgery, vacant by the resignation of Mr. Samuel Lane. Dr. Broadbent has been appointed co-lecturer with Dr. Chambers on the Principles and Practice of Medicine, and Mr. Gascoyen co-lecturer on Surgery with Mr. J. R. Lane. Dr. Nunneley has also been appointed Lecturer on Histology and Experimental Physiology.

SMALL-POX IN HAMBURG.

THE following particulars with reference to the prevalence of small-pox in Hamburg have appeared in the newspapers there. The particulars are not of the whole place; for, as far as we know, no official returns on the subject have been published. But the accompanying figures are taken, as above stated, from a newspaper which professes to give the number of cases admitted into the General Hospital and into an Infirmary between January and June last: January, cases 311, deaths 7; February, cases 419, deaths 18; March, cases 471, deaths 38; April, cases 601, deaths 39; May, cases 637, deaths 65; June, cases 834, deaths 85; total cases, 3,273; deaths, 252. It is also reported that the deaths from this disease have been very numerous in the State, the numbers being given as follows: January, 62; February, 107; March, 160; April, 226; May, 400; June, 466; total, 1,421. We believe that the population of Hamburg is somewhere about three hundred thousand; so that, if this amount be taken, the death-rate would appear to be something more than four per thousand of the population—an unmistakably high death-rate for six months.

THE SMALL-POX AND SUMMARY OF ITS MORTALITY.

THE present epidemic of small-pox, which may be said to have broken out in the last three months of 1870, caused, according to the Registrar General, 1,229 deaths in England and Wales during that quarter. In the first three months of this year they rose to 4,903, and in the quarter ending June last they further increased to 7,012. Of these, 3,241 occurred in the metropolitan division, 1,120 in the north-western counties, and 1,069 in the northern counties; the remaining 1,585 were distributed among the seven other registration divisions. It will thus be seen that the principal centres of infection were the same four that were noticed in the Quarterly Return for the first three months of this year: London, from which the disease spread into the extra-metropolitan portions of Middlesex, Surrey, and Kent, and also into that part of Essex adjoining the east end of London; Liverpool, from which the infection extended to a considerable number of the other towns in the densely populated Lancashire district, including Manchester, Salford, Bolton, and Wigan, and also, but slightly, into Birkenhead. The third principal centre of infection was the coal districts of the north, more notably the towns of Newcastle, Sunderland, Stockton, and Durham. The fourth distinct outbreak was in the mining districts of South Wales. In London, the deaths from small-pox increased from 2,400 in the first, to 3,241 in the second quarter of this year; in Lancashire and Cheshire they declined from 1,224 to 1,120; they rose in Northumberland and Durham from 461 to 1,022; while in South Wales they declined from

207 to 109, although the fatal cases had increased in Swansea. Of the other and smaller outbreaks which cannot be directly traced to any of the above four centres of infection, the following are the most important:—Southampton, where the deaths from small-pox increased from 24 in the first quarter of the year to 229 in the quarter ending June; Weymouth, where from two in the first, they rose to 39 in the second quarter; Falmouth, which showed an increase from 11 to 27; Bridgewater, which showed 12 deaths last quarter; Oswestry, in which 14 deaths occurred last quarter; Stoke-upon-Trent, in which district 103 occurred in the second quarter, against but one in the first quarter; Nuneaton, in which the numbers were respectively 9 and 26; Coventry, which showed 4 and 14; and Great Grimsby, in which the deaths rose from 18 in the first quarter to 164 in the three months ending June last. The three Ridings of Yorkshire, comprising the ninth registration division, with its more than two and three-quarters millions of population, has hitherto comparatively escaped the effects of the present small-pox epidemic; in the first quarter of this year the deaths from this disease in Yorkshire were but 69, while in the three months now under notice they had only increased to 98; of these, 21 occurred in Bentham and 20 in Kirk Leatham sub-districts, the former in the West and the latter in the North Riding.

THE CONTAGIOUS DISEASES ACTS.

THE Association for extending these Acts has shown a remarkable—we had almost said a culpable—apathy in the face of coming events, and has by no means risen to the height of the responsibilities which the members assumed before the country when they commenced their proceedings. They have resolved at a recent meeting to postpone the general meeting of the members, which was to have been held when the Report of the Royal Commission appeared, until the publication of the minutes of evidence, of which the subcommittee hopes to lay before the Association and the public an impartial summary before Parliament reassembles next session. In the meantime, the subcommittee considers that the Association has much cause for congratulation in the result of the inquiry. The modification and extension of the Acts for the purpose of lessening disease, restraining immorality, and for obtaining legal power to remove young girls from a life of sin, which have throughout been the avowed objects of this Association, are, in the main, adopted by the Commission in their Report. This document has been drawn up after an exhaustive inquiry, in which every one who believed he or she had information to give was allowed full liberty of speech and a patient hearing. It is most satisfactory, they observe, to find that not one of the outrages so vividly described by certain opponents of the Acts has been proved to have actually occurred; and that, while disease among the troops quartered outside the districts of the Acts has increased, and not diminished, it has fallen to less than one-half of its old prevalence where the Acts are put in force. It would be still more satisfactory to find the Association intelligently at work to foil the misrepresentations, and, by truthful and intelligent agents capable of speaking on a platform and writing effectively in local prints, counteracting the restless and mischievous misstatements which form part of the ubiquitous system of agitation of the friends of contagion.

BRITISH PHARMACEUTICAL CONFERENCE.

THE annual Conference of Pharmaceutists was held last week at Edinburgh, just before the meeting of the British Association. Mr. Stoddart presided. There were about a hundred members present. The President's address discussed pharmaceutical progress. Papers were read on Chloral by Mr. Mason, F.C.S. The conclusions were favourable to the general purity of the substance. Mr. Wood made some important remarks. He believed it was the general experience that what caused the principal variation in the chloroform results, was the presence of rather more or rather less water in the sample examined. But in the manufacture of chloral it appeared probable that there were produced, in a greater or less proportion, certain other substances, and that these might remain associated with the chloral in greater or less proportion; and those sub-

stances were likely to exercise very considerable influence on the medicinal properties of the article. The chloroform test, as far as his experience had gone, failed to be of much use in indicating the presence or absence of such substitution products. What was really required was the means of testing chloral so as to recognise their presence. He himself was inclined to regard the boiling point as a more valuable test to apply; though that, unfortunately, was liable to a defect which was probably due to the action of heat on the chloral itself.—Mr. H. C. Baidon read a brief paper recommending a decoction of the bark of *Rhamnus frangula*, or black alder, as a gentle cathartic, calculated to serve as a valuable substitute for senna.—The Conference then adjourned for luncheon.—The Conference resumed at two o'clock.—Communications were read from Mr. C. H. Staples, on "The Compound Iron Mixture of the British Pharmacopœia"; by Professor Allen, R.C.S., on "The Purity of the Permanganate of Potassium of Pharmacy"; and from Mr. T. B. Groves, F.C.S., on "Solutions". "On the Use of Blistering Flies in Hydrophobia" was the subject of a worthless paper from Mr. Henry Groves, of Florence.

MUNIFICENCE.

MR. CHARLES BROOK, of Enderley Hall, Leicestershire, the head of the firm of Messrs. Jonas Brook and Brothers, thread manufacturers, Huddersfield, lately gave to the Trustees of the Infirmary in that town a "convalescent home," which he has erected at a cost of £12,000, and to the endowment fund of which he presented an additional £18,000. The "home" has been built in the midst of a beautiful landscape, and overlooks, not only Messrs. Brook's manufactories (Meltham Mills), but a church, model working-men's dwellings, schools, dining-hall for operatives, and a people's park, all the gifts of Mr. Charles Brook. The donor in person opened the building, and it was the sign for an almost general holiday in the town. In the evening a banquet was given to celebrate the event.

NEW SICK ASYLUM FOR EAST LONDON.

ON Friday last, the Poplar and Stepney Sick Asylum, which has been erected under the provisions of the Metropolitan Poor Act (1867) for the accommodation of the sick of the parishes of Poplar, Bromley, Bow, Limehouse, Wapping, Shadwell, and Ratcliff, was opened for the reception of patients. The building, which has been erected on a plot of land opposite the workhouse of the Stepney Union, at Bromley-by-Bow, has been constructed on the pavilion principle, and consists of eight separate blocks, all of which are connected by a corridor 10 feet wide, and upwards of 600 feet long. Though no great architectural effects have been intended, yet a pleasing effect is obtained from the general arrangement of the pavilions, and by judicious variety in the use of the materials, which are Portland stone and brick. The building is certified by the Poor-law Board to contain 572 beds, and the cubic space allotted to each patient varies from 1,000 feet to 1,500 feet. The central block contains the officers' rooms and a chapel, the latter being fitted to seat 100 persons. It has an open timbered roof of pine, with moulded tie beams and curved ribs under the principal rafters meeting in an apex, and the spandrels filled with perforated panels. Eight stained grisaille windows give light to the building. The whole asylum is warmed by hot water coils. The building was erected by Mr. R. Mann, of Kentish-town, at a total cost of £43,000. This amount is defrayed from a loan made by the District Asylum managers, the repayments from the poor-rates of the district being spread over a long series of years.

NORMAL AND MORBID ANATOMY OF THE PELVIS.

AMONGST the useful works chalked out by the Obstetrical Society is the collection of specimens of the pelvis (male and female) of the various races, together with, if possible, foetal heads at term; the collection of abnormal female pelvises or casts; the collection of histories, drawings, or photographs and descriptions, of abnormal pelvises, where it is not possible to procure the pelvis themselves or casts. To carry out this work, a "Pelvis Committee" has been appointed. It is suggested that, as the vacation will be scattering the Fellows of the

Society in various directions, they might lend material aid to the Committee, and at the same time attain a pleasant and instructive motive for their wanderings, if they would undertake to visit such collections as may fall in their way, taking notes of the objects of interest they may contain, and opening communications with the authorities with a view to the procuring of casts, photographs, descriptions, etc. Gentlemen about to start on their tours, who may wish to help in this way, are invited to write for instructions and introductions to the Secretaries, Dr. Wiltshire and Dr. Heywood Smith.

DIARRHOEA IN LONDON.

ACCORDING to the Registrar-General's return for the week ending August 5th, the deaths in London were so many as 350 below the average numbers in the corresponding week of the last ten years. The fatal cases of diarrhoea, which had been 110 and 201 in the two previous weeks, further rose to 225 last week; this number, however, was 72 below the average number from this complaint in the corresponding week of the ten years 1861-70, corrected for increase of population. Of these 225 deaths from diarrhoea last week, 189 were of infants under one year of age. To cholera and choleraic diarrhoea 18 deaths were referred last week, against 9 and 17 in the two previous weeks; three were of adults, and the rest of infants; the adult cases were all certified as "choleraic diarrhoea," of a few days duration. The mean temperature last week was again somewhat below the average, or probably a still larger fatality from diarrhoeal diseases would have been recorded.

SMALL-POX IN MANCHESTER.

OUR Manchester correspondent sends a short note on two cases of small-pox which terminated fatally last week. The details are, we think, worthy of record. The first case was that of a girl, aged 20, who died in the Manchester Royal Infirmary. She had three well-marked cicatrices from early vaccination, and also three good vesicles of revaccination, which had been performed a fortnight before her admission, with lymph taken from a child. She sank on the sixth day of the eruption. At the *post mortem* examination, all the organs were found to be healthy. The second case occurred at the Small-pox Wards of the Poor-law Guardians in Canal Street, and was under the care of Mr. Westmorland. The patient was a man, aged about 35, who presented no cicatrices of early vaccination. On the fourth day, Mr. Westmorland found him breathing with great difficulty, and on examination, discovered that the dyspnoea was caused by a very great enlargement of the tongue. He freely incised it down each side with the effect of giving temporary relief, but the glossitis, in spite of this, increased, and in the night, while the patient was asleep, the swollen tongue seems to have fallen back upon the larynx, and caused death by suffocation.

VIVISECTION.

THE Committee on Vivisection of the British Association have reported as follows.

A Committee, consisting of ten individuals, having been appointed at the last meeting of the British Association, held at Liverpool, to consider the subject of physiological experimentation in accordance with a resolution of the General Committee, the following Report was drawn up and signed by seven members of the Committee: 1. No experiment which can be performed under the influence of an anæsthetic ought to be done without it. 2. No painful experiment is justifiable for the mere purpose of illustrating a law or fact already demonstrated; in other words, experimentation without the employment of anæsthetics is not a fitting exhibition for teaching purposes. 3. Whenever, for the investigation of new truth, it is necessary to make a painful experiment, every effort should be made to ensure success, in order that the suffering inflicted may not be wasted. For this reason, no painful experiment ought to be performed by an unskilled person with insufficient instruments and assistance, or in places not suitable to the purpose—that is to say, anywhere except in physiological and pathological laboratories under proper regulations. 4. In the scientific preparation for veterinary practice, operations ought not to be performed upon living animals for the mere purpose of obtaining greater operative dexterity.—Signed by M. A. Thomson, Oxford; John H. Balfour and Arthur Gamgee, Edinburgh;

G. M. Humphrey, Cambridge; William Flower, Royal College of Surgeons, London; J. B. Sanderson, London; George Rolleston, Secretary, Oxford.

THE ADVANCE OF CHOLERA.

ACCORDING to Dr. Zuelzer, of Berlin, Asiatic cholera has now entered Germany. During the first three days of August, seventeen fatal cases occurred in Königsberg; the first was of a Polish merchant who arrived at Königsberg from Wirballen. In Riga, seventy-five deaths from cholera were reported between the 5th and 22nd of July.

MEDICAL EXPERTS IN COURTS OF LAW.

WE have received the following from Mr. James Lane and Mr. Arthur Norton, in reply to the communication published last week from Mr. Lawson Tait.

In your last number you have published some remarks by Mr. Lawson Tait, in which he criticises as a "scandal to science" the evidence given by "two London hospital surgeons" on the occasion of a trial which recently took place at the Guildhall for alleged malpraxis by a dentist. We (the surgeons alluded to) are ready to admit that the present method of taking the evidence of medical experts may be open to grave objections; but the facts of the case in question have been entirely misrepresented by Mr. Tait, and, instead of being liable to the interpretation which he has placed upon them, should, in our opinion, rather be quoted as an example of the way in which juries will occasionally return a verdict in direct opposition to the evidence before them and to the most obvious principles of justice. The following are the real facts. In November 1869, the plaintiff, a mate of a vessel, had his second upper molar tooth extracted by a dentist in Liverpool. The dentist heard no more of the matter *till eighteen months afterwards*, when he received a lawyer's letter demanding compensation for injuries alleged to have been done to the patient's jaw, which request not being complied with, an action for damages was brought. The defendant, the dentist, having no recollection whatever of the circumstance or of the individual, and being in complete ignorance of the nature of the alleged injury and of the evidence to be adduced in support of it, applied to us to examine the plaintiff in his behalf. We accordingly met by appointment for this purpose on the morning of the trial, and, after having waited two hours for Mr. Tait, the medical attendant of the plaintiff, were informed, on that gentleman's arrival, that he preferred not to meet us. We therefore examined the man in his absence; but his legal adviser would not permit us to ask any questions. We found that the teeth and apparently a considerable portion of the alveolus of the left upper jaw were wanting; that there was a sinus discharging matter beneath the upper lip; that the hard palate was extremely tender when touched; and, further, *that the nasal septum had fallen in, and the nose was completely flattened*. We learned, as the case went on, that, in addition to a large sequestrum of the alveolus which had been removed, together with the teeth belonging to it, by Mr. Tait, several other pieces of bone had come away through the nose; and that there was still some dead bone remaining. Our evidence was to the effect that it was in the highest degree improbable, if not impossible, that such extensive disease, especially in the direction of the nose, could have been caused by the extraction of a second molar tooth, even if the jaw had been fractured or fissured for three-quarters of an inch in an upward direction from the alveolus of that tooth, as described by Mr. Tait; who, however, did not see the patient till seven months after the occurrence. We stated also that fractures of the superior maxilla in a healthy person commonly united with great facility, and were rarely attended by serious complications; but that appearances precisely similar to those presented by the plaintiff were not unfrequently met with as the result of constitutional disease, and notably of syphilis. We had also no difficulty in controverting, from our own experience, the statement of Mr. Tait that syphilis, though it might affect other portions of the superior maxillary bone, never affected its alveolar process. The case, however, after all, did not turn so much on the medical evidence as on the question whether *reasonable* care and skill were applied by the dentist in the extraction of the tooth; it being laid down that, unless the contrary could be shown, no after-consequences would entitle the plaintiff to damages. Mr. Tait has told you that the jury immediately found most substantial damages for the plaintiff; but he has not told you that at the close of the plaintiff's case, the judge intimated his opinion that there was no evidence of want of skill or care on the part of the dentist, but allowed the case to proceed, reserving leave to the defendant to move the full court to have a non-suit entered; and, after hearing the defendant's evidence, he summed up very strongly in his favour. There was a pro-

tracted discussion in the jury box before the verdict was given. The case, therefore, is still *sub judice*; and it is not improbable that the verdict may yet be reversed.

We care little for the opinion of Mr. Lawson Tait; but when that self-satisfied gentleman places himself on a high moral and scientific elevation, and serenely sits in judgment in your columns on the conduct of two members of his own profession with whom he has been brought in contact, modestly drawing comparisons in his own favour, we feel impelled to question his title to the position which he has assumed, and to ask what right he has to infer that the evidence given by us in this case was less honest and conscientious than his own. When this self-constituted censor morum talks of our evidence as a "scandal to science", and as an "unfair attempt to damage the cause of a poor man", he must mean, if he means anything, that we perverted the facts or distorted our real opinions in order unworthily to serve the cause of those by whom we had been consulted—an imputation alike offensive and unjustifiable. It is a "*scandal*", sir, to our profession, when members of it are found ready publicly to fling about against their *confrères* such reckless and unfounded accusations as these.

ST. THOMAS'S MEDICAL SCHOOL.

DR. MURCHISON will deliver the lectures on Medicine in conjunction with Dr. Peacock; Dr. John Harley, on Physiology and Practical Physiology, in conjunction with Dr. Ord; and Mr. Francis Mason and Mr. Wagstaffe, on Descriptive Anatomy. The demonstrations on Morbid Anatomy will be given by Dr. Payne.

THE MEDICAL ARRANGEMENTS AT THE CAMP AT SHOEBOURNESS. THE arrangements this year are of a more complete character than on previous occasions. A hospital-tent, to afford accommodation for six patients, with separate surgery and requisites, has been furnished, and attendants have been supplied from the Army Hospital Corps. Mr. Wickham Barnes, 2nd Middlesex Artillery, is Surgeon in charge, assisted by Dr. W. H. Arthur, 1st Sussex Artillery; Mr. Corbet, 2nd Essex Artillery; and Mr. E. F. Willing, 7th Essex Artillery. The sanitary arrangements of the camp are good, and very little illness has appeared.

THE NEW BATHS AT UNIVERSITY COLLEGE HOSPITAL.

WE have had the satisfaction of inspecting the new baths at this hospital, which are now verging on completion, and will be opened in a few days. On a previous occasion, we alluded to the arrangements which were being carried out in their construction. The baths are, it will be understood, not by any means exclusively intended for the treatment of cutaneous affections, although, no doubt, Dr. Tilbury Fox will claim for this class of diseases the largest demand on their therapeutical use. There are means afforded, by the medicated, Russian, vapour, douche, and other baths, for the treatment of nervous and pulmonary diseases, acute rheumatism, and other general maladies; and we look forward with interest to the rich therapeutical harvest which will now no doubt be gathered in the treatment of diseases by the physicians and surgeons of the hospital. The very successful completion—indeed, the existence—of the baths is chiefly due to Dr. Tilbury Fox, who has carried out the undertaking with great energy. The well known architectural ability of Mr. Manning in the arrangement and perfecting of detail is fully represented.

THE PRIVY COUNCIL AND THE CHOLERA.

THE Privy Council has issued the following orders in accordance with the powers of the Sanitary Acts:—1. No master of any ship in which, during the voyage and before the arrival thereof at any port of the United Kingdom, any person has been attacked with or died of cholera, shall bring his ship into any such port until he has destroyed the clothing and bedding of all persons who shall so have died, or had an attack of cholera on board such vessel during such voyage. 2. In this order, the term "ship" includes vessel or boat. The term "master" includes the officer or person for the time being in charge or command of a ship. The term "cholera" includes choleraic diarrhoea. 3. The terms "clothing and bedding" mean and include all clothing and bedding in actual use, and worn or used by the person attacked as aforesaid, at the time of and during such attack. 4. Every person offending against this order

shall be liable on summary conviction to a penalty not exceeding £10. 5. The Lords Commissioners of Her Majesty's Treasury are to give the necessary directions herein accordingly.

THE BRITISH ASSOCIATION.—The sittings of the British Association terminated on Wednesday. The general Committee has resolved to make application to Government for a grant of £2000 to assist in defraying the expenses of observing the eclipse of the sun, which will take place in December next. The intended observations are to be made in India and Ceylon. The total number of tickets sold for the Edinburgh meeting was 2463, and the money received £2575.

THE office of Medical Officer of Health for Islington has become vacant by the resignation of Dr. Ballard. The salary attached to the office amounts to £300.

SCOTLAND.

CRAIG *versus* JEX BLAKE.

A FUND is being raised by the friends of the Medical Education of Women Society in England and Scotland, for the purpose of defraying the expenses of the late action, in which the pursuer obtained damages of a farthing, while the defendant was saddled with costs to the amount of nearly £900. Professor MacDonald, of St. Andrews, in a letter which appears in the *Scotsman*, proposes that a public testimonial be given to Miss Jex Blake, and intimates a subscription from himself of £5 towards the object.

EDINBURGH ANNUAL DINNER OF THE LICENTIATES IN DENTAL SURGERY.

THE annual meeting passed off successfully in the Douglas Hotel; Mr. Robert Hepburn, late President of the Odontological Society of Great Britain, in the chair, supported by Vice-Admiral Sir Edward Belcher, Dr. Richardson, and others.

PREPARATIONS FOR CHOLERA.

WE are glad to observe that the local authorities in most of the east coast seaport towns of Scotland are actively engaged in preparing to meet an epidemic of cholera should it appear in their midst. Many of them are erecting hospitals or making arrangements with the infirmary authorities so as to secure efficient and early attention to cases which may occur.

MEDICAL SCIENCE.

PROFESSOR HUGHES BENNETT delivered last week a graduation address at the formal "capping" of the graduates of the University of Edinburgh, which, at any other time of less pressure, we should have been disposed to present to our readers *verbatim*. Vigorous, clear, eloquent, and bold, this address defined the position in the State of the physician, and the attitude in science of the biologist; it dealt severely with the intolerant and ignorant pretensions of verbally educated *litterateurs* and dogmatic theologians to sit in judgment on researches and theories on which they were less qualified to judge, by the blankness of their ignorance and the prejudices of their cultivation, than an intelligent savage. Professor Bennett's address was enthusiastically received.

IRELAND.

VISIT OF THE ROYAL FAMILY TO ST. VINCENT'S HOSPITAL, DUBLIN.

ON Thursday, H.R.H. the Prince of Wales, Prince Arthur, Princess Louise, the Marquis of Lorne, and several noblemen in attendance, visited St. Vincent's Hospital. They were received by Cardinal Cullen and other clerical dignitaries, and were then conducted through the various wards by Dr. Mapother, Mr. O'Leary, and Mr. Doherty, the Surgeon-Dentist.

APOTHECARIES' HALL OF IRELAND.

AT the annual meeting of the General Council of the Apothecaries' Hall of Ireland on August 1st, 1871, the following gentlemen were elected as office-bearers for the ensuing year:—*Governor*: R. Montgomery, Esq. *Deputy-Governor*: J. A. Dirham, Esq. *Court of Directors and Examiners*: T. Collins, C. Holmes, A. Harvey, C. H. Leet, C. F. Moore, H. P. Nolan, J. O'Flaherty, E. J. O'Neill, G. B. Owens, John Ryan, James Shad, John Shea, and G. Wyre, Esqrs. *Examiners in Arts*: G. Atkinson, A. M., M. B. Dub., and J. W. Moore, M.D. *Secretary and Representative in the Medical Council of Education*: C. H. Leet, M.D.

THE BRITISH ASSOCIATION.

THE British Association commenced its annual Session on Wednesday, August 2nd, at Edinburgh. The issue of tickets proceeded apace, and at six o'clock the numbers stood as follows:—Old life members, 200; new life members, 21; old annual members, 273; new annual members, 96; associates, 801; ladies, 688; foreigners, 15—total, 2,094, representing in receipts, £2,164.

Professor Huxley, the retiring President, introduced Sir WILLIAM THOMSON, the President of the year, who delivered the annual address. The following passages are those particularly interesting to our readers.

Biological Research.—The essence of science, as is well illustrated by astronomy and cosmical physics, consists of inferring antecedent conditions and anticipating future evolutions from phenomena which have actually come under observation. In biology the difficulties of successfully acting up to this ideal are prodigious. The earnest naturalists of the present day are, however, not appalled or paralysed by them, and are struggling boldly and laboriously to pass out of the mere "natural history stage" of their study, and bring zoology within the range of natural philosophy. A very ancient speculation, still clung to by many naturalists (so much so that I have a choice of modern terms to quote in expressing it), supposes that, under meteorological conditions very different from the present, dead matter may have run together or crystallised or fermented into "germs of life," or "organic cells," or "protoplasm." But science brings a vast mass of inductive evidence against this hypothesis of spontaneous generation, as you have heard from my predecessor in the presidential chair. Careful enough scrutiny has in every case, up to the present day, discovered life as antecedent to life. Dead matter cannot become living without coming under the influence of matter previously alive. This seems to me as sure a teaching of science as the law of gravitation. I utterly repudiate, as opposed to all philosophical uniformitarianism, the assumption of "different meteorological conditions"—that is to say, somewhat different vicissitudes of temperature, pressure, moisture, gaseous atmosphere—to produce or to permit that to take place by force or motion of dead matter alone, which is a direct contravention of what seems to us biological law. I am prepared for the answer, "our code of biological law is an expression of our ignorance as well as of our knowledge." And I say yes: search for spontaneous generation out of inorganic materials; let anyone not satisfied with the purely negative testimony of which we have now so much against it, throw himself into the inquiry. Such investigations as those of Pasteur, Pouchet, and Bastian are among the most interesting and momentous in the whole range of natural history, and their results, whether positive or negative, must richly reward the most careful and laborious experimenting. I confess to being deeply impressed by the evidence put before us by Professor Huxley, and I am ready to adopt, as an article of scientific faith, true through all space and through all time, that life proceeds from life, and from nothing but life.

Origin of Life on our Globe.—How, then, did life originate on the earth? Tracing the physical history of the earth backwards, on strict dynamical principles, we are brought to a red-hot melted globe on which no life could exist. Hence when the earth was first fit for life, there was no living thing on it. There were rocks solid and disintegrated, water, air all around, warmed and illuminated by a brilliant sun, ready to become a garden. Did grass and trees and flowers spring into existence, in all the fulness of ripe beauty, by a fiat of creative power? or did vegetation, growing up from seed sown, spread and multiply over the whole earth? Science is bound, by the everlasting law of honour, to face fearlessly every problem which can fairly be presented to it. If a

probable solution, consistent with the ordinary course of nature, can be found, we must not invoke an abnormal act of creative power. When a lava stream flows down the sides of Vesuvius or Etna, it quickly cools and becomes solid; and after a few weeks or years it teems with vegetable and animal life, which for it originated by the transport of seed and ova and by the migration of individual living creatures. When a volcanic island springs up from the sea, and after a few years is found clothed with vegetation, we do not hesitate to assume that seed has been wafted to it through the air, or floated to it on rafts. Is it not possible, and if possible, is it not probable, that the beginning of vegetable life on the earth is to be similarly explained? Every year thousands, probably millions, of fragments of solid matter fallen upon the earth—whence came these fragments? What is the previous history of any one of them? Was it created in the beginning of time an amorphous mass? This idea is so unacceptable that, tacitly or explicitly, all men discard it. It is often assumed that all, and it is certain that some, meteoric stones are fragments which had been broken off from greater masses and launched free into space. It is as sure that collisions must occur between great masses moving through space as it is that ships, steered without intelligence directed to prevent collision, could not cross and recross the Atlantic for thousands of years with immunity from collisions. When two great masses come into collision in space, it is certain that a large part of each is melted; but it seems also quite certain that in many cases a large quantity of *débris* must be shot forth in all directions, much of which may have experienced no greater violence than individual pieces of rock experience in a landslide or in blasting by gunpowder. Should the time when this earth comes into collision with another body, comparable in dimensions to itself, be when it is still clothed, as at present, with vegetation, many great and small fragments carrying seed, and living plants and animals, would undoubtedly be scattered through space. Hence, and because we all confidently believe that there are at present, and have been from time immemorial, many worlds of life besides our own, we must regard it as probable in the highest degree that there are countless seed-bearing meteoric stones moving about through space. If at the present instant no life existed upon this earth, one such stone falling upon it might, by what we blindly call natural causes, lead to its becoming covered with vegetation. I am fully conscious of the many scientific objections which may be urged against this hypothesis, but I believe them to be all answerable. I have already taxed your patience too severely to allow me to think of discussing any of them on the present occasion. The hypothesis that life originated on this earth through moss-grown fragments from the ruins of another world may seem wild and visionary; all I maintain is that it is not unscientific.

The Darwinian Theory.—From the earth stocked with such vegetation as it could receive meteorically, to the earth teeming with all the endless variety of plants and animals which now inhabit it, the step is prodigious; yet, according to the doctrine of continuity, most ably laid before the Association by a predecessor in this chair (Mr. Grove), all creatures now living on earth have proceeded by orderly evolution from some such origin. Darwin concludes his great work on *The Origin of Species* with the following words:—"It is interesting to contemplate an entangled bank clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us. . . . There is grandeur in this view of life with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms, most beautiful and most wonderful, have been, and are being, evolved." With the feeling expressed in these two sentences, I most cordially sympathise. I have omitted two sentences which come between them, describing briefly the hypothesis of "the origin of species by natural selection," because I have always felt that this hypothesis does not contain the true theory of evolution, if evolution there has been, in biology. Sir John Herschel, in expressing a favourable judgment on the hypothesis of zoological evolution, with, however, some reservation in respect to the origin of man, objected to the doctrine of natural selection, that it was too like the Laputan method of making books, and that it did not sufficiently take into account a continually guiding and controlling intelligence. This seems to me a most valuable and instructive criticism. I feel profoundly convinced that the argument of design has been greatly too much lost sight of in recent zoological speculations. Reaction against the frivolities of teleology, such as are to be found, not rarely, in the notes of the learned commentators on Paley's *Natural Theology*, has, I believe, had a temporary effect in turning attention from the solid and irrefragable argument so well put

forward in that excellent old book. But overpoweringly strong proofs of intelligent and benevolent design lie all round us, and if ever perplexities, whether metaphysical or scientific, turn us away from them for a time, they come back upon us with irresistible force, showing to us through nature the influence of a free will, and teaching us that all living beings depend on one ever-acting Creator and Ruler. [*Applause.*]

SECTION D. *Biology.*—*President*, Professor Allen Thomson, F.R.S. L. and E. *Vice-Presidents*: Professor Wyville Thomson, F.R.S.; Professor W. Turner, F.R.S.E.; Professor Owen, F.R.S.; Professor Huxley, F.R.S.; Dr. Beddoe; Dr. Hughes Bennett; Dr. Carpenter, F.R.S.; Sir W. Jardine, Bart.; Dr. Sharpey, F.R.S. *Secretaries*: Dr. T. R. Frazer, F.R.S.E.; Dr. Arthur Gamgee, F.R.S.E.; E. Ray Lankester, B.A.; Professor Lawson, M.A.; H. T. Stainton, F.R.S.; C. Staniland Wake, Dir. A.I.; Dr. W. Rutherford, F.R.S.E.; Dr. Kelburne King.

The following was the programme for Thursday.

Department of Anatomy and Physiology.—Inaugural Address by the President. Dr. B. W. Richardson, F.R.S., Report on the Physiological Action of Organic Chemical Compounds. Professor Rolleston, F.R.S., Report of the Committee appointed to consider the subject of Physiological Experimentation. Dr. Arthur Gamgee, F.R.S.E., On the Heat generated in the Blood during the process of Arterialisation. Dr. A. Buchanan, On the Pressure of the Atmosphere as an Auxiliary Force in carrying on the Circulation of the Blood. Dr. John Chiene, An Experimental Inquiry into some of the Results of Inoculation in the Lower Animals. Dr. Marcet, F.R.S., On the Nutrition of the Muscular and Pulmonary Tissue in Health and in Phthisis, with Remarks on the Colloid Condition of Matter. Dr. J. Batty Tuke and Professor Rutherford, On the Morbid Appearances noticed in the Brains of Insane People.

Professor ALLEN THOMSON's Inaugural Address on Biology was admirable for its completeness and candour; and full of interesting statements and speculations. On the subject of Embiology he was aware that the mere name of development suggests to some ideas of a painful nature as associated with the theory of evolution recently promulgated. To one accustomed during the whole of his career to trace the steps by which every living being, including man himself, passes from the condition of an almost imperceptible germ, through a long series of changes of form and structure into their perfect state, the name of development is rather suggestive of that which seems to be the common history of all living beings; and it is not wonderful, therefore, that such a one should regard with approval the more extended view which supposes a process of development to belong to the whole of nature. How far that principle may be carried, to what point the origin of man or any animal can by facts or reasoning be traced in the long unchronicled history of the world, and whether living beings may arise independently of parents or germs of previously existing organisms, or may spring from the direct combination of the elements of dead matter, are questions upon which we may expect this section may endeavour to guide the hesitating opinion of the time.

On the subject of Histology, he said: I am inclined to regard contractile protoplasm, whether vegetable or animal, as in no instance entirely amorphous or homogenous, but rather as always presenting some minute molecular structure which distinguishes it from parts of glassy clearness. Admitting that the form it assumes is not necessarily that of a regular cell, and may be various and irregular in a few exceptional instances, I am not on that account disposed to give up definite structure as one of the universal characteristics of organisation in living bodies. I would also suggest that the terms formative and nonformative, or some others, should be substituted for those of living and dead, employed by Dr. Beale to distinguish the protoplasm from the cell-wall or its derivation, as those terms are liable to introduce confusion.

Referring, finally, to Spiritualism, he said: I cannot conclude these observations without adverting to one aspect in which it might be thought that biological science has taken a retrograde rather than an advanced position. In this, I do not mean to refer to the special cultivators of biology in its true sense, but to the fact that there appears to have taken place of late a considerable increase in the number of persons who believe, or who imagine that they believe, in the class of phenomena which are now called spiritual, but which have been long known—since the exhibitions of Mesmer, and, indeed, long before his time—under the most varied forms, as liable to occur in persons of an imaginative turn of mind and peculiar nervous susceptibility. It is still more to be deplored that many persons devote a large share of their time to the practice—for it does not deserve the name of study or investigation—of the alleged phenomena, and that a few men of acknowledged reputation in some departments of science have lent their names, and surrendered their judgment, to the countenance and attempted authentication of the foolish dreams of the practitioners of

spiritualism, and similar chimerical hypotheses. The natural tendency to a belief in the marvellous is sufficient to explain the ready acceptance of such views by the ignorant; and it is not improbable that a higher species of similar credulity may frequently act with persons of greater cultivation, if their scientific information has been of a partial kind. It must be admitted, further, that extremely curious and rare, and to those who are not acquainted with nervous phenomena, apparently marvellous phenomena, present themselves in peculiar states of the nervous system—some of which states may be induced through the mind, and may be made more and more liable to recur, and greatly exaggerated by frequent repetition. But making the fullest allowance for all these conditions, it is still surprising that persons, otherwise appearing to be within the bounds of sanity, should entertain a confirmed belief in the possibility of phenomena, which, while they are at variance with the best established physical laws, have never been brought under proof by the evidences of the senses, and are opposed to the dictates of sound judgment. It is so far satisfactory in the interests of true biological science that no man of note can be named from the long list of thoroughly well-informed anatomists and physiologists, who has not treated the belief in the separate existence of powers of animal magnetism and spiritualism as wild speculations, devoid of all foundation in the carefully tested observation of facts. It has been the habit of the votaries of the systems to which I have referred to assert that scientific men have neglected or declined to investigate the phenomena with attention and candour; but nothing can be farther from the truth than this statement. Not to mention the admirable reports of the early French academicians, giving the account of the negative result of an examination of the earlier mesmeric phenomena by men in every way qualified to pronounce judgment on their nature, I am aware that from time to time men of eminence, and fully competent, by their knowledge of biological phenomena, and their skill and accuracy in conducting scientific investigation, have made the most patient and careful examination of the evidence placed before them by the professed believers and practitioners of so-called magnetic, phrenomagnetic, electro-biological, and spiritualistic phenomena; and the result has been uniformly the same in all cases when they were permitted to secure conditions by which the reality of the phenomena, or the justice of their interpretation, could be tested—viz., either that the experiments signally failed to educe the results professed, or that the experimenters were detected in the most shameless and determined impostures. I have myself been fully convinced of this by repeated examinations. But were any guarantee required for the care, soundness, and efficiency of the judgment of men of science on these phenomena and views, I have only to mention, in the first place, the revered name of Faraday, and in the next that of my life-long friend Dr. Sharpey, whose ability and candour none will dispute, and who, I am happy to think, is here among us, ready, from his past experience of such exhibitions, to bear his weighty testimony against all cases of *levitation*, or the like, which may be the last wonder of the day among the mesmeric or spiritual pseudo-physiologists. The phenomena to which I have at present referred, be they false or real, are in great part dependent upon a natural principle of the human mind, placed, as it would appear, in dangerous alliance with certain tendencies of the nervous system. They ought not to be worked upon without the greatest caution, and they can only be fully understood by the accomplished physiologist who is also conversant with psychology. The experience of the last hundred years tends to show that there will always exist a certain number of minds prone to adopt a belief in the marvellous and striking in preference to that which is easily understood and patent to the senses; but it may be confidently expected that the diffusion of a fuller and more accurate knowledge of vital phenomena among the non-scientific classes of the community may lead to a juster appreciation of the phenomena in question, and a reduction of the number among them who are believers in the impossible. As for men of science who persist in submitting to such strange perversion of judgment, we can only hope that the example of their less instructed fellow-countrymen may lead them to allow themselves to be guided more directly by the principles of common sense than by the erratic tendencies of a too fervid imagination.

[We are compelled to break off our report here, having occupied so much space with the report of these admirable addresses.]

MALVERN COLLEGE.—On Tuesday, August 1st, was "Speech Day" at this flourishing Institution, and the proceedings went off with unusual *éclat*. There was a very large and fashionable attendance, comprising many of the local families of distinction, and a large gathering of the parents and friends of the pupils. The Head Master, the Rev. Arthur Faber, presided, and was supported by the Lord Bishop of Worcester, the Visitor of the College.

THIRTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in PLYMOUTH, August 8th, 9th, 10th, and 11th, 1871.

THE Thirty-Ninth Annual Meeting of the British Medical Association was held on Tuesday evening last, at the Assembly Rooms, Plymouth. There were nearly three hundred members of the Association present at the gathering. Dr. Charlton of Newcastle, the President, occupied the Chair. The Mayor of Plymouth and the Mayor of Devonport, with the Corporations of those towns, were present, as were the Earl of Mount Edgumbe and other gentlemen of influence in the locality.

On the President taking his seat, the Mayor of Plymouth, amid loud cheers, gave the Association welcome; and the Town Clerk of Plymouth then read the following address.

"To the President and Members of the British Medical Association,—We, the Council of the borough of Plymouth, desire, in the name and on behalf of the burgesses, our constituents, and the inhabitants at large, to offer to you our cordial welcome on the occasion of your visit to this town. It is our privilege on various occasions to offer such a welcome to distinguished guests; but we have never experienced a more real satisfaction than we now enjoy in hailing your arrival among us, and expressing our admiration and respect for the scientific and philanthropic pursuits which form the objects of your Association. The profession to which you have devoted yourselves is distinguished alike by its labours in mitigating the horrors of war, and in assuaging suffering and arresting the progress of disease in its ordinary and epidemic forms. These services to humanity, rendered on the battle-field and in our hospitals and infirmaries, and in the dwellings of our poorer classes, often without regard to personal interests or personal safety, have obtained for you a deservedly large measure of the public gratitude.

"As constituting the Local Board of Health for this district, we feel a peculiar interest in your labours in the cause of sanitary improvement, and we anticipate a valuable addition to our sources of instruction and information in the discussions which will be devoted to this all-important subject.

"We offer you our best wishes for the success of your Association, and our willing co-operation in all that may facilitate your proceedings and render agreeable your visit to this town and its interesting neighbourhood.—ROBERT C. SERPELL, Mayor."

The MAYOR asked the Association to receive this address as the spontaneous expression of good will of the inhabitants generally, and said they were all deeply sensible of the honour which the Association had conferred in visiting the town. He sincerely trusted that the gentlemen would thoroughly enjoy themselves, for then there was some hope that this would not be their last visit to this spot.

The PRESIDENT, on behalf of the Association, thanked the Corporation for their kind expressions of good will conveyed in this address, which, he said, was the first of the kind the Association had ever received; and it would not be lightly esteemed, not only by those present, but by those whom they represent. [*Cheers.*] The profession was to some extent isolated from the rest of the world, but its end and aim was the good of mankind, and they were proud indeed when they found their efforts to arrest the progress of maladies appreciated as they had been by the kind words of welcome given that evening. [*Cheers.*] The Association would not, he assured them, readily forget the reception afforded this year.

The Corporation and visitors then retired.

Then PRESIDENT then delivered the following valedictory address.

Gentlemen,—To the retiring President, as the last act of his official life, belongs the duty of introducing his successor in the chair; and it may also be expected that he should give some account of his stewardship during the twelve months that he has occupied the Presidential chair. Contrary to the expectations we indulged in on assuming office at the meeting of Newcastle, the past year, instead of being one of great excitement among those interested in medical legislation, has been singularly barren of incident in regard to that which is, for our profession, the question of questions—the all-important subject of Medical Reform. Twelve months ago we hoped for a session of Parliament in which this subject would have occupied no small portion of the attention of our legislators, and we girded up our loins for the struggle; but the battle came not. We were willing to devote our time and our energies to do

the work of the British Medical Association, had but the opportunity been afforded to us. If the late session of Parliament has been a singularly unproductive one in reference to general questions, how could our legislators be expected to devote much time to medical reform? a subject interesting to, and understood but by, a few, beyond those who, like ourselves, have had a practical experience of its necessity. Moreover, this year Her Majesty's Government declined to bring forward any measure of medical reform, and left this difficult task to the unaided efforts of private members of the House of Commons. Perhaps, after all, this is not to be regretted. Questions of the most important character—questions of the utmost public interest—have been lost sight of amidst the smoke of contending armies, amidst the din of battle resounding from the other side of the channel. We in the mean time have had leisure to marshal our forces, to analyse and to improve upon the measures of reform proposed during the last twelve months; we have had time to marshal our forces and to bring them early to the fight whenever the struggle shall commence. No measure of medical reform, we can boldly say, will ever be acceptable to the profession which does not embrace the two propositions; viz., (1) the one single portal by which all shall enter the medical profession, and (2) the radical and thorough reform of the Medical Council. But it is not for us to enlarge upon this subject; we turn gladly to the pleasing memories of the last meeting at Newcastle; we greet once more the kindly faces which smiled upon us when we accepted the President's office, and we trust those smiles will not be changed to frowns on this the closing evening of our career. The North this day fraternises with the South; the retiring President from Newcastle introduces the President-elect of Plymouth. Of our successor it is needless for us here to speak; he is well known to you all, and especially to the medical practitioners of southwestern England. To him we hand over all the bright anticipations we last year indulged in, of leading the van in a good battle for medical reform; to his guidance we commit the President's office in this great Association, with the full assurance that his energy, his hearty English goodwill, and kindness of manner, will make this meeting one of the most successful among the many memorable reunions of the British Medical Association.

The PRESIDENT-ELECT then, amid loud cheers, took the chair vacated by Dr. Charlton; and, after a few words expressive of the high sense of honour done to him by electing him President, which he regarded as an honour to his district and not to himself alone, he proceeded to read an address, which is published at page 169.

Dr. SIBSON, in rising to propose a vote of thanks to the retiring President, said the Association, having a new President every year—a President who was always a leading man in his neighbourhood, and among the professional brethren with whom he dwelt—came into contact year by year with the representative men in whatever locality it went. The members of the Association last year had an opportunity of meeting at Newcastle, where a hearty and hospitable reception greeted them, and where it had a notable example of the popularity which attended the medical man in the person of Dr. Charlton, who was a noble representative of an English gentleman, and possessed every qualification the profession could desire to find in one of their high calling. It was due to Dr. Charlton that the Association should give him their cordial thanks, and elect him a permanent Vice-President.

Dr. RADCLIFFE HALL warmly seconded the motion, and said that the Association was now handed over to the genial South by the vigorous North. It was due to Dr. Charlton that he should be heartily thanked, and enrolled among the list of permanent Vice-Presidents of the Association. [*Loud cheers.*]

The motion was then put and carried amid renewed cheers.

Dr. CHARLTON thanked the meeting for the kind way in which they had expressed their approbation of what he had done, or rather, he would say, the manner in which they had pardoned him for being able to do so little. That he had been able to do so little was not owing to a want of will to do more, but to a want of opportunity. It was, perhaps, impossible for the Legislature and the medical profession to concentrate their thoughts on the required Medical Bill while the din of battle was heard across the Channel; and at that time it seemed as if men's minds would never settle down again. He trusted that the time of war had passed away for ever, and that the voice of the profession, joined to the voice of the public, would now be heard by the Legislature. [*Cheers.*] The Association had power in urging on legislation, and it had had the power to compel the Government to withdraw its Bill because it did not meet all that was required. The Association and the profession did not want to act against Her Majesty's ministers, whoever they might be; and he hoped that the Association, representing the profession generally, would be able to work in accord with the Government. Again he thanked them, and most sincerely, for their kind words; and he expressed his pleasure at seeing that what

was done at Newcastle, in the way of giving a welcome to the Association, was being done at Plymouth. [*Cheers.*]

The Hastings Medal was then presented to Dr. J. M. Fothergill of Leeds, who on coming forward to the President's table, was greeted with hearty cheers.

The PRESIDENT addressed the recipient of the medal, and said he could personally testify to the value of Dr. Fothergill's views laid down in the essay for which this medal had been awarded; and persons in this town lived to thank Dr. Fothergill, inasmuch as those persons had been rescued from the verge of death. In conclusion, the President hoped that Dr. Fothergill would be long spared to carry on a work of so great service to his fellow-creatures as that which had earned the recognition of the Association.

Dr. FOTHERGILL thanked the President for his kind remarks and the Association for its recognition of his services, and said the high honour done to him was reflected on the Branch he had the honour to represent. [*Cheers.*]

Report of Council.—Mr. WATKIN WILLIAMS, General Secretary, read the following report.

"Your Council congratulate the Members of the British Medical Association on meeting together for the first time in the important maritime town of Plymouth. The very cordial invitation received from the three towns, Plymouth, Devonport, and Stonehouse, signed by all the principal medical practitioners, and warmly supported by offers of assistance from the neighbouring nobility, the civil, military, and naval authorities, and the most influential inhabitants, fully justifies the expectation of a very successful meeting. The Council beg sincerely to acknowledge the energetic efforts which have been made to receive the Association, and to render its visit to Plymouth and the associated towns highly gratifying, not only as respects its scientific, but also its social objects.

"At the Annual Meeting in 1870, there were on the list 4,251 members, of whom 65 have died, 94 resigned, and 106 have been removed for non-payment of subscriptions. 411 new members have been elected this year. There are now 4,403 on the books.

"The Treasurer's accounts, audited by Mr. Church and Dr. E. L. Fox, the Auditors appointed at the last Annual Meeting, have been published in the JOURNAL, and are appended to this Report.

"During the past year, several subjects of grave importance have received the earnest and constant attention of the Committee of Council, and the Special Committees of the Association.

"The Reform Committee, appointed at the last Annual Meeting at Newcastle, will present a special report of its proceedings during the past year. This Committee have strictly adhered to the principles enunciated, and repeatedly endorsed, at the General Meetings of the Association. From circumstances which will be detailed in its Report, medical legislation has been found impracticable during the present session of Parliament, but the Committee are of opinion that the field has been cleared for action, and that arrangements have been made which it is hoped will conduce to a settlement of the long-vexed question of medical reform before the next Annual Meeting of the Association.

"The Parliamentary Committee having been reconstituted, in accordance with the instructions of the last General Meeting, have been quietly but effectively discharging their functions during the present session of Parliament, and will present a report of their proceedings.

"The joint Committee on State Medicine will present a report—a report which deals closely with recommendations of the Royal Sanitary Commission, and the principles that should regulate the future sanitary administration of the kingdom, subjects full of interest both to the medical profession and the public; and which will doubtless occupy a prominent place in the deliberations of the meeting.

"The Therapeutical Committee have been at work during the year; they have performed a large number of experiments, and collected much valuable matter, but are not yet prepared to report the result of their labours. Your Council regret that Professor Hughes Bennett will not, in consequence of ill health, be able to attend the Annual Meeting.

"For the very efficient working of the Branches, thanks are due to the Honorary Secretaries of the Branches of the Association.

"Your Council especially thank Dr. J. W. Moore of Dublin, for the very valuable and efficient services he has rendered to the Association as Honorary Secretary for Ireland, especially as he has had to act on his own responsibility, without the aid of a Council.

"Your Council record, with much pleasure, the establishment of a new Branch in South Wales, which promises to bring together the members of the medical profession in that part of the kingdom.

"The mode in which the business of the Association has been carried on, and especially the absence of supervision over the business and monetary transactions of the JOURNAL office, which has now become a

very important department of the Association, has for some time been far from satisfactory. Your Council must here, however, state that neither the late nor the present Editor of the JOURNAL is responsible for the unsatisfactory management of the business of the office. They thoroughly appreciate the efforts which Mr. Hart has made since his re-appointment as Editor to bring about a better management, and the important assistance which he has rendered in ascertaining the defects which prevail, and the changes required for their removal; but they felt that they could not ask him to continue the supervision of the JOURNAL office, which is no part of the duty of an Editor. The Committee of Council, therefore, in November last, appointed a Subcommittee to consider and suggest means for improving the organisation and business-working of the Association. This Subcommittee met in London; and the inquiry having elicited, among other matters, that from want of supervision at the JOURNAL office, the Clerk and Collector had been able to misappropriate a large sum of money, and then abscond, it was determined to report to Committee of Council that the inquiry was a most important one, and that in their opinion a larger Committee should be appointed. The Committee of Council at once decided not to depute the inquiry to a Subcommittee, but to meet in London, and inquire fully into the general management and financial position of the Association.

"The Committee of Council met in London on the 3rd and 4th of last May, and after a full and searching inquiry, which extended over many hours of these days, and receiving every information from the officers of the Association, and the *employés* of the JOURNAL, unanimously passed the following resolution:—"That the management of the Association having been found, on inquiry, to be in an unsatisfactory state, owing chiefly to defective organisation and supervision, it is recommended that for the future the General Secretary should reside in London, and that he shall devote his whole time and attention to the management and work of the Association."

"Your Council, although fully recognising that the Association owes much to their present Secretary for the energy which he has displayed in increasing the number of its members, are fully convinced that the amount of Association work done at, and the large sums of money passing through, the JOURNAL Office, imperatively demand that the duties of Secretary of the Association, and the management of the office, so interwoven with each other, should be performed by the same officer, who shall be directly responsible to the Committee of Council. When this change has been effected, the list of Members can be accurately kept, and a regular payment of subscriptions ensured by maintaining a correct account of subscriptions received and due, and thus carrying out a systematic application for arrears. The regular circulation of the JOURNAL can also be thus more efficiently maintained, and other irregularities, consequent on the present arrangements, now complained of, removed. Your Council, therefore, recommend that in future the General Secretary shall reside in London, so that, in addition to the duties now required of him, he shall give personal attention to, and be responsible for, the management of the financial and business department of the JOURNAL Office. The President of the Council has, at the request of the Committee of Council, given formal notice of the alterations which may be required in the Laws, if you think proper to adopt the change now proposed in the duties of the General Secretary.

"The annual accounts of your Treasurer, to whom the Association owes so much, have year by year been audited and published in the JOURNAL. From time to time estimated balances have been printed with the Treasurer's accounts; but it was thought desirable by the Committee of Council at their last meeting, in consequence of the defalcations by the Office Clerk and Collector at the JOURNAL Office, that the exact financial position of the Association should be ascertained by an Accountant; such special audit has been made, and a printed copy of the result is now placed in your hands. Although a deficit is there shown, owing chiefly to the misappropriation of monies at the JOURNAL Office, yet this deficit will be wiped off during the present year by the saving to the funds of the Association which will arise from the lower rate of postage for the JOURNAL. Your Council also trust that an improved system of management and a more regular collection of subscriptions will soon place the finances of the Association on a satisfactory footing, *especially if Members will assist by a more regular payment of their Subscriptions.*

"Your Council deeply regret that five distinguished members have severed their connection with the Association. The cause of their retirement is well known to you all, and your Council can only express their hope that ere long they may again be united to the Association.

"Your Council have felt that it has been their duty to refer to unpleasant facts, and to recommend important changes, the allegiance which they owe to the Association, and their deep solitude for its well-being, having left them no alternative. They are fully persuaded that a body

which has gained so powerful an influence over the profession, and possesses a JOURNAL which is recognised, both at home and abroad, as one of the ablest exponents and representatives of medical science, will suffer no permanent injury from these passing trials, which, rightly improved, will conduce to better management and future prosperity.

"Hastings Medal for 1870."—Four essays of very superior merit were received in competition for this medal. The adjudicators, Dr. Charlton, Newcastle-on-Tyne, Dr. Stewart, London, and Dr. A. T. H. Waters, Liverpool, have awarded the medal to Dr. J. M. Fothergill, of Leeds.

"Hastings Medal for 1871."—Your Committee regret that only one essay has been received on the very important subject, "The action of Bromide of Potassium," and that the adjudicators, Dr. C. B. Radcliffe, London, Dr. A. Fleming, Birmingham, and Thomas Scattergood, Esq., Leeds, have recommended that the medal should be withheld."

The Treasurer's report was also presented, as follows.

R. W. FALCONER, M.D., Treasurer of the British Medical Association, in account with that Association for the year commencing January 1st, 1870, and ending December 31st, 1870.

| | Receipts. | £ | s. | d. |
|--|-----------|------|----|----|
| Subscriptions | | 3641 | 7 | 4 |
| Advertisements and sales | | 1607 | 0 | 11 |
| Balance in Treasurer's hands (last year) | | 13 | 7 | 11 |
| Total..... | | 5261 | 16 | 2 |

| JOURNAL EXPENSES: | Payments. | | | |
|-----------------------|-----------|----|---|----------|
| Printing | 2856 | 8 | 0 | |
| Engraving | 13 | 12 | 0 | |
| Editorship | 256 | 0 | 0 | |
| Sub-editorship | 81 | 5 | 0 | |
| Contributors | 935 | 8 | 0 | |
| Work at office | 50 | 0 | 0 | |
| Office clerks | 175 | 0 | 0 | |
| Office expenses | 296 | 16 | 4 | 4664 9 4 |

EXECUTIVE EXPENSES, ETC.:

| | | | | |
|---|-----|----|----|---------|
| Secretary's salary | 300 | 0 | 0 | |
| Secretary's petty cash | 35 | 10 | 5 | |
| Branch Secretaries and Collectors | 28 | 2 | 10 | |
| Reporting proceedings at Newcastle..... | 43 | 7 | 6 | |
| Stationery, printing, etc..... | 75 | 1 | 2 | |
| Advertising | 2 | 18 | 6 | |
| Sundry other charges | 14 | 3 | 3 | 499 3 8 |

SCIENTIFIC AND OTHER GRANTS:

| | | | | |
|-------------------------------|----|---|---|--------|
| Dr. Hughes Bennett | 50 | 0 | 0 | |
| Parliamentary Committee | 10 | 0 | 0 | 60 0 0 |

| | | | | |
|---|------|----|---|--|
| | 5223 | 13 | 0 | |
| Balance in Treasurer's hands (this year, 1871) .. | 38 | 3 | 2 | |
| Total..... | 5261 | 16 | 2 | |

R. WILBRAHAM FALCONER, M.D., Treasurer.

We the undersigned, being the auditors appointed to examine the above accounts for the year 1870, have examined the same with the vouchers, and find the whole correct.

EDWARD LONG FOX }
WILLIAM J. CHURCH } Auditors.

We the undersigned auditors, appointed by a general meeting of the members of the British Medical Association, held at Newcastle-upon-Tyne, in the month of August 1870, having this day examined the General Secretary's cash-books, together with the lists forwarded by the Branch Secretaries, and the counterfoils of the receipts issued, certify the same to be correct, and that we are satisfied with the accounts which have been exhibited to us.

EDWARD LONG FOX }
WILLIAM J. CHURCH } Auditors.

Bath, March 28th, 1871.

Mr. HUSBAND said that, as President of the Council, he should feel it his duty to make some lengthy remarks upon moving the adoption of the Report. He should do so because, in the sitting of the Committee of Council, it seemed that the President of the Council was shrinking from his duty in not giving more ample details than were offered as a reason for their recommendations in the Report. For thirty years he had not shrunk from his duty to the Association; and he would not shrink from the Committee of Council now when a cloud was passing over it. He would not shrink from telling the Association what was its real position, and he would say that that position was one quite

compatible with a future of success, if the recommendations in the Report were carried. [Cheers.] He need not touch upon that part of the Report which spoke of the pleasure with which the Council met the general body of members; and no words of his could express the deep sense of pleasure they had in meeting. [Cheers.] The Council held that the accounts should be audited by auditors in whom the Association had confidence, and that the Association should know exactly its financial position year by year. If there were anything to be ashamed of in that position, the shame was to those who did not pay their subscriptions. [Cheers.] He expressed his regret that some gentlemen whom the Association valued had resigned for certain reasons; but he said, much as he valued those gentlemen, who were members high in the profession, who had thus left, he valued the consistency of the Association still more; and he maintained that the Association should follow its own views in preference to giving way to the views of others. [Cheers.] He then entered upon the discussion of that part of the Report which some there considered as the most important; namely, that part relative to the changes which the Committee of Council had considered it their duty to suggest should be made relative to the Secretary's position. It was necessary that that question should be considered fairly; and he submitted that the Committee of Council should have the balance of consideration over those gentlemen who, it was no secret to say, had come there, without having borne any of the heat and burden of the day, and would submit views of their own, founded without any knowledge of the actual facts of the case. Now he would lay these facts before the meeting, and leave the members of the Association to judge as to the course to be adopted. In autumn last the Committee of Council had reason to think that the financial and business affairs of the Association were not going on as they should go on. There had been no great complaints, and the Committee of Council had no thought of any defalcations going on, such as those committed by one of their clerks; but, having their attention directed in the autumn to the manner in which the business was carried on, the Committee as early as November appointed a special Committee to report upon the position. The special Committee came to town early in the spring, and they minutely examined the mode in which the business of the Association was conducted, and then, and then only, did they investigate the defalcations reported to them then on the part of the person who carried out the duties of clerk and collector, and next entered into the whole question. The defalcations only have occurred from the absence of supervision by any business officer. The Subcommittee heard enough from every one who aided their inquiries to prove to them that the business of the office was carried on in such a manner that there was no guarantee that this would not again occur if a change were not made. There was not that supervision by a business officer which was necessary for the conduct of an office and accounts. It was not, it should of course be remembered, in any degree whatever the fault either of the past or present Editor of our JOURNAL; and, indeed, we should have been in a far worse position than we are in if it had not been for the able and intelligent interest which Mr. Ernest Hart, the present Editor, has taken in giving, to some extent, some friendly assistance to make up for the personal supervision which the Association should undoubtedly provide. It is no part of an editor's duty to superintend the conduct of the office, as they themselves will tell you. [Hear, hear.] Well, the Subcommittee spent two days in London. Every one in the office who could give any information was examined; and the Committee found, without any doubt whatever—for there was every disposition on their part to lay open the whole mode of conducting business in the JOURNAL Office—that there was no responsible business supervision, and every one wished there should be. The evidence taken was at the disposal of the meeting; but he would not go into that, because of the time it would take up. There was an attempt on the part of some to instil into the minds of members that there was a desire to take the business from the provinces and concentrate it in London. Now, of all the members who were on the Committee, only two were Londoners, and the provincial men were unanimous in recommending the resolution. [Hear, hear.] He quite agreed with those who were of opinion that all wisdom was not centred in London; but it was to be remembered that the Association was a national institution, and whatever means could be taken to carry out the principles of the Association in the best manner should be taken, even though they might clash with certain personal views. [Hear, hear.] He was not going to speak about any of the letters which had appeared, or to touch upon any one's character; but he would say that no gentleman who took the office of Secretary could attend at the same time to a daily practice. The Committee arrived at this conclusion after a full consideration of the whole subject, and without entering upon the narrow question raised about London and the provinces. The Committee did not say a word about where the JOURNAL should be conducted; but they said that wherever the JOURNAL was conducted,

there the Secretary must reside, and give his personal supervision to the business affairs of the office. He must be responsible for the correct list of the members being kept, for the accurate distribution of the JOURNAL, and for the proper return of subscriptions of members. [Hear.] Unless this course was adopted, no guarantee-office would guarantee the Association against loss from defalcations, because these offices say the Association does not exercise any proper supervision over its clerks. The Committee of Council believed that the Association must have a Secretary who was responsible only to the Committee of Council. This Association could not centre in any one man; and what was wanted was a man who could hold his own position, and take the resolutions passed and see them carried out. These were the views of the Committee, and they were the views of men with whom he himself had had the pleasure of working for many years—men who had a knowledge of business as it should be carried out; and, having investigated the affairs of the Association, the adoption of their recommendation would not lead the Association far wrong. [Hear.] The business of the Association could not go on as it had been going; for, under the system hitherto adopted, the Association would be liable to have these losses year by year. They therefore laid before the meeting what should be done; and they left with the meeting the responsibility of saying whether these proposed alterations should be carried out, or whether the evils which had been mentioned should go on unchecked. He hoped he had not wounded the feelings of any one present; but he had felt it his duty, as he ever should while he remained a member of the Association, to adopt the course he considered best, and urge it on the attention of the members without fear or favour. The accounts had been audited by a professional auditor, who had given to the Treasurer a most valuable analytical account; and this showed that, if it had not been for the defalcations of the clerk, the Association would have had money in hand; and the Association would have been in that position even now, if members had fully paid up their subscriptions. [Hear.] It was to be remembered that the JOURNAL cost sixteen or seventeen shillings a year, and was supplied on the faith that the subscriptions would be paid; and when so large an amount of subscriptions were unpaid, the cost was of course greatly increased. These defalcations and these non-payments of subscriptions had made the balance against the Association at this time about £200; but that could be shortly covered. He had gone through the books, and could say that money had been lost through not being collected—[hear]—and by taking better means for collecting the subscriptions—hoping, too, that members would assist in this—[hear]—a better JOURNAL still would be given even than the very excellent medical authority now given, and a bright future would be open to the Association. [Hear.] He moved the adoption of the Report.

Mr. HECKSTALL SMITH seconded the motion, and said that never since he had been connected with the Association, now upwards of the third of a century, had a question of greater importance been presented to the members than the one presented that evening. The matter, however, was a simple one, though the proposition was of primary importance to the existence of the Association. It was said this necessity for a change could not have arisen if the Committee of Council had done their duty in bygone time; but this could only have been done by coming before the Association as they had now come. He owned that he had been disposed to keep the Association provincial in its character as long as it was possible so to keep it; but the Association had carried out its work of elevating the character of the provincial practitioner, and no little part of the improvement there had been was unquestionably due to the Association. [Hear.] The time came when the character of the institution became extended, and it merged into a general Association; and the JOURNAL was necessarily published in London. There was no doubt that the jealousy in the breasts of provincial members prevented the whole of the executive staff being removed at the time to London; and he for one was ready to confess that he was one who supported only the partial removal. What was done when this partial removal was carried out, was responsible for what mischief had occurred. [Hear.] He hoped that the Association would see the necessity for carrying out the views of the Committee of Council; and he appealed to them whether any business could be properly carried on with the Secretary and the books divided by a hundred miles. The Committee were blamed for not bringing this proposal forward before, and they must bear the blame; but it could be seen that this was a matter which required great consideration; and the Committee having given that consideration, now made the recommendation. [Hear.] This was a great crisis, and he urged the meeting to adopt the motion.

Dr. DAVY said he hoped the souls of the Committee of Council were the better for the confession they had made. [Laughter.] He knew many years ago that the Association was getting into a difficulty ["No"] and now the Committee of Council came forward and said it was owing

to the absence of supervision. There had been, without doubt, an absence of due supervision for several years, and not only so, but there had been a defective organisation of the Association so far as the Council was concerned. The speaker proceeded to say that he had made suggestions at previous times, and had been regarded as troublesome, and he had met with reproaches and threats.

Dr. SIBSON challenged the statement as to threats being used, and it was forcibly denied.

Dr. DAVY then proceeded; and he desired to propose some alterations in the report.

Dr. HUSBAND believed that a member could not thus alter the report, and that the proposal was out of order.

Mr. CLAYTON said the Committee of Council had nothing to seek for themselves, and they had done their duty at an amount of self-sacrifice on behalf of the Association, of which few had any conception. [Cheers.] The position of the Committee of Council was valueless without the sympathy of the members of the general body; and he was sure he was speaking the views of his brother members when he said that unless they had the sympathy of their constituents they would willingly resign. [Hear.] The Committee did their duty with a singleness of purpose which could only be accounted for by their love for their noble profession and a desire to promote the interests of the Association. [Cheers.] He had gone through the accounts, and he could say that if the Association was to go on with financial soundness this change proposed must be adopted. [Hear.] There was no doubt that there was not a penny lost (this was proved by the books) except through that clerk, and the loss was one such as often had happened in the best business transactions of the country. The Association would do well to adopt the recommendation of the Committee.

Dr. SIBSON said, while listening to the speeches given there, he could not help feeling that the same object animated all there, and this was that the Association should be managed in the best possible way. [Hear.] He pointed out the vast increase which had been made in the numbers of the Association of late years; and this, he said, occurring rapidly, had thrown a heavy pressure upon the Association for a larger machinery to conduct the business. He urged the members to forget all personality, and to join as one to spread the advantages of the Association, and ensure for it the great future to which it justly aspired. He thought members should remember that they received a quite incomparable and invaluable JOURNAL, which all were delighted to receive, but for which many did not pay; they should use their personal influence to lessen the difficulties of the Committee of Council. It was no question that the Association could not be carried on unless the change now proposed were adopted. He concluded by pointing out that, by an united action, the Association would have the most important influence for the good of the whole community in pressing forward the measures requisite for the health of our population.

Dr. STEELE asked a question on the accounts.

Mr. SAMPSON GAMGEE said it would have afforded him pleasure to have had the report so modified that it could have been passed unanimously; but as it had not been modified, he should oppose it. If the chief magistrate of this town had remained longer, he would have wondered if, after listening to the speeches, it had been doing honour to a body of commercial gentlemen who had been conducting a weekly journal, or a body of gentlemen associated together for the furtherance of science, who had little knowledge of general business. He freely admitted that the Committee of Council had had a hard time of it, but he could not come there without a passing regret that they had resisted in past times all suggestions which would have prevented the present position. The management had been as bad as bad could be, and because it had been bad as bad could be, the manager was to be taken to London, and the Association was to do away with its present professional secretary. It was as necessary now, as at any time in the history of the Association, that there should be provincial independence against the London corporations, who were the stumbling-blocks in the way of medical reform. He spoke further against the motion, and said that what was required to be done was in the way of a direct representation on the Committee of Council. He asked how the Association could ask the Government to give direct representation on the General Medical Council when it had it not in its own body, but had a body such as its General Council, which had three hundred and sixty-three holidays in the year. He spoke of the subsidised JOURNAL, which could not be carried on, he considered, with success, and called upon the meeting to reject the motion.

On the vote being taken, only five hands were held up against the motion. It was therefore carried.

On Wednesday morning the members assembled in the Town Hall, Devonport, when an address of welcome was presented from the Mayor and Corporation of the borough.

It was agreed that Birmingham be the place of meeting in 1872, and that ALFRED BAKER, Esq., be the President-elect.

Mr. WATRIN WILLIAMS was appointed to act as General Secretary till the end of the year, with a salary of £200; and a Committee was appointed to define the duties of the General Secretary, and to take steps for the appointment of one till the next annual meeting.

Dr. GEORGE JOHNSON delivered the Address in Medicine (*see* page 171).

SPECIAL CORRESPONDENCE.

BERLIN.

[FROM OUR OWN CORRESPONDENT.]

AT a recent meeting of the Medical Society here, Dr. Liebreich exhibited a rare form of Calculus, which had lately been removed from the bladder by lithotripsy. It was found to consist almost entirely of gall stone, with a very thin coating of uric acid, and must have found its way into its late home either from the intestine or biliary ducts. Through the kindness of the same gentleman, I am enabled to send you a specimen of a very handy form of drug preparation introduced from Sweden. Each of the small gelatine squares contains a quarter of a grain of acetate of morphia; and, as almost every ordinary medicine has been reduced to this most convenient size, the country doctor may now carry an entire Pharmacopœia in an ordinary envelope. I may also mention that Dr. Liebreich has just published the third edition of his work on *Chloral*, in which he has given a most exhaustive report on the literature of the subject, and referred to every paper of importance in English, French, and Italian, as well as German, literature. The great point now to attain is a precise knowledge of those cases in which its therapeutic value is undoubted; and he naturally feels that its reputation is somewhat imperilled by the reckless manner in which it has been occasionally used.

Many interesting cases have been under treatment in the medical *cliniques*. Professor Traube recently directed attention to one of glanders, in which the face was much swollen and deformed from large reddish-black gangrenous patches, whilst the body was studded with pustules, rather smaller than those of variola. Abscesses existed in considerable number—probably depending on capillary embolism—and the pathognomonic yellow discharge from the nose was not wanting to complete the diagnosis. The patient was a groom, and had contracted the disease from horses under his charge—the *materies morbi* being communicable either by abrasion or contact with a mucous surface. Death usually occurs from pulmonary embolism, and this case was no exception to the rule.

At the *clinique* of this morning, we were enabled to examine the now well-known case in which Professor Traube caused the colon to be opened in the right flank for ileus about two years ago. Four months after the operation, natural motions were passed, and the artificial anus is now closed, and all digestive trouble at an end. In the earlier stages, he recommends the use of iced salt water enemata, passed as high up as possible by means of a curved pipe; and the larger the extent of mucous surface affected at once, the greater the chance of exciting the peristaltic action of the intestine. Crude mercury, formerly used to overcome such obstructions, acted not by its mere mechanical force, but by exciting the nerves to stimulate the muscular tissue from the irritation of its weight. In one instance, where this method proved successful after other means had failed, he was enabled to demonstrate that the therapeutic agent had never left the cavity of the stomach, but had probably caused peristaltic movements by travelling down the canal.

In the service of Professor Frerichs, a very instructive series of cases has been under observation, in which acute endocarditis closely simulated intermittent fever. In one of these, the patient had suffered from pneumonia, but was going on well until rigors set in; the temperature suddenly rose, and the fever assumed a truly intermittent type. On this account, as well as the fact that a loud systolic bruit was now audible, acute ulcerative endocarditis was diagnosed, and placed beyond doubt shortly afterwards at the *post mortem* examination, when a large hole was found in the mitral valve, surrounded by fungoid excrescences. In a second, the symptoms became developed in the course of acute rheumatism; and the intermittent character was even more strongly marked, the temperature oscillating from day to day between 100 and 105 deg. On dissection, inflammation of the mitral valve, with warty growths, was observed. It is interesting to note that in this case large doses of quinine were prescribed without the slightest influence on the course of the fever.

The consumption of uncooked meat in Berlin, and its influence on

health, might well repay investigation. "Beefsteak Tartar", or, in other words, a piece of absolutely raw flesh, raw ham, salmon, and herring, are largely consumed, and their effects may be superficially noted. Tape-worm is common, and is found in a considerable proportion of bodies opened in the dead-house; but which variety prevails I am unable to state. The trichina has only been once seen this *semestre*, and that in a dissecting-room subject; but cases of hydatid have not been infrequent. Two of the liver have occurred in the practice of Professor Frerichs, one of which died, whilst the other ruptured close to the navel, and is doing well; one in Professor Traube's wards; two of the brain, exhibited by Professor Virchow in his course of demonstrations; one of the neck, tapped a few days ago by Langenbeck. These facts are rather significant, and the pen and the eloquence of Cobbold may well be directed against such barbarous food as I have alluded to.

It may be interesting to your readers to know that a successful case of ovariectomy has just occurred in the hands of Professor Martin—his first this session, although by no means the first in his experience. The woman has since emerged unscathed from an attack of small-pox.

I may mention that Professor Langenbeck a few days ago, in commenting on a case, expressed himself as strongly opposed to the English notion that rodent ulcer, as it is there called, is not a cancerous disease. He bases his opinion on the numerous instances in which he has seen it affect internal organs after removal. The ulcerative process here involved a considerable portion of the left side of the face, necessitating the removal of the eyelids, eyeball, left side of nose, and cheek. To remedy this frightful deformity, a large flap was dissected from the forehead and applied to the raw surface, and it is hoped that primary union may be obtained.

Intending students at Vienna will be glad to see that Professor Bamberger's appointment has at last been signed by the Emperor.

Berlin, July 30th, 1871.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 5TH, 1871.

J. BRAXTON HICKS, M.D., F.R.S., President, in the Chair.

MR. CURGENVEN exhibited a Knotted Umbilical Cord.

Dr. PROTHEROE SMITH showed a new Expanding Cylindrical Speculum Uteri.

Dr. WHITEHEAD exhibited two instruments for producing Vesication previous to Vaccination—the one with ammonia, the other with boiling water or the flame of a spirit-lamp.

Dr. HEYWOOD SMITH exhibited a Marine Vaginal Irrigator.

Dr. BARNES read a note on the Rupture of an Intraperitoneal Hæmatocele into the Peritoneal Cavity. One case was recorded by Dr. West, and another as having occurred in Seyfert's practice; but the occurrence was very rare.—Dr. PROTHEROE SMITH related three cases, in each of which, after the sudden disappearance of a retro-uterine tumour, severe peritoneal symptoms became developed.

Dr. PLAYFAIR read the particulars of a case of Sudden Death in the Puerperal State. Although no *post mortem* examination was permitted, the symptoms were characteristic of death from pulmonary thrombosis. The patient, when convalescent from her confinement, had a slight attack of pleurisy.—Mr. SCOTT recollected three cases, in each of which, the patients having been previously debilitated by illness, peritonitis supervened, and death occurred suddenly after slight exertion in bed. On *post mortem* examination, a clot was found in the pulmonary artery.—Dr. ROUTH said that the symptoms might have been those of cramp or spasm of the heart.—Dr. WILTSHIRE inquired whether the urine had been examined, seeing how frequently pleurisy was a complication of Bright's disease.

Dr. TILT read a paper on the Diagnosis of the least known varieties of Uterine Inflammation. The author admitted that all the uterine tissues were inflamed in superacute, in acute, and in chronic metritis; and he explained by what signs these three varieties of metritis might be recognised—mentioning that, while the acute variety was very rare, the chronic was a disease of frequent occurrence. Dr. Tilt believed that one of the uterine constituents could not be long inflamed without the adjacent tissues becoming more or less diseased; and that in the cases called internal metritis, or endometritis, because inflammation of the lining membrane of the womb was their leading pathological condition, there was often a thickening of the uterine walls, to be explained by congestion in most cases, and occasionally by inflammation. In the more chronic stages of internal metritis, the uterine walls were said to become thinner, and to be softened by fatty degeneration—a circum-

stance that should teach caution in the use of the uterine sound. The author discussed the symptoms of internal metritis; and he was thereby led to deny that fundal metritis—that is, inflammation of that portion of the endometrium which lies between the insertion of the Fallopian tubes—had any particular symptoms by which it could be distinguished from ordinary cases of internal metritis. Dr. Tilt asked the Fellows to compare Dr. Routh's cases of fundal metritis with those which he had himself published in his work on *Uterine Inflammation*, promising that they would find the same liability to menorrhagia, and to purulent discharges capable of becoming intensely acrid—the same tendency to obstruction to the free exit of the fluid secreted in the body of the womb—the same kind of very acute uterine pain, aggravated by any kind of pressure, whether made by the finger or by the uterine sound, of which Dr. Tilt reprobated the use in acute metritis.—Dr. PLAYFAIR said that grave alterations were very generally present in such portions of the mucous membrane of the uterus as were accessible to sight; and it was reasonable to infer that, by continuity of tissue, similar alterations existed in the more deeply seated portions of the membrane. He believed that all who had tried intrauterine medication in such cases would bear witness to its remarkable curative power. The application was easy, as the os uteri was always morbidly patulous; and one of the first symptoms of improvement was the closure of the os.—Dr. HENRY BENNET said that arrest of uterine irritation was much more frequently the cause of an increased size of the uterus in child-bearing women than actual inflammation. It was also a frequent mechanical cause of uterine displacements and flexions of all kinds. For many years he had carefully weighed the uteri of all the child-bearing women who had died under his care, and found that, in all who presented lesions of the cervix subsequently to parturition, the uterus had not returned to its natural weight. Dr. Bennet thought Dr. Tilt was scarcely warranted in saying that internal metritis in non-parturient women was common. If confounded with inflammation of the mucous membrane lining the cervical cavity, of course it would appear to be common. The principal diagnostic signs of internal metritis in his experience were a patulous state of the os internum, an aggrandised state of the uterine cavity, and a muco-sanguinolent discharge. The inflammation, when it extended to the uterine cavity, seemed to paralyse and relax the cervical muscular fibres which constituted what he had termed the sphincter of the uterine cavity.—Dr. ROUTH said that, in these cases of enlarged uterus with internal metritis, it was the fundal portion which increased. The nervous supply of the fundus uteri derived from the renal plexus, and being indirectly connected with the semilunar ganglia, was *a priori* evidence that more general and severe symptoms might be expected in inflammation of it, than when the body of the uterus only, or the cervix, was attacked. He could not agree with Dr. Bennet that, because disease of the uterus was cured by active measures to the cervix, therefore the disease was in the cervix. Blistering or cauterising the cervix relieved not only the cervix, but the whole organ. The internal os was occasionally liable to severe inflammatory lesions attended with agonising pain; and such cases were, he believed, incurable.—Dr. FORDYCE BARKER (of New York) assented to most of the statements and doctrines in the paper. But, although it was generally believed that acute non-puerperal metritis was a very rare affection, he suggested that cases of sudden suppression of the menses attended with intense uterine pain and other pelvic symptoms, with fever, quick hard pulse, headache, and sometimes more or less cerebral disturbance, were not very rare; and that they really were cases of acute metritis, which terminated frequently by resolution, leaving no permanent lesion of the organ. Dr. Barker could hardly understand the term fundal endometritis. The distinctions between inflammation of the lining membrane of the cervix and that of the body of the uterus could readily be understood, as the histological and physiological differences between the two membranes were now accepted in science; but if the term fundal endometritis implied a difference which could be recognised and required different therapeutical measures from chronic inflammation of other parts of the body of the uterus, he could not as yet comprehend it. He would ask whether pain was not the most fallacious of all symptoms in establishing the existence or the character of uterine disease. Again, as regards the pain produced by the introduction of the sound in the so-called fundal endometritis, was it not the usual fact that, on the first introduction of the sound, when the point reached the fundus, pain, sometimes very severe and persistent, was complained of; while in the same persons a tolerance of the instrument was acquired after it had been used a few times?—Dr. PROTHEROE SMITH recognised the active metritis described by Dr. Barker. Regarding the uterine canal as a whole, consisting of vagina, cervix uteri, body, fundus, and Fallopian tubes, there were, he believed, corresponding differences in the symptoms marking the occurrence of inflammatory and catarrhal affections of these different parts. When the tubes were

primarily affected, the discharge was watery and colourless, and ejected spasmodically with painful expulsive efforts; whilst when the cavity of the fundus and body was attacked, it would be productive of considerable suprapubic pains and irritable bladder, and at first the discharge would be thin, and often tinged with blood. Again, the glairy secretion, tumefaction, and everted uterine lips, marked similar affections of the cervix. Yet all these, if allowed to run their course, soon merged into one disease affecting the entire canal.—Dr. TILT, in reply, said that he could not see how he could express himself more strongly than he had in appreciation of the value of treatment directed to the cervix; but he often found that this was insufficient to cure chronic metritis and internal metritis; and he believed that the future improvement of uterine pathology lay in the study of the inflammatory diseases of the body of the womb. With regard to his dissent from the views entertained by Dr. Routh respecting fundal endometritis, Dr. Tilt said the whole question was now placed before the profession, and he confidently left it to the decision of future observers.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IRELAND.

WEDNESDAY, MAY 17TH, 1871.

SAMUEL GORDON, M.D., Vice-President, in the Chair.

THE SECRETARY read, in the absence of Dr. HAYDEN, a paper on Diaphragmatic Pleurisy, with notes of several cases. In the first of these, the patient was suffering from lumbago, when he suddenly complained of severe pain in the situation of the diaphragm, and his respiration became markedly thoracic. The usual signs of a localised pleuritis were also present. The coexistence of lumbar and of phrenic pain was noteworthy. The second patient suffered from phthisis. A violent darting pain set in in the neighbourhood of the costal cartilages, and the breathing was costal. The symptoms were but slightly lessened by treatment, yet in due time they disappeared spontaneously. In the third case, there were evidences of pneumonia affecting the lower lobe of the right lung. In this situation there was dulness on percussion, but neither crepitus nor *frottement* was remarked. The patient complained of intense pain, which he referred to the right hypochondriac region. In another instance, the chief symptom was a "stabbing" pain shooting from the inferior part of the left side upwards to the tip of the shoulder. The occurrence of a diaphragmatic hernia, of an empyema, and of diaphragmatic pleurisy, might have given rise to the symptoms. Constitutional disturbance was, however, but slight, and the patient did well. Dr. Hayden then reviewed the literature of the subject. He quoted the allusions to the affection made by Corvisart, Abercrombie, Graves, and others. Andral gave as unequivocal symptoms of the disease the setting in of severe pain darting along the false ribs; the costal nature of the respiration; and the occurrence of a peculiar form of orthopnoea. Dr. Hayden mentioned that, in his opinion, the diagnosis of diaphragmatic pleuritis mainly depended on the following considerations: the occurrence of a sudden and severe pain in either hypochondrium; the shallow and thoracic character of the respiration; the absence of febrile symptoms in mild cases, and the appearance of collapse in severe attacks; the displacement of the diaphragm either up or down; and the resistance of the symptoms to active treatment. Dry cupping, however, was often attended with the best results.—The CHAIRMAN referred to the increased difficulty in arriving at a correct diagnosis when the seat of the disease was on the left side. The case might readily be mistaken for one of acute gastritis. He believed that a valuable aid in diagnosis was afforded by watching the results of upward pressure in both cases. Pleuritic pain was relieved in this way, while the gastralgia was increased.—Dr. A. SMITH looked upon some of the cases detailed in Dr. Hayden's paper as being instances of a neuralgic or rheumatic affection of the muscular structures of the diaphragm, closely analogous to lumbago and to pleurodynia, rather than as cases of pleuritis. The absence of constitutional disturbance in many of the patients, and the failure of active treatment supported this view. He was disposed to place reliance (from experience) in the use of aconite, externally as an anodyne liniment, and internally in small and repeated doses of the tincture.

The SECRETARY (Dr. EAMES) read a communication from Dr. W. J. CARROLL, of Australia, on the Climate of Sydney. In the course of the paper, Dr. Carroll alluded to the comparative immunity from phthisis enjoyed by Sydney as contrasted with Melbourne and other places on the southern coast of Australia. He also spoke of the treatment of that disease by arsenic, and of the favourable results obtained from the production of rapid cinchonism in certain cases of pneumonia.

OBITUARY.

JACOB VALE ASBURY, M.R.C.S., L.S.A., OF ENFIELD.

THE late Mr. Jacob Vale Asbury, who died on June 21st, at his residence, Enfield, in the eightieth year of his age, was in early life a student of the Middlesex Hospital, and for seven years the pupil of, and morbid anatomist to, Joshua Brooks, with whom he afterwards continued on terms of intimate friendship. He was apprenticed to Mr. Dewint of Stone, Staffordshire; and his early years were passed in the mining districts of that county, where he gained much experience among the fearful accidents then common in such localities. He became member of the Royal College of Surgeons and licentiate of the Apothecaries' Society in 1816. About 1818, he visited Enfield as medical friend and companion to a gentleman of position in the neighbourhood. In 1820, he married and commenced practice, and shortly became medical officer to the parish. In 1826, he operated successfully in a severe case of distortion in a child aged 9; and received from the more influential inhabitants of Enfield a testimonial in the form of a silver salver. Another memorial record of silver plate bears the following inscription: "Dono dedit Gulielmus Powell Jacobo Vale Asbury, propter artem ejus eximiam quâ in se quâvis in casu inextinguibili operationem perfecit."

In 1833, he published a treatise on epidemic cholera. His "cholera tincture" was sent largely to India. The late Charles Lamb, his friend and patient, bears witness to his successful treatment of cholera in a witty acrostic on his name. Jacob Vale Asbury was on terms of intimate friendship with John Abernethy, Tom Hood, Edward Turner Bennett, and others of note and scientific celebrity. His success as a country practitioner was almost beyond precedent, his reputation extending far beyond the limits of his own neighbourhood.

Enfield was in former years the resort of the aristocracy, of whom there were none but sought him as a valued friend and medical adviser.

Towards the close of the year 1852, in consequence of the severity of railway accidents, he turned his whole attention towards the construction of machinery to be applied to railway carriages to lessen the force of collision in the event of trains or carriages being brought into undue contact with each other. This machinery was intended to be applied to the bed of each carriage, and also to be introduced into a safety luggage-van or brake, which he named "Asbury's Diasostikon". His patent for these inventions bears date 4th February, 1853.

In earlier years he invented two surgical instruments—one for the puncture of the tympanum, the other for the extraction of fish-hooks. The late Jacob Vale Asbury was for seven years demonstrator of anatomy to Joshua Brooks.

WILLIAM REYNOLDS, M.R.C.S., WELLINGTON, SOMERSET.

MR. WILLIAM REYNOLDS, who died recently at Appledore, at the age of 50, had been for twenty-five years in extensive practice at Wellington, in Somerset. He was surgeon to the union house at Wellington, and a district medical officer of the union. The duties were performed personally by him, which entailed upon him much physical labour and anxiety.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At an extraordinary meeting of the College, on Monday, Aug. 7th, the following members were admitted Fellows.

Child, Gilbert William, M.D., Oxford
Copeman, Edward, M.D., Upper King Street, Norwich
Drake, Augustus, M.B., Southernhay, Exeter
Fox, Tilbury, M.D., 43, Sackville Street
Hensley, Philip John, M.D., 4, Henrietta Street, Cavendish Square
Hitchman, John, M.D., Mickleover, near Derby
Leared, Arthur, M.D., 12, Old Burlington Street
Stevenson, Thomas, M.D., Guy's Hospital
Williams, Charles Theodore, M.D. Oxon., 78, Park Street, Grosvenor Square

The following gentleman was admitted a Licentiate of the College.
Noad, Henry Carden, St. George's Hospital

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board, on July 31st.

Evers, Benjamin, L.R.C.P. Edinburgh, Fulham Road, S.W.
Mondelet, William Henry, M.D. McGill College, Montreal Emigration Service
Smith, Eldred Noble, M.R.C.S., Worth, near Crawley, Sussex
Willis, Julian, M.R.C.S., Great Northern Hospital

The following gentlemen passed the necessary examinations, and received their diplomas in Dental Surgery, at a meeting of the Board, on August 1st.

Gingell, George, Moreton Ongar, Essex
King, Richard Francis Henry, Newark
Marsh, Henry, Chester
Rose, Harry, Albany Street, N.W.
Stevens, Mordaunt Augustus de Brouquens, M.R.C.S., Paris
Vasey, Charles Lyon, M.R.C.S., Cavendish Place

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, August 3rd, 1871.

Barrow, Frank Edward, Woolwich
Barrow, Henry John Waller, Woolwich
Benham, William Thomas, Bristol Royal Infirmary
Bland, George, Dalston
Henson, Walter Knowsley, Hull
Wade, Reginald, Cross, Somerset

The following gentlemen also on the same day passed their first professional examination.

Fairbank, William, St. Bartholomew's Hospital
Hall, Frank Algernon, St. Bartholomew's Hospital
Harvey, William, St. Bartholomew's Hospital
Floyer, B. Bernard, Middlesex Hospital
Powell, Joshua, University College
Triggs, John B. B., University College
Thompson, Francis Henry, St. Thomas's Hospital
Welchman, Edward, St. Thomas's Hospital
Vines, Edward Prince, King's College

MEDICAL VACANCIES.

THE following vacancies are announced:—

BIRMINGHAM, Parish of—Dispenser.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon.
DURHAM COUNTY HOSPITAL—Physician.
EDINBURGH VETERINARY COLLEGE—Professor of Zootomy or Comparative Anatomy; Professor of Cattle Pathology.
GREAT NORTHERN RAILWAY—Surgeon for the Grantham District.
HOLBORN UNION—Medical Officer for District No. 1.
MIDDLESEX HOSPITAL—Physician; Assistant-Surgeon.
QUEEN'S COLLEGE, Birmingham—Demonstrator of Anatomy.
QUEEN'S HOSPITAL, Birmingham—Fourth Physician.
SETTLE UNION, Yorkshire—Medical Officers for the Horton and Settle Districts, and the Workhouse.
SOUTH WESTERN PROVIDENT DISPENSARY—One Attending Medical Officer.
UNIVERSITY COLLEGE HOSPITAL—Assistant Physician.
UNIVERSITY OF DURHAM—Medical Tutor at the Newcastle-upon-Tyne College of Medicine.
UNST, Shetland—Parochial Medical Officer and Public Vaccinator.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ALLEN, Marcus, M.R.C.S., L.R.C.P. and L.M., has been appointed Resident Accoucheur to St. Bartholomew's Hospital.
BARRY, James Bernard, L.K.Q.C.P. Irel., appointed Medical Officer for the Killebeggan Dispensary District of the Tullamore Union, King's County.
*DRINKWATER, William, Esq., appointed Medical Officer to the Bicester District Union.
FRIER, Dr. Wm., appointed Medical Officer for the Waringstown Dispensary District of the Lurgan Union, co. Armagh.
LAFFAN, Dr. Patrick Michael, appointed Medical Officer for the Killeen Dispensary District of the Dunshaughlin Union, co. Meath.
MAGRATH, John, Esq., appointed Assistant Resident Medical Officer to the Leeds Public Dispensary.
MATHEWS, George C., L.R.C.P. Edin., appointed Medical Officer for the Moate Dispensary District of the Athlone Union, co. Westmeath.
*THOROWGOOD, John C., M.D., appointed Junior Physician to the West London Hospital, Hammersmith.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

*LOWRY, Harvey, M.D., West Malling Place, Kent, to Jane Frend, daughter of the late Captain William TUCKER, R.N., on August 5th.
*MILLER, Alexander Gordon, M.D., F.R.C.S.E., Edinburgh, to Jessie, third daughter of the late Captain Alex. Dingwall Fordyce, R.N., of Brucklay and Culsh, on August 2nd.

DEATHS.

WRIGHT, E. Welchman, M.D. Ed., at Shipton-on-Stowe, aged 70, on July 22nd.
FOLEY, John Joseph, Esq., son of *W. Foley, M.D., Kilrush, on August 1st.

CHARITABLE DONATIONS.—The Worshipful Company of Mercers has contributed fifty guineas to the fund for the completion of the National Sanatorium for Consumption and Diseases of the Chest at Bournemouth. Her Majesty has given £100 towards the same object.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.
 WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.
 FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
 SATURDAY... St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

DR. DYCE DUCKWORTH.—The paper is in the hands of the printer.

R. M.—By application either to the General Secretary or to the Secretary of your Branch.

NEMO.—Being registered under the Medical Act in Medicine and Surgery, Nemo can of course recover in both. The Apothecaries' licence has no special privilege in this respect. Those who already hold the diploma of the London College of Surgeons will be admitted to the examination for the licence of the College of Physicians of London, under conditions which may be ascertained by writing to Dr. Pitman, the Registrar of the College.

A MEMBER.—Birmingham.

OBSERVER (Harrogate).—The circular headed "PRO BONO PUBLICO; NO CURE, NO PAY", is one of the most discreditable productions which ever came under our notice. If "T. Clarkson, Surgeon, Darley House, Darley, Ripley, Yorkshire", whose name is signed, be the author of this handbill, and be on the *Medical Register* as "M.R.C.S. England and L.S.A. London", we commend the case to the attention of the Council. This circular involves a scandalous breach of professional propriety and an extreme degradation of the professional character. We have forwarded it to the Secretary of the Royal College of Surgeons.

FACTORIES AND WORKSHOPS ACTS AMENDMENT BILL.

SIR,—Permit me to call your attention, and that of medical men who act as certifying surgeons of factories, to the Factories and Workshops Acts Amendment Bill, which has passed the House of Lords, and was ordered, on July 18th, to be printed by the Commons. Under the 7th Section, no accidents are to be returned by employers, except (A) any accident which causes loss of life, and (B) any accident caused by machinery or by explosion of gas or steam. Upon consideration, certifying surgeons will see how largely this proposed alteration of the law will affect them, and, I will add, prejudicially affect the *working men*. In this district, I know that inquiries into the causes of accidents have been the means of diminishing the numbers of fatal results. I am, etc., T. J. DYKE.

The Hollies, Merthyr Tydfil, August 6th, 1871.

DR. SAYRE'S VERTEBRATED PROBE.—Dr. Sayre, of New York, writes to us from Bern: In writing the hurried note descriptive of my vertebrated probe, I neglected to give credit to Mr. Stollman, of the firm of Tieman and Co., 67, Chatham Street, New York, who manufactured it for me. He is one of our most ingenious mechanics, and always obliging in endeavouring to carry out surgical ideas. I regret that I should have overlooked him, and beg you to supply the omission.

THE PRELIMINARY EXAMINATION AT THE COLLEGE OF SURGEONS.

SIR,—With three hundred and forty-one other candidates, I presented myself at the recent Preliminary Examination at the Royal College of Surgeons; and, to my astonishment and regret, am just informed that I have failed in one subject, the remainder being satisfactory; "and that the rejection necessitated re-examination in all the subjects, should I again apply for admission to examination." As the one unlucky subject is likely to be of no practical importance to me in after life, neither as an assistance in the study of my profession, nor even as a proof of general education, surely it must be unnecessary to commit me, and others similarly situated, to re-examination in all the other subjects; thus not only hindering me from proceeding to a medical school or hospital for six months, but also preventing me from turning my attention to what would be valuable in the successful pursuit of the profession which I have adopted. I am, etc.,

August 1871.

STUDENS.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

Dr. VENABLES, Dr. C. FOX, Dr. T. L. GREEN.—We fear we shall be unable to use the manuscripts on small-pox referred to.

Dr. HERBERT L. SNOW (Shrewsbury).—Pulvermacher's chains have been carefully examined by many eminent members of the profession. They furnish a reliable continuous current, and their precise utility remains to be decided in each case by the medical attendant.

MEDICAL ETIQUETTE.

SIR,—Will you kindly give your opinion on the following points, and your advice as to the courtesy to be observed under the circumstances.

1. A practitioner calling at the residence of a lady under the care of another, and leaving his card for the lady's husband.

2. A patient of one practitioner, suddenly seized with illness near the door of another, into whose surgery he is carried: the latter continues to attend the patient without communicating with the regular attendant.

An answer to the above will oblige.

NEMO.

* * * 1. If the call be made merely in discharge of the ordinary courtesies of society, the act is unobjectionable; if with the ulterior object of supplanting the practitioner in attendance, it is wrong.

2. The practitioner into whose hands the patient has fallen ought decidedly to communicate with the regular medical attendant, unless the patient or friends spontaneously express a decided wish to the contrary.

A MEMBER of the Yorkshire Branch should communicate with the Honorary Secretary of his Branch, from whom the report is transmitted.

A. W. (Leicester).—We will see what can be done, and communicate further with our correspondent. We shall be glad if he will remind us of the circumstances in about a fortnight's time.

PORTABLE GALVANIC BATTERY.

SIR,—A short time before the late war, a new portable galvanic battery, called Gaiffe's, was introduced to this country, and was being sold here: it was sufficiently small to be carried easily in the coat pocket, and was *always ready for use*, without any preparation, the cells being closed so that their contents could not escape. I ordered one, but the war broke out and stopped the supply; and I have been unable as yet to get one. I shall feel obliged if any of the readers of the JOURNAL can tell me where I can obtain one (I do not mind a second-hand one if in perfect condition). I also want to know what is the strength of the current as compared with the ordinary electro-magnet, and whether it would be sufficiently strong for such a case as galvanising the phrenic nerve in threatened death from chloroform. Possibly there may now be a better apparatus; I shall be very glad to hear of any that will fulfil these conditions—viz., smallness, portability, durability, being always ready for use, and being strong enough for resuscitation from threatened death from chloroform. I am, etc., AN ASSOCIATE.

P.S.—What are Emil Stührer's batteries?

DEATH FROM CHLOROFORM AT ABERDEEN.—Our correspondent, J. F., will find that if an animal, say a dog, be slowly asphyxiated, both sides of the heart will be found full, the right containing more than the left, simply on account of its greater capacity. The repeated assertions in text-books that in asphyxia the left side of the heart is empty, or nearly so, and the right full, is unfounded in fact. One author has probably accepted the statement as a fact from some previous writer.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, August 5th; The New York Medical Record, July 27th; The Boston Medical and Surgical Journal, July 27th; The Madras Mail, May 27th; The Shield, August 5th; The Philadelphia Medical Times, July 19th; The Philadelphia Medical Independent, July 22nd; The Birmingham Morning News, August 4th; The Kentish Express and Ashford News, Aug. 5th; Saunders's News-Letter and Daily Advertiser, Aug. 2nd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Mr. J. Whipple, Plymouth; Dr. Arthur Ransome, Manchester; Mr. G. Wood, Cheetham Hill; Mr. T. J. Dyke, Merthyr Tydfil; Mr. Joseph Lister, Edinburgh; Dr. Charlton, Newcastle-upon-Tyne; Dr. W. H. O. Sankey, Cheltenham; Mr. Herbert M. Morgan, Lichfield; Mr. Clayton, Birmingham; Mr. Square, Plymouth; Mr. Whittle, London; Dr. Greene, London; Dr. Braxton Hicks, London; Dr. Heywood Smith, London; Dr. Cheadle, London; Mr. John Magrath, Leeds; Mr. Kemp, Wellington, New Zealand; Mr. David Hadden, Bandon; Mr. E. B. Adams, Bungay; Mr. C. S. Jeaffreson, Newcastle-upon-Tyne; Mr. H. Walmsley, Teignmouth; Dr. Bryan, Northampton; Dr. R. Barnes, London; Mr. Berkeley Hill, London; Mr. W. F. Morgan, Bristol; Mr. J. R. Fielding, Alfreton; Dr. W. Roberts, Manchester; Mr. Benson Baker, London; Dr. Radcliffe, London; Dr. D. T. T. Maunsell, Dublin; Dr. Venables, Blackheath; Dr. Crichton Browne, Wakefield; Mr. Milner, Harrogate; Dr. Shuttleworth, Lancaster; Dr. L. A. Sayre, Bern; Mr. Henry Terry, jun., Northampton; Studens; Mr. Ferneley, Grantham; Dr. Althaus, London; Dr. J. G. Davey, Northwoods, Bristol; Mr. C. Heath, London; Dr. Thorowgood, London; Dr. Summerhayes, Norwich; Dr. Morell Mackenzie, London; Mr. J. Hackney, London; Dr. Protheroe Smith, London; Dr. Smyth, Brighton; Our Manchester Correspondent; Dr. Mapother, Duulin; Mr. J. J. D. Burns, West Mall Place, Kent; Mr. E. J. Nicoll, Bury; Mr. R. S. Hannay, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. E. L. Fox, Bristol; Dr. Bishop, Paris; Our Dublin Correspondent; Dr. Browne, Rochester; Dr. Thompson, Leamington; Dr. Merriman, Kensington Square; The Secretary of the Royal College of Physicians, London; Mr. E. Lund, Manchester; Mr. Fleischmann, Cheltenham; Dr. Aitken, Edinburgh; Dr. Dyce Duckworth, London; Mr. H. W. Hunt, London; Mr. E. Façon Watton, London; The Director-General of the Army; etc.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

*At the Annual Meeting of the British Medical Association,
in Plymouth, August 1871.*

By JOSEPH MAY, ESQ.,

Mayor of Devonport, and President of the Section.

GENTLEMEN,—I beg to acknowledge the compliment that has been paid me in asking me to take this chair, and to preside over the proceedings of this Section. I must presume that the offer was made to me in recognition of the social position which I occupy by the indulgence of my fellow-townsmen, and not from any claim that I may present to the Association personally. I will not detain you by any lengthened remarks upon the subject of surgery. After the able address that was delivered to us this morning by Dr. Johnson, perhaps it would be better that we should come almost immediately to the actual business of the Section. However, I may observe that, whilst hearing Dr. Johnson this morning remark upon the great changes that had gone on in medicine within the last thirty years, I recalled the fact that I myself was old enough to recollect that within the same period enormous advances have been made in surgery also. I can look back and recognise in my younger days such great names as those of Astley Cooper and Abernethy, besides others with which we are all familiar as being leaders of the profession in their day and generation. If we compare their opinions and their practice with those of the present day, we are at once reminded of the great advance that has been made. It seems as though medicine and surgery have partaken of the great onward progress that is characteristic of other institutions in society. The adoption of the powers of steam and of electricity has given to society at large an impulse which has altogether transformed the face of things. And so by various agencies which have been at work in the past forty years, the sciences of medicine and surgery have been thoroughly metamorphosed. One of the most valuable agencies introduced during that period has been the use of anæsthetics. Their employment was unknown in my younger days, and without them our hands were comparatively tied; but we now see the beneficial influence of chloroform and allied substances in allowing us to undertake operations extending over periods of time which, without the use of such agents, would have been simple acts of cruelty. In the matter of diseases of bones has the influence of that agency been most conspicuously shown. Operations are undertaken in the present day which occupy half-an-hour or even three-quarters, and which would have been impossible before the discovery of these beneficent aids to surgical science. Anæsthetics are indeed the most valuable agency which has been given to the surgery of the present day. The learned professor in medicine to whom we all listened with so much pleasure, spoke to us of the expectant treatment. Now, the expectant treatment of medicine is becoming more and more in vogue, in opposition to what we may call the more heroic treatment of administering large doses of drugs and other violent measures. In surgery it would not do, however, to trust to expectant treatment. Here you require prompt action. The life of the individual depends not upon waiting upon Nature, but upon prompt interference with the mischief which accident has occasioned. Still, though that applies to wounds recently inflicted, there are cases in which the expectant treatment so ably advocated by the professor is of great value in surgery by giving Nature an opportunity of carrying out her sanitary regulations. Great things may be expected when the conservative method of treatment can be followed out so far as the expectant system is of value in surgery. I had hoped this Section would have been favoured with a paper from a gentleman who had the good fortune to be present in France during a part of the late conflict. Circumstances have prevented him from doing so; but as he is present, I have no doubt we shall be favoured with the result of some of the observations which he made during the campaign.

THE PATHOLOGY AND TREATMENT OF
CHOLERA.*

By GEORGE JOHNSON, M.D., F.R.C.P.,

Professor of Medicine in King's College, London; Physician to King's College Hospital; etc.

IN the present communication, my object will be to bring distinctly before you, in the fewest possible words, the main points relating to the pathology and treatment of cholera which I hold to be probably true, and upon these points to invite comment and discussion.

Cholera is the result of a material and portable poison, capable of being conveyed from place to place and communicated from person to person. The poison may enter the system either with the air through the lungs, or with the food and drink through the alimentary canal. Water contaminated with choleraic discharges is, in a large proportion of cases, the vehicle by which the poison enters the system. Whatever may be its mode of entrance, the poison is absorbed and enters the blood. When it enters by the lungs, the blood is the only channel through which it can reach the alimentary canal.

The usual period of incubation, *i. e.*, the interval between the reception of the poison and the commencement of the symptoms, varies from one to three or four days. Mr. Macnamara records the fact of nineteen healthy men having, on one occasion only, drunk water with which cholera stools had been mixed. One man was seized with cholera after an interval of one day, two on the second, and two on the third day, after imbibing the poison; the others escaped.

In some cases, a general feeling of *malaise* and depression, the result, probably, of blood-poisoning, precedes the commencement of the gastro-intestinal symptoms. The discharges from the alimentary canal are the result of a conservative effort to expel the poison and its products from the system; in this respect they are analogous to the eruption of small-pox, and the intestinal discharges of enteric fever. The discharges, when abundant, are a source of great exhaustion, and they may be so copious as to kill. That they are not the essential or the chief cause of the state known as cholera collapse is clear from the following considerations. They bear no direct relation to the degree of collapse; often an inverse relation.

Collapse and death may occur without discharges and with but a scanty secretion into the alimentary canal; on the other hand, recovery from collapse is always associated with a continuance of the discharges, which gradually cease as reaction occurs. During the state of collapse, there is evidence of an impeded circulation through the lungs. This is shown—During life, 1. by the comparative emptiness of the systemic arteries, the pulse being small and feeble, or even entirely absent at the wrist. 2. By the fulness of the systemic veins; hence the lividity of the surface. After death, evidence of impeded circulation is found in the condition of the heart and lungs; the left side of the heart is empty; the right side, the pulmonary artery, and the large veins are distended; the lungs are anæmic, light in weight, and either dark- or light-coloured, depending on the presence or absence of a retrograde passive congestion of the bronchial veins and capillaries. The only probable explanation of this arrest of the circulation is contraction of the minute pulmonary arteries. A similar arrest of the circulation occurs as a result of acute apnoea. The state of collapse which accompanies a fit of spasmodic asthma is very similar to the collapse of cholera. The main difference between choleraic and asthmatic collapse consists in this—that in asthma there is a primary apnoea, the result of bronchial spasm, and a secondary asphyxia or pulselessness consequent on contraction of the minute pulmonary arteries. On the other hand, in cholera there is a primary asphyxia and a secondary apnoea consequent on the arrest of the circulation.

Embolism of the pulmonary artery has in several recorded instances given rise to the most characteristic symptoms of cholera collapse—blueness of the surface, shrinking of the features, pulselessness, coldness of the tongue and breath, urgent dyspnoea, with loud puerile respiration over the lungs and a feeble whispering voice.

Feebleness of the heart does not explain the arrest of the circulation in cholera. Why should the right heart alone be always enfeebled? And, admitting weakness of the right heart, this would not explain the fact that, while the blood has been abruptly stopped just before reaching the capillaries, the trunk of the pulmonary artery is so distended that, when its walls are punctured soon after death, the blood spurts out with considerable force—showing that, while the right ventricle

* Read before the Medical Section at the Annual Meeting of the British Medical Association, in Plymouth, August 1871.

had continued to contract, some obstacle in front had prevented the onward movement of the blood.

There probably *is some* weakening of the heart's walls during collapse, in consequence of the defective circulation through the coronary, as through all the systemic arteries. This weakness of the heart's walls is obviously a consequence, and not the cause, of the impeded circulation through the lungs. The dark and viscid condition of the blood is a result of the defective aëration and movement of the blood. The same condition of blood occurs in all forms of apnœa. So long as the circulation and respiration are free, mere loss of water does not thicken the blood, for the reason that water is rapidly absorbed from the soft tissues throughout the body to supply the place of that which is lost by vomiting and purging. After the discharges have ceased, this borrowed water has to be restored to the tissues, and the urine remains suppressed or scanty until the loan has been repaid.

The greatly diminished, almost suspended secretion of bile and urinary solids during collapse is explained by the defective circulation, and the consequent diminished oxidation of blood and tissues. Bile, urine, and carbonic acid, are joint products of oxidation. In a nursing mother who is the subject of cholera and collapse, the secretion of milk continues, because the milk-constituents—casein, sugar, oil, and water—are not oxidised products. The marvellous temporary relief which follows the injection of a warm saline solution into the veins during collapse is due partly to the morbid blood being diluted, and thereby rendered less obnoxious to the resisting arterioles, but mainly to the relaxation of the arterial spasm by the high temperature of the injected liquid. It has been found by those who have had most experience of this method of treatment, that hot injections are more efficacious than those of lower temperature.

In the treatment of cholera and choleraic diarrhoea, which is, in fact, cholera in a mild form, the main principle to bear in mind is, that the discharges are as essentially curative as is the eruption of small-pox. The discharges are not to be abruptly stopped by opiates. Experience has abundantly proved that this is a pernicious practice. Neither are they to be permitted to accumulate in the alimentary canal. There is one remedy which is almost universally applicable in all forms and stages of the disease, and that is an abundant supply of cold water to flush the intestinal sewer, and to wash out the poisonous discharges. A copious imbibition of pure cold water will suffice for the cure of most curable cases.

Palpation and percussion of the abdomen reveal the fact that there occurs not unfrequently a painful and sometimes a paralyzing over-distension of the bowel by rapidly effused morbid secretion. This, if not promptly relieved, may even go to the extent of causing a fatal obstruction. More especially is this likely to happen when the sensibility of the bowel has been deadened by opium. The plan to prevent and to remove this accumulation is to give some quickly acting yet unirritating evacuant dose. For this purpose, castor-oil is, on the whole, better suited than any other remedy. The objection sometimes raised—that all remedies must be useless, because none are absorbed—obviously does not apply to such a remedy as castor-oil, which, by its merely local action upon the mucous surface, stimulates the bowel to expel its contents. Experience has amply proved the success of the treatment in this and kindred classes of cases.*

The time to give opium, if at all, is in small doses to soothe the bowel after the expulsion of the poisonous secretions. Opiates are useless, and even dangerous, when the blood is poisoned, or when the bowel contains offensive morbid secretions. Opiates in the early stages of diarrhoea and cholera would be more frequently and decidedly injurious, were it not for the fact that their absorption is prevented by the rapid current of liquid which is being poured from the blood into the alimentary canal; therefore they are quickly expelled, together with the morbid secretions, and they are powerless to arrest the discharges.

INTEMPERANCE AND CHOLERA.†

By ROBERT MARTIN, M.D., Manchester.

WE are assured, on tolerably good authority, that the terrible destroyer, cholera, which has already again and again ravaged this country, is once more marching towards our shores. Now, forewarned is, or should be, forearmed, and many members of our profession have done the state good service by pointing out what are the weak parts in our sanitary defences, and showing on which of these the enemy's assault is most likely to be made. It may seem somewhat presumptuous and ungracious

to say that in the letters and leading articles which have lately appeared, it is doubtful whether the greatest source of the nation's peril has not been entirely overlooked. So far as I am aware, no writer has ever alluded to intemperance as a powerful predisposing cause of cholera, yet it is certain that, both directly and indirectly, it tends to promote the occurrence, spread, and fatality of zymotic disease in its most malignant form. Now that, in the enumeration of preventable causes, this should be overlooked, would be most unfortunate. Thousands may strike on this unbuoyed rock, on which thousands have already struck and been wrecked. It will be comparatively useless to lavish large sums of money on sanitary operations, the erection of hospitals, the appointment of trained nurses, if an agent so directly provocative of zymotic disease, is allowed to operate unchecked.

The better to comprehend the bearings of this question, it will be well to give a passing glance at the sequelæ of intemperance.

1. *Indigence*.—The intemperate man burns the candle at both ends, he wastes time during which the means of providing for his family should be earned, and he squanders much of the little which he has earned. He is, therefore, miserably poor; he and his family suffer frequently from lack of food, and that which they do get is often bad in quality. It is for this class that the stink butchers—the dealers in diseased flesh-meat and tainted fish—chiefly cater. The half-famished are glad to seize on any garbage whereby the pangs of hunger may be appeased.

2. *Overcrowding* is another of the conditions most frequently associated with cholera outbreaks, where persons are found huddling together, purity of air, cleanliness of person, are all but impossible, it is in the drunkard's lair that we find this evil most strongly marked. He cannot, or will not, pay for a decent lodging, his family have to take refuge wherever they can, often in foul damp apartments. Again, not only does overcrowding favour the outbreak of epidemic disease, but more than anything else it tends to promote its spread. Until men, women, and children live like human beings, instead of herding like pigs in close pent up styes, they will be liable to be ravaged by epidemics. Until families are located in roomy dwellings, where each individual can have something like the cubical space which we give to convicts or paupers, we shall be kept in a state of alarm, shall be disgraced by the outbreaks of pestilence—amongst the surest indications of residuary barbarism. It is well-known that animal poisons are intensified by concentration. Hence, as regards effluvia, the law may be thus expressed:—As the square of the distance separating those infected diminishes, so the infecting power of the poison increases. So long as people are crowded into filthy apartments, it will be impossible for the sanitary authorities to stamp out pestilence. But if roomy dwellings are to be provided they must be paid for, but if people are to be in a position to pay they must be industrious and sober; they must also be orderly in their conduct and careful in their treatment of property. Whilst vast numbers of the working classes are addicted to habits of drunkenness they will not pay rent, their brawls and midnight revels drive away respectable tenants, the children of the drunkard are frequently recklessly destructive of property. Hence capitalists will not build cottage property, and those who possess it are glad to turn it into workshops or stables, etc., or pull it down and appropriate the ground to some other purpose. If drunkenness were less rife amongst the working classes, dwellings would be as freely provided for them as well as for the class above them. For a variety of reasons, therefore, overcrowding must be chiefly debited to intemperance.

Filth is another agent strongly favouring the development and spread of cholera. But filth is too often a direct result of intemperance. The drunkard's wife is too often a spirit-broken creature, lacking food, enduring cruelty, obliged to nurse sickly children, or having to struggle to maintain them; who can wonder that she is slatternly and dirty in her home? Is it reasonable to expect women to keep their families and homes cleanly who return at night, fagged with a day's washing or hawking, or factory or field labour, to which she is driven through the idleness of a drunken husband? But in the lowest deep there is a lower deep, when the wife and mother is herself a drunkard. An example of this was presented lately in the case of the family at Ilford, where a man was found on the floor in one apartment who had been dead a week, whilst his wife lay drunk in the next room amidst filth and stench which were sickening. Now drunkenness amongst females is terribly on the increase. A more humiliating confession, or a more ominous one, could not be made. Liverpool is the most unhealthy town in the kingdom, and in no part does female drunkenness so greatly abound or increase so fast.

But it is the poisonous effects of alcoholic liquors which most directly open the doors for pestilence to enter. The depression which follows the free use of liquor, the loss of functional balance, the retention of effete matters, the enfeebled circulation, the torpid liver, and weakened

* See a valuable paper by Drs. M'Cloy and Robertson. *Med.-Chir. Trans.*, vol. 50.

† Read before the Medical Section at the Annual Meeting of the British Medical Association, in Plymouth, August 1871.

digestion, the generally lowered tone of the system, all favour the development of zymotic agents.

During the cholera-visitation of 1832, the nurses in the Manchester Cholera Hospital were at first allowed to go home each day at certain intervals. This arrangement gave them the benefit of a certain amount of out-door exercise and change of atmosphere, as well as relieved the tedium of their duties; the mortality, however, amongst them was so great that it was feared that the supply would fail. It was discovered that, with the idea of protecting themselves against the disease, they indulged freely in liquors; they were therefore confined to the hospital, and debarred from obtaining more than a small allowance of alcoholic drink, after which not a single fresh case occurred amongst them. Here we see that, notwithstanding far less favourable hygienic conditions, there was an immunity from cholera attacks when there was a greatly diminished consumption of alcohol.

Cheerfulness is undoubtedly one of the best defences against cholera, as depression is one of its most effective allies. Nevertheless, joyousness associated with the free use of liquors, as is so frequently the case in this country, may be productive of very adverse results. When the cholera-visitation of Glasgow (1832) was dying out, the jubilee was held to celebrate the passing of the Reform Bill. This gave rise to a considerable increase of drinking and drunkenness; the result was that cholera, which was nearly extinct, burst forth afresh, causing considerably increased mortality.

During the second epidemic, a great increase in the number of deaths from cholera took place during and after the New Year's festivities. At Gateshead, the week after Christmas-day was signalled by a most terrible fatality, which was obviously attributable to the drunkenness which prevailed in the town; one of the worst streets of which was said to be swept of confirmed drunkards from one end to the other, with very few exceptions.

At the close of the cholera-visitation, as experienced in Liverpool in 1866, Dr. Shearer, in his Report to the Toxteth Park Board of Guardians, thus wrote:—

"Of all the physical causes predisposing to cholera, indulgence in intoxicating liquors is the most powerful. This was proved on a large scale by the number of applications on the Sundays, Mondays, and Tuesdays, being from seventy to a hundred daily in excess of the number of applications on other days of the week. I have no hesitation whatever in tracing this terribly significant fact to the drunken orgies of Saturday night, Sunday, and Monday, which follow the weekly receipt of wages on the part of the labouring community."

The cholera-attack on the metropolis told, in 1866, with terrible effect on the East of London, more especially over the Limehouse and Ratcliffe districts. Mr. Orton, the Medical Officer of Health, in his report, states: "Those who have been water-drinkers, teetotallers more especially, have been pre-eminently exempt." Again, in his report for the year ending Lady-day 1867, after an enumeration of the facts connected with the outbreak, he declares: "That the drinkers of stimulating liquors, both fermented and spirituous, all other conditions being equal, were pre-eminently the sufferers and victims during and arising from the epidemic."

One of the most terrible examples of the effects of drunkenness and its accompaniments in promoting the spread of cholera was associated with the terrible outbreak at Liverpool in July 1866. Dr. Trench, the Medical Officer of Health, received information on Monday, July 2nd, that a death from cholera had occurred on the previous evening. This was the first case, the victim being an Irishwoman. The friends resolved on waking the corpse. The body was laid on a board; and in the apartment, scores of persons (men, women, and children) ate, drank, and slept, the orgies being kept up, amid drunken and profane revelry, during day and night. The whole place reeked with the loathsome and disgusting emanations of drunken and unwashed bacchanals. Drunken women squatted thickly on the flags of the court, before the open door of the crowded room where the corpse was laid. Before a week had passed, the husband of the woman was among the dead; and before the end of July, forty-eight persons had died from cholera within a radius of a hundred and fifty yards from the court which had been the scene of the ill-timed revelry.

Numerous facts teaching a similar lesson could easily be added; those cited will, however, suffice to show that, in taking means for preventing the advent or spread of cholera, the utmost efforts should be used by the authorities for limiting the facilities for procuring intoxicating liquor. When an attack is impending, intemperance ought to be most stringently dealt with. The drunkard is a source of the greatest danger to himself and to the community. The utmost efforts of the authorities, and the most lavish expenditure of funds, may be neutralised by the reckless conduct of a few intemperate persons. Every means ought therefore to be taken in order to prevent drunkenness.

It is not intended to imply that the attention of the authorities should be confined to the promotion of temperance—every hygienic method should be employed; but incentives to intemperance must be especially repressed—indeed, as far as may be practicable, suppressed.

ON THE TREATMENT OF ANEURISM BY COMPRESSION.*

By RAWDON MACNAMARA, M.D., F.R.C.S.I.,
Surgeon to the Meath Hospital, etc.

It may perhaps be in the recollection of some of the members present of this great Association, that upon the occasion of their honouring my native city, Dublin, with a visit, I read a paper in the Surgical Section on the Deligation of the Femoral Artery, in what is now known amongst surgeons as Porter's space. Upon that occasion I supported my views as to the eligibility of selecting this space as the site for operation by a record of eight cases, in six of which the operation had proved eminently successful, whilst in two the results had proved fatal, but fatal from causes perfectly independent of the site selected for operation. This paper will be found in the *BRITISH MEDICAL JOURNAL* for the year 1867, vol. ii, p. 285. Since then I have had no further personal experience of this operation; but I have learned from Professor Gross that since his return to America from the visit he recently paid these countries, he also has deligated the artery in this space with success, and that it is his intention to introduce a description of this operation into the forthcoming new edition of his well known *System of Surgery*. My inability to support this mode of procedure by a further record of additional cases is to be accounted for by the fact, that all the cases of popliteal aneurism which I have witnessed in the interval have proved amenable to treatment by compression. Even within the month just passed two cases have been successfully so treated in the wards of the Meath Hospital—one by Mr. Porter, the other by Mr. Wharton; the former case being brought to a successful issue in thirty-two days, the latter in seven days.

The treatment of aneurism by compression has been attended with such happy results in the hands of Irish surgeons—results contrasting in so marked a manner with the exceptionally favourable cases occurring in the practice of English surgeons—that I have on more than one occasion been asked by eminent London authorities how I could account for this discrepancy. To enable me to answer this question at all in a manner satisfactory to myself, I shall give a brief sketch of this mode of treatment since its revival in Ireland up to the present moment, and I shall lay before the Section several of the instruments which have been employed for the purpose during that period. By such a course I hope to clothe my observations at all events with somewhat of historic interest: and here, gentlemen, I beg of you to observe that I have used the phrase "*revival* in Ireland"; to do otherwise would be but to display a gross ignorance of the literature of the subject, inasmuch as that Irish surgeons cannot lay claim to absolute originality in the matter. In our earliest surgical writings we find recorded cases so treated. Not to go further back than Galen and Rhazes, we find these worthies using pressure in the treatment of aneurisms occurring at the bend of the elbow; whilst in more modern times, in the year 1772, Guattani published a treatise on aneurism, in which he records the results of this plan of treatment in eleven cases of popliteal aneurism, in five of which there was a successful result. So that we cannot claim for Irish surgery absolute originality in the matter; but we can claim for it the merit of its revival—of unwearied study of the subject—of having established the principles whereby the cure is effected—and of the suggestion of numerous most ingenious improvements in the class of instruments suited for the successful conduct of such cases. Pre-eminent amongst these labourers must always stand the names of Bellingham, Carte, and Tufnell; and to this latter gentleman am I indebted for being able to exhibit to you many of the most interesting of the instruments now lying upon the table.

Historically, the treatment of aneurism by compression may be divided into two eras—one anterior, the other subsequent, to the year 1785—a year memorable in our annals as that in which John Hunter per-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association, in Plymouth, August 1871.

formed the first of those operations for the cure of popliteal aneurism which will bear his name so long as civilisation lasts. In the first of these eras the pressure was applied directly over the aneurismal tumour, the object being to empty the sac of its contents, with the view of bringing the edges of the wound or slit in the vessel into apposition, so as to cause their adhesion and thereby to cure the disease. However faulty were both this theory and mode of treatment, undoubtedly successful results occasionally ensued. Why this should be so is capable of explanation did time permit; but more important matters press, and I must hurry on.

After Hunter's brilliant operation a long interval occurred, during which all such efforts as the cure of aneurism remained in abeyance until the year 1820, when Mr. Todd's now celebrated cases occurred in the Richmond Hospital. These cases are recorded in the third volume of the *Dublin Hospital Reports*, p. 121, *et seq.* In this paper Mr. Todd thus expresses himself: "The tumour was so much under the control of pressure on the inguinal portion of the artery, that I was not altogether without hope that, by diminishing the current of blood in the trunk of the artery, so as to favour the coagulation of the contents of the sac, a cure without operation might be effected." In both of these cases, however, recourse was subsequently had to deligation of the artery. In the year 1825, Mr. Todd for the third time employed pressure in the treatment of a case of popliteal aneurism, and upon this occasion with success; but his premature death interrupted his labours, and indeed prevented his placing this case upon record; and probably it would long since have been forgotten had it not been communicated to the profession by his son, the late lamented Dr. Robert Todd, in the pages of the *Dublin Quarterly Journal*, in the year 1846; the case being recalled to memory in consequence of the fact that Irish surgeons were then becoming sensible of the value of this mode of treatment, through the earnest exertions of the late Dr. Bellingham, whose masterly treatise on the subject is well worthy of careful study. As bearing upon this subject, I should also wish to direct your attention to Mr. Tufnell's work upon aneurism, the pages of which are enriched with several interesting plates illustrative of many of the instruments employed in this plan of treating aneurism.

The period of the *renaissance* of this plan of treatment was marked shortly afterwards by what must always be recognised as an important epoch in the treatment of aneurism by compression, to wit the superaddition of elasticity to pressure in the controlling power. From the very earliest period up to then, *dead* pressure alone had been employed, and the sufferings resulting therefrom were alone sufficient to baffle the best directed efforts of the most zealous and intelligent surgeon, and to exhaust the endurance of the most heroic patient—so much so as in numerous cases to induce them loudly to call out for deligation of the artery, thus reversing those well known lines—

—rather bear those ills we have,
Than fly to others that we know not of.

To Dr. Carte must be attributed the merit of suggesting an instrument in which pressure of sufficient power could be combined with an amount of elasticity calculated to render that pressure tolerable.

Another and most important defect in the earlier instruments was, that no provision was made in their construction for altering the direction in which they were to exercise the pressure, and thus were they difficult of application and unsuited for general use. An instrument might control the artery in one individual, and yet fail altogether to do so in another; in fact, they were not suited for universal application: and even in such cases as those in which they were able to control the artery, their action was but temporary, as they were perpetually liable to displacement every time the patient shifted his position. To Mr. Read, the well known cutler in Dublin, is due the merit of meeting this difficulty, by adopting in our more recent instruments the ball- and socket-joint and the pelvic cradle. Since then Mr. Read has introduced to our notice another instrument which bears his name—"Read's compressor"—of the merits of which it would be difficult to speak in too eulogistic terms. This is the instrument which was mainly instrumental in effecting the cure in the two cases of popliteal aneurism already alluded to as having been successfully treated last month in the wards of the Meath Hospital. In it, in my opinion, are combined the *ne plus ultra* of all that should characterise a good compressor—directness and permanence of pressure, associated with the requisite amount of elasticity.

A radical defect in our earlier efforts at curing aneurism by compression was, that the pressure was restricted to but one portion of the artery. Bellingham pointed out to us this error, and all subsequent experience has confirmed his teaching. Now-a-days we supplement the pressure applied by means of a Carte's or a Reid's compressor to the vessel in the upper portion of its course, by a second instrument such as Signoroni's or Salt's tourniquet, or some one or other of those

instruments constructed on the clamp principle, applied to the artery some three inches lower down. Thus are we enabled, when the pressure becomes even irksome in one situation, to remove it to another, and, by thus alternating it, to impede the ingress of the blood into the aneurismal sac, and thereby to allow the cure continuously to progress; for, be it well understood, one pressure is not relaxed until the other is brought into play.

A mistaken idea also pervaded our earlier efforts at the cure of aneurism by compression, that, to cure the disease, it was essential to cut off *entirely* the supply of blood to the sac. The fallacy lurking in this theory, so plausibly supported, as it was thought, by the analogy existing between the *modus curandi* of this plan of treatment and of that at the time attributed to the ligature, was also exposed by Bellingham. No theory more obnoxious to the satisfactory carrying out of this plan of treatment could have been promulgated. In the first place, it would render necessary an amount of pressure which, on its application painful, would quickly become intolerable. In the second place, it is absolutely antagonistic to the pathological conditions which must be established to assume a successful issue—the deposition in the aneurismal sac of successive layers of the fibrine of the blood. To secure this, a feeble current of blood through the sac is not only desirable, but essential; and therefore is it that an amount of pressure which would command the complete circulation through the artery is not only uncalled for, but is absolutely prejudicial to the ultimate cure. How important becomes a knowledge of this fact in the practical use of compression, will presently appear.

Another error which long prevailed was, that firm pressure should be applied through means of a roller to the entire extent of the limb; which roller, it was hoped, would act as an auxiliary to the pressure directed upon the vessel in the inguinal portion of its course. So far, however, from such pressure supplementing the cure, it actually obstructs it, inasmuch as it interferes with the establishment of the collateral circulation. Occasionally, also, too little attention was paid to the general condition of the patient's health. Anæmic and hyperæmic patients should not all alike be subjected to compression, without appropriate preliminary treatment. Long since have we learned in Ireland how certain such conduct would be to be attended with disappointing results.

From this hasty recapitulation of our earlier mistakes may be collected the plan upon which we now conduct such cases in Ireland. It may, however, prove useful to epitomise them. A case of popliteal aneurism presents itself for treatment. We determine to use compression. We first carefully ascertain the condition of the patient's general health. If anæmic or hyperæmic, we take appropriate measures; and, when we are satisfied upon this point, we apply some one or other of the most improved compressors—those in which the compressing power is modified by elasticity. With this we compress the artery in the upper portion of its course, having previously arranged, some three or four inches lower down, the auxiliary instrument by means of which we propose to alternate the pressure. The upper instrument is now made to control the artery, so as but just to arrest the pulsation in the sac. This is the most delicate step in all the procedure, and is regulated by the hand of an intelligent assistant, who at once informs us when the pulsation is arrested; and then and there the further application of pressure is arrested. A roster of intelligent students is now organised, and to them is entrusted the management of the case. Two are appointed to take charge of the patient for one hour, when they are relieved by two others, and so on during the day, whereby we secure unwearied attention during the period that pressure is kept up; and, as in Dublin we visit our hospitals at 9 o'clock A.M., the treatment generally commences about that hour, and is continued up to 9 o'clock P.M., when all pressure is removed, and the patient is encouraged to take his night's rest undisturbed. Next morning the treatment is resumed, and so on until the cure is perfected. At the commencement of the case, we take the patient into our confidence; explain to him the nature of his case and the method we are about to adopt for his cure, placing clearly before him the alternative, with all its possible dangers, which we should have to adopt in case compression should fail. The value of this procedure is very frequently demonstrated by the intelligent interest exhibited by our patients in the management of their own cases—so intelligent as in protracted cases to supplement, if not altogether to supersede, the supervision of them by our students. In the selection of our compressing force, we adopt in its widest sense the maxim "*Nullius addictus jurare in verba magistri*". Should one compressor prove irksome, we try another; if all should fail, we have recourse to digital compression, or to compression by means of weights; but, in every instance convinced of the soundness of this plan of treatment, we leave no stone unturned to secure its success.

As you will collect from the preceding remarks, gentlemen, every

exertion is made on our parts to conduct the case with as little inconvenience or pain to the patient as is possible. Pain in the seat of pressure we look upon as an evil; but there is a pain, and that sometimes for a few hours a very sharp pain, to the advent of which we anxiously look forward. I allude to pain in the neighbourhood of the knee-joint, which pain is the harbinger of cure. This pain is due to the rapid enlargement of the collateral circulation, dependent upon the diminished calibre of the aneurismal sac, encroached upon by the deposit in it of fibrine, and is best combated by narcotics.

So far, gentlemen, for our Irish plan of treating aneurism by compression: I now come to the question so often asked me, why we should be so successful, and you so much the reverse, in thus treating aneurism. I confess that the tone in which this question has occasionally been asked me has pained me very much. A doubt in the truthfulness of our statistics has not been openly expressed; still "*c'est le ton qui fait la musique*", and so with this question. This is a painful theme upon which to descant, as painful as I feel it to be unnecessary before such an audience as I have the honour now to address. The majority of our cases have been conducted not only in the presence, but with the assistance, of our students in our public hospitals. Under these circumstances, to attempt to colour the facts would be worse than a crime, for it would be a blunder. No! gentlemen, before you I feel that it would be a work of supererogation to attempt to vindicate the character of Irish surgeons for honour, truth, and loyalty to our common profession; whilst, on the other hand, to no man will I yield in profound reverence for what has been done in the past, what is being done in the present, by British surgeons, for the scientific progress of our profession. Therefore is it that I feel myself acquitted of any unworthy motive in placing on record my ideas as to why we should succeed and you should fail.

First, and above all, we have faith in the efficacy of our treatment, and reverently be it expressed, faith can do all things. Your experience can scarcely justify you in entertaining such faith.

Second. In this instance, at all events, the spirit of nationality pervades our ranks, and the humblest, the most indolent, the most apathetic surgeon amongst us, will try every expedient ere he will acknowledge that in his hands the Irish method of cure has failed.

Third. Our hospitals are visited at 9 A.M.; yours, I believe, at 2 P.M. By our arrangements we are enabled to visit our patient, and to commence his treatment under our personal supervision at an early period of the day.

Fourth. All our hospitals are within a few minutes' drive of the residences of their surgeons; thus are we enabled to pay during the day repeated visits to such cases, and so to watch them from hour to hour; and no matter how zealous, how intelligent, be the house-surgeons or the pupils, there is no eye equal to the master's for seeing that the work be done. That such surveillance imposes great trouble on the attending surgeon I freely admit, still it must always be borne in mind that it was *per tædia et labores* that this plan of treatment has been brought to its present perfection, and that *pour réussir il faut travailler*. You know best, gentlemen, your arrangements in these respects.

Fifth. Thoroughly aware, as we are, of the pathological changes which must be brought about in the contents of the sac to effect a cure, and convinced, as we are, of the principles whereby alone these changes can be produced, we are not afraid, during the night, to remove all pressure, and so to secure for our patients uninterrupted sleep, whereby we keep up their health to the condition most favourable for fibrinous deposit in the sac.

Sixth. And here I trust that I will not be considered as blowing too loud a blast on our Irish trumpet, I am of opinion that some of our success must be attributed to the intelligence of the patients whom we are called on to treat. Many are the instances in which their co-operation has proved to us of inestimable value. One of the class of instruments (the clamp) of which, even to the present day, we frequently avail ourselves, is due to the suggestion of a patient, a carpenter by trade, of the late Professor Harrison's; and, did time permit, numerous other instances of the truth of this assertion could be adduced.

Finally, the physique of our patients differs widely, I suspect, from yours. I fancy that the disease occurs, in the majority of English patients, in the persons of well-fed, robust, and plethoric individuals; such patients will require a compressing force of high tension; but as a rule it may be laid down that if the force employed exceed that which would be represented by a *dead* pressure of nine pounds, the pain to which it will give rise will soon render it intolerable. Our patients rarely, if ever, present such appearances; they rather incline to the opposite extreme—and when such is the case, we are obliged to call to our assistance good diet. 'Tis true that the plethoric individual may be reduced by regimen, etc., to the *juste milieu*. Still, after all, it is but human nature that we should find patients more amenable to a plan of

treatment which involves generous diet, than to one which enforces starvation and depletion.

Whatever be the motive, gentlemen, which actuates Irish surgeons in advocating this plan of treatment, there is one of which their history must hold them acquitted—pusillanimity. In a country where, within these past few years, the common iliac has been tied by Hargrave, the innominate laid bare by Porter, the abdominal aorta by Stokes, there must exist potent reasons for inducing such surgeons to prefer compression to deligation of the femoral artery. Irish surgeons may dare much in their operative proceedings, but one thing they must not do—submit a patient to a dangerous operation when they have at hand a procedure at once so simple, so effectual, so free from risk, as that to which I have so feebly drawn your attention this day.

TREATMENT OF HÆMORRHAGE ARISING FROM RETENTION OF THE SECUNDINES AFTER ABORTION.*

By J. G. SWAYNE, M.D.,

Physician-Accoucheur to the Bristol General Hospital, and Lecturer in Midwifery at the Bristol Medical School.

AN abortion about the middle of utero-gestation may become one of the most troublesome, difficult, and dangerous cases which can fall to the lot of the accoucheur. The reason is, that at this time it is peculiarly liable to be complicated with retention of the secundines. During the first two months of pregnancy, the aborted ovum is usually cast off entire, and there is seldom any further trouble. During the last three or four months, the membranes generally are ruptured, and the foetus and placenta expelled separately; but the latter is sufficiently bulky to stimulate the uterus to expel it; and, even if this should not happen, the uterus is large enough to admit of the introduction of the hand for the purpose of removing it. During the middle of pregnancy, however, or rather, I should say, during the third, fourth, and fifth months, the ovum is very likely not to be expelled entire: the placenta and membranes are not sufficiently bulky to induce expulsive efforts of the uterus, and are, therefore, very liable to be left behind; and the uterus is not large enough to admit the hand for the purpose of extracting them. Under favourable circumstances, the placenta and membranes may be cast off with, or immediately after, the foetus; but it is quite as usual, I think, to find that this is not the case, and that the secundines, if let alone, may be retained for an indefinite period. For instance, on making an examination, the accoucheur finds the uterus contracted in all its dimensions, and the os uteri tightly encircling the filiform funis, which will inevitably give way if any attempts are made to remove the placenta by its means. In fact, circular contraction of the fibres of the os uteri internum, or what is commonly called hour-glass contraction of the uterus, is a much more frequent occurrence after abortion than after labour at the full term, and is accompanied with similar dangers, although in a minor degree. As long as the placenta and membranes remain behind in the uterus, the patient is subject to attacks of hæmorrhage, which may be very frequent and very profuse; or she is liable at a later period to septicæmia from the absorption of putrid matter caused by the decomposition of the retained secundines.

To prevent such untoward results, the obvious indication is, of course, to remove the exciting cause; but this is a matter of so much difficulty in practice, that obstetric authorities have for a long time been divided in opinion as to the advisability of attempting it. The older authorities—for instance, Denman, Davis, Dewees, Burns, Ingleby, and Blundell—are in favour of the expectant plan, and disapprove of manual attempts to extract the placenta. Denman, who always relied so implicitly on the *vis medicatrix natura*, is especially opposed to manual interference, and at the same time very much underrates the risk arising from retention of the secundines, for he goes so far as to say, "Much less mischief may be expected from the retention of a putrid placenta than from attempts to force it away by the medicines usually given, or by manual assistance." I have myself in many instances tried the expectant plan of treatment, and can by no means give a favourable report of its results. As long as the placenta remains in the uterus, the patient is liable to sudden and alarming attacks of hæmorrhage; and so greatly am I impressed with the danger of this occurrence, that during the first three or four days after an abortion I would not on any account leave a patient with the placenta in the uterus, unless I had previously guarded against this accident by plugging the vagina. In all cases of miscar-

* Read before the Medical Section at the Annual Meeting of the British Medical Association, in Plymouth, August 1871.

riage accompanied with much hæmorrhage, the plug is a most valuable remedy, and may always be employed when the placenta cannot be extracted. It is a very safe remedy also, when certain precautions are taken. These are, to watch carefully that it does not occasion accumulations of blood, or retention of putrid matter, in the uterus. To fulfil the first indication, firm counterpressure should be made over the fundus uteri, so as to prevent the expansion of that organ. This is unnecessary during the first three months of pregnancy, as the uterus is too small to hold much blood; but during the fourth, and especially the fifth month, it becomes necessary, because the uterus is then capable of containing a considerable amount. I once attended a woman who miscarried during the fifth month, and who nearly died from internal hæmorrhage into the uterus, although the vagina had been plugged, and there was not the slightest escape of blood externally. She had lost a large amount of blood previously, and the quantity which then escaped into the uterus was nearly enough to turn the scale against her. Her case so impressed the danger of internal hæmorrhage on my mind, that I now never use the plug in the fourth or fifth months of pregnancy without applying over the fundus uteri a large cup-shaped piece of padded metal made for that purpose, and just adapted to the size of the organ. This is secured in its place by a strap and buckles, and over all an abdominal bandage. To fulfil the second indication—viz., to obviate the danger of collections of putrid matter in the uterus—the plug should be removed frequently, and reapplied if necessary. As a general rule, it is well not to let a plug remain *in situ* more than twelve hours. By far the most efficient method of plugging is to introduce into the os uteri a tent of compressed sponge before plugging the vagina. This not only prevents all escape of blood from the uterus, but most effectually dilates the cervix, and facilitates the extrusion of the placenta. The vagina should then be plugged; and for this purpose I generally prefer an old silk handkerchief, which has been previously torn into two or three long strips, and well oiled. It is much more convenient to introduce the plug through a full-sized tubular speculum. When the plug is pushed up by the fingers without using a speculum, the operation is much more tedious and painful. The plug should be removed after an interval of about twelve hours; and it is a good plan to administer a full dose of ergot about two hours previously. The result of this will probably be that, on removing the plug, the retained placenta will come away also; the stimulus of the plug and the ergot having induced expulsive action of the uterus. But yet, in many other cases, the action of ergot is very uncertain, and one's hopes are doomed to disappointment.

If the placenta does not come away, plugging may be continued for two or three days, if there be much danger of hæmorrhage, but if this is not the case, it is better not to persevere with it so long. When putrefaction of the secundines has come on, and the vaginal discharge has become very offensive, the plug should be taken away; and this is above all necessary if fever and constitutional irritation have set in. The plug, by confining putrid discharges within the uterus, renders the danger of absorption more imminent. To obviate this danger the vagina and even the uterus should be syringed out twice or three times a-day with warm water and antiseptic lotions, and this should be done quite as much with the view of detaching the placenta as of neutralising and washing away the putrid discharges. An ordinary Higginson's syringe with an elastic tube is the best instrument for washing out the vagina, and the nurse or other attendant may be directed to throw up about a pint of fluid each time. To syringe out the uterus, however, requires much more care and caution, as it is a proceeding by no means free from risk. I have seen very alarming symptoms, such as sudden acute abdominal pain, dyspnœa, and great prostration produced by injections into the uterus, especially when the fluid has been thrown up too forcibly and in too great quantity; and there is no doubt that in this way, not only some of the injection, but even some of the putrid uterine contents may be forced through the tubes into the abdominal cavity. On this account no more fluid should be injected than the uterus can easily contain; and the tube used for the purpose should not be so large as to prevent a free escape of the fluid by the side of it through the os uteri as soon as the uterine cavity is filled.

A small India-rubber bottle, to which an elastic catheter has been adapted, will be much better for uterine injection than a Higginson's syringe. I need scarcely say that this operation should not be entrusted to a nurse. Besides antiseptic lotions, astringents and styptics may be injected in the manner just described whenever hæmorrhage comes on after plugging has been discontinued. For this purpose an injection consisting of four ounces of the liq. ferri perchlorid. fortior of the *British Pharmacopœia* with twelve ounces of water, as recommended by Dr. Barnes, will be found very serviceable. I am in the habit of using a lotion consisting of one part of Bird's styptic (a peroxide of sulphate of iron and alumina) with four parts of water, and I prefer it to any other.

Besides these local means for checking hæmorrhage cold may be applied, and ergot of rye administered, together with various astringents. The recumbent posture should be strictly enjoined.

It must be confessed, however, by all who have had much experience of these cases, that the expectant treatment is very unsatisfactory; and that, in spite of plugging, styptics, and other palliatives, the patient is never safe from hæmorrhage, septicæmia, and other less dangerous consequences, so long as the *fons et origo mali* in the shape of the whole or any portion of the secundines is left behind in the uterus. She may suffer for weeks from severe hæmorrhages, frequent rigors, constant foetid vaginal discharges, hectic fever, night sweats, great prostration of strength, tenderness and swelling of the abdomen, and complete loss of appetite; and these symptoms may go on to a fatal termination* unless the putrefying portions of retained placenta are either expelled naturally or removed by art. On this account most obstetric authorities in the present day have abandoned the expectant plan and are in favour of active interference.

In 1861 Mr. Priestley communicated to the Obstetrical Society of London an excellent paper on "the Treatment of Cases of Abortion in which the Placenta and Membranes are retained." In the discussion which followed, the weight of opinion in the Society was decidedly in favour of manual interference: Dr. Priestley, Dr. Hall Davis, Dr. Tyler Smith, and Dr. Tanner, all strongly advocating this plan of treatment, in which opinion I myself fully concur.

The propriety of manual interference being decided in the affirmative, the next question will be as to the best method of effecting it. Most authors maintain that the safest means is by the hand alone, and condemn (without, as I think, sufficient reason) the use of any kind of instrument for this purpose. As I remarked before, the uterus at this period of gestation will not admit the entire hand, and the most that we can do is to introduce the hand into the vagina so as to pass the fore and middle fingers into the uterus. Any attempts to extract a retained placenta, by two fingers, in the vagina only, will almost certainly be futile. Under the most favourable circumstances, the tips of the fingers may thus be able to touch the placenta just within the os uteri, but have little or no power to bring it down, and, in all probability, it will again and again elude their grasp. It becomes necessary, then, to introduce the whole hand into the vagina. But this is always a very painful operation at this period, even in a multipara, and in a primipara is accompanied also with considerable difficulty, and not free from danger. It is, therefore, always best to place the patient first under the influence of chloroform, as much for the purpose of relaxing their tissues as of abolishing pain. The *modus operandi* is thus described by Dr. Priestley: "Whilst the woman lies on her back, with the thighs flexed upon the abdomen, I have introduced one hand into the vagina, the other hand being placed over the fundus uteri, externally, to steady and depress it. If the os uteri was closed, it was gradually dilated by passing first the forefinger into the orifice, and then the second, with as little force as possible. With time and caution, the os uteri gives way to gentle pressure, and the introduction of the finger is in most cases not difficult. When the placenta is reached, it is separated in the ordinary way, and pushed downwards towards the palm of the hand, until it is partially or wholly beyond the os uteri. It is important, certainly, to ascertain that the placenta and membranes are entirely loosened from their attachments, and quite movable in the uterine cavity before the retraction of the hand, so that a second introduction of the fingers is not needed." Dr. Priestley further remarks: "In scarcely any case can it be necessary to introduce more of the hand into the uterus than the first two fingers—one may occasionally answer the purpose, but it works at great disadvantage alone, both in separating and extracting the placenta. The two fingers together constitute the best form of forceps for seizing what it is intended to withdraw, and are the most serviceable in all respects." With respect to the time that ought to elapse after the birth of the foetus, before the placenta should be extracted, Dr. Priestley is inclined to suggest that six hours may be fixed as an approximative limit, unless hæmorrhage have occurred to any extent during the interval. In such a case their removal should be effected earlier.

As far as my own experience goes, I cannot bear out the statements which have been made as to the efficiency of two fingers, either in dilating the os uteri, or extracting the placenta and membranes; I have several times failed, especially when the placenta has been at all adherent, in effecting these objects. This I attribute to the small powers of abduction and adduction which the fingers possess, even under ordinary circumstances. It is surprising how little power there is of grasping anything between the distal phalanges of the two first fingers, compared to

* In the BRITISH MEDICAL JOURNAL for December 1858, Mr. Humphreys of Shrewsbury related a case of fatal flooding from retention of a piece of placenta only the size of a shilling.

that which is possessed by the forefinger and thumb. To test the relative powers of each, I have tried what amount of weight I could raise by the forefinger and thumb only, used as a forceps, and by the two first fingers. I found that, while I could raise twenty-eight pounds by the former, I could not raise more than four pounds by the latter. The reason, no doubt, for this great difference in power is, that when anything is grasped between the points of the thumb and forefinger, it is held by means of the flexor muscles; whereas, when it is grasped between the points of the fore and middle finger, it is held solely by the adductor muscles, which are much weaker and act much less advantageously. To show how little power the two first fingers have of grasping anything between them, let any one place the handle of an ordinary dining-room poker between their two distal phalanges, and he will find it no easy matter to lift it off the ground. One can readily understand that these two fingers, enclosed in a contracting uterus, would form but a very inefficient forceps.

On this account I have endeavoured to supply the deficient powers of abduction and adduction possessed by the fingers by means of a modification of the ordinary forceps which is used for extraction of the ovum. The extremities of the instrument form an obtuse angle, with the shanks so as to correspond with the angle formed by the axis of the uterus with that of the vagina. The extremities are fenestrated, and resemble in shape the blades of an ordinary obstetric forceps in miniature, except that they are more hollowed on their inner surface, so as to fit with tolerable accuracy over the forefinger of the left hand when it is placed between them for the purpose of introduction. Attached to the handles is a screw by means of which they can be powerfully separated when necessary. The instrument may thus be made a most efficient agent in dilating the os uteri.

The cases most adapted for the use of this forceps are those in the os uteri which will just admit the last phalanx of the index finger, and where the detached placenta can just be felt at the os uteri internum, but is found to be retained in that position by the contraction of the circular fibres of the os uteri. The forefinger of the left hand enclosed between the blades of the forceps, but with the tip advanced a little beyond them, should be passed through the os uteri until it touches the placenta. The blades of the instrument should then be passed in a little beyond the finger, and separated very slowly by the screw until the contraction of the circular fibres is gradually overcome. The placenta will then probably be extended until it can be grasped by the blades of the forceps, and if the cord is unbroken, this process may be facilitated by a little gentle traction upon it. In order to grasp the placenta, the screw must be turned in a reversed direction until the handles can be brought together.

Much has been said about the danger of passing instruments of this kind into the uterus beyond the guidance and protection of the fingers. I can readily understand that, with such an instrument as the wire crotchet of Dr. Dewees, it would not be difficult to injure the inner surface of the uterus when groping about for a retained placenta; but I cannot see how it would be possible to grasp any portion of the uterus with such a forceps as I have described when used with ordinary care; and the blades are so smooth and rounded externally, that they would not be likely to inflict injury in any other way. For my own part, I should not hesitate to employ this forceps, even when the placenta is still adherent to the fundus uteri. The advantages it possesses are that it dilates the os, and grasps the secundines better than the fingers, and that it renders the introduction of the entire hand into the vagina unnecessary.

CONSTIPATION ATTENDING THE USE OF IRON. To obviate the constipation liable to attend the use of iron, M. Béhier recommends a centigramme of powdered belladonna to be taken with ten centigrammes of sugar before meals—the dose of iron being taken with the meal. If, however, the belladonna produce disturbance of vision or dryness of the throat, the dose must be diminished; or a mild laxative may be given occasionally.—*Journal de Méd. et de Chir. Pratiques*, July 1871.

TREATMENT OF BURNS. M. de Bruyne recommends the following in cases of burns in place of the Carron oil and similar applications: fresh hydrate of lime, 3 grammes; glycerine, 150 grammes; chlorinated chlorhydric ether, 3 grammes. The mixture is transparent and uniform, and is applied to the injured part by means of a piece of fine linen, over which may be laid oiled-silk or other material to prevent evaporation. M. de Bruyne says that the treatment is equally applicable in cases of burn unattended with sloughing, and in those where sloughing has occurred and the eschars have fallen off. He believes that it will also be found useful in ill-conditioned wounds, and in tonic, callous, fungous, and foul ulcers. The quantity of the anæsthetic or of the lime may be varied according to circumstances.—*Journal de Bruxelles et Lyon Médical*, July 23.

REPORT OF THE JOINT COMMITTEE OF THE BRITISH MEDICAL AND SOCIAL SCIENCE ASSOCIATIONS.

THE following report was read at the annual meeting of the British Medical Association at Plymouth, August 1871.

1. The whole of the oral evidence taken by the Royal Sanitary Commission having been now published, and their Report thereon, as well as on other documentary evidence (not yet published), having been carefully examined by us, we beg leave to offer the following remarks on the Report in general, and on certain portions thereof in particular.

2. We feel bound to express our views, because the Royal Sanitary Commission may be said to owe its existence mainly to our efforts, it having been appointed in compliance with a request, submitted on May 22nd, 1868, to Her Majesty's Ministers by a deputation from the above mentioned Associations, called together by us, introduced by Mr. George Clive, then M.P. for Herefordshire, and accompanied by several other members of Parliament.

3. But before entering upon a critical examination of some features of the Report, we desire to express our gratitude to the members of the Commission for the vast amount of labour and thought which they have devoted to this important inquiry, and our conviction of the general excellence of the work which they have now completed.

4. In their history of sanitary laws up to the present time—in their general observations on the subject of public health—in their exposition of some causes of present imperfection in sanitary administration—in their full appreciation of those injurious and morbid conditions of social life which tend to sap the vigour and destroy the health of the masses of our population—in their able summary of existing laws—and in many of their practical recommendations, especially those relating to the consolidation of law—we gladly recognise the value of their exertions, and the benefit they are likely to confer on the public by their prolonged investigation.

5. Having thus expressed a general opinion, we feel obliged to proceed to the far less agreeable task of pointing out certain primary defects in the method and scope of inquiry, and certain errors of conclusion which have naturally resulted from those defects.

6. The memorial which we presented to the Government in 1868 contains the following request:—"For all these reasons, and for others set forth in the accompanying 'Memorandum,' we ask for a thorough, impartial, and comprehensive inquiry, by a Royal Commission having power to visit, or to send Sub-Commissioners to visit, the large towns and other districts of the country, to obtain information and evidence, and to report on: 1. The manner in which the cases and causes of sickness and of death are and should be inquired into and recorded in the United Kingdom.—2. The manner in which coroner's inquests and other medico-legal inquiries are and ought to be conducted, particularly in regard to the methods of taking scientific evidence.—3. The operation and administration of sanitary laws, with special reference to the manner in which scientific and medical advice and aid in the prevention of disease are and should be afforded; and also with special reference to the extent of the areas or districts most convenient for sanitary and medico-legal purposes.—4. The sanitary organisation, existing and required, including a complete account of the several authorities and officers. The education, selection, qualification, duties, powers, tenure, and remuneration of the said officers to be specially reported on.—5. The revision and consolidation of the sanitary laws, having special reference to the increase of the efficiency of their administration both central and local." Into four of these subjects the Commission was expressly instructed to inquire, and to report thereon.

7. We observe with satisfaction that the Commission, like ourselves, "much regret that Scotland and Ireland were not included in the terms of the present, as well as of the former, Commission" (Memorandum, vol. ii, p. 360); but, admitting that the objections to the limitation of this inquiry to the provinces of England—objections which were submitted in a second memorial, dated July 1869—have been partially removed by the examination of eminent witnesses from the metropolis, from Scotland, and from Ireland, we beg to point out that the more important defect was further noticed in the last mentioned memorial, in the following terms:—"That no information obtained merely by written answers to schedules of questions, always open to grave misconception of their scope and import, and addressed exclusively to local authorities, can, in the absence of personal inquiry, either by the Commission itself or by skilled persons deputed to discharge its functions, furnish a trustworthy basis for permanent legislation. That as, sooner or later, recourse must be had in many places to inquiry on the spot, in order to supplement the tabular returns, as well as to test their accu-

racy, economy as well as efficiency demands that this course be adopted now."

8. Such inquiry would, we believe, have proved the necessity for a *wider extension of administrative areas*, as health districts, and for a more complete combination of the various functions of local government within those areas.

9. We observe that the Commission proposes to preserve and confirm, nay, even to augment the number of, existing *local board* districts, under what are called "urban" authorities; the minimum population of these districts being fixed at 3,000. Now, it is well known that petty elective authorities in small separate districts are apt to obstruct rather than forward sanitary improvement, and that for the most part they render any uniform and efficient system of administration almost impossible. This fact would, we believe, have been established indisputably by proper local inquiry. We had hoped, therefore, that all such local board districts would be combined and included in wider jurisdictions—even although the districts themselves, having been legally formed, might be separately represented in a larger board.

10. Estimating the number of local board districts from Parliamentary returns—and observing that an unreported, though considerable number of *special drainage* districts (some of which are little more than villages) are, according to the recommendations of the Commission, to be converted into local board districts—allowing also for the proposed creation of new districts of the same kind (see Report, p. 26)—we may reasonably conclude that the surface of the country would soon be, if it be not now, honeycombed by not fewer than 1,000 limited and isolated areas under "urban" authorities. *Against such a project of local government, we strongly and earnestly protest.*

11. We acknowledge that the Commission proposes to facilitate the combination of districts for limited purposes; but neither are the principles and terms of such combination (or joint action) defined in the Report, nor is its general necessity enforced; while its adoption is to be merely permissive, and left to the determination of either local or central authorities.

12. Whatever may be the nature of the district, or the extent and population of area which, on mature deliberation, shall appear to be the most desirable for purposes of local sanitary administration—and admitting that, outside of the larger towns, the Poor-law Union or Registration District may possibly offer superior advantages for this object—there appears to us no good reason why all the districts and authorities included within that area should not be combined under a single board of management for sanitary administration. The great majority of town districts in England are included in registration districts of a somewhat larger area. It is extremely important that the two or more governing bodies within that larger area should be united at the very least intermediately, by representation, for the purposes of the proposed Act.

13. The Royal Sanitary Commission having advised that all objects of local government, including the care of the public health and the relief of the poor, should be supremely directed by a single central authority,—it follows, if the propriety of such consolidation be admitted, that the same principle should be applied to all local authorities. But this appears not to be recommended by the Commission. For whereas, *outside* of "urban" districts, the management of the roads—unless the suggestion referred to in Resolution 12 be adopted—may continue under a different authority from that which is to administer the relief of the poor, the removal of nuisances, and the prevention of disease; yet, *inside* of "urban" limits, the relief of the poor might remain under a different authority from that which directs the management of the roads, the removal of nuisances, and the prevention of disease.

14. There might thus be two kinds of authority in *urban* districts, exercising different groups of functions from those exercised by the other two kinds of authority in *rural* districts. It cannot be doubted that this complication of authority and duty would lead to much administrative confusion, and hinder, as it has already hindered, the progress of improvement in local government. Nor, if so-called "rural" authorities have to be constituted for all purposes, has any sufficient reason been shown why "urban" authorities should not act for the relief and prevention of *destitution*, as well as for the relief and prevention of *sickness*. It is very obvious, from their excellent remarks on "coincidence of areas of local government" (p. 53), that the Commissioners are fully aware of the great advantages which would result from the universal comprehension of all the various subjects of administration within the same districts.

15. We infer, not only from the evidence taken in this inquiry, but from well known facts, that "intermediate authorities", consisting of members not liable to be swayed by petty interests and sordid views, would be essential, on social, sanitary, and economical grounds, for

the higher purposes of sanitary administration. And, inasmuch as the authorities of counties have already to administer and enforce the law, to control institutions, to appoint officers, and to execute functions connected more or less with the health and safety of the people, we deem it highly desirable either that the powers of the magistracy (an existing authority) should be extended so as to comprehend the care of the public health, or that boards representing the magistracy and ratepayers in due proportion should be constituted for the direction and control of local sanitary administration. The magistrates would, of course, continue to sit as *ex officio* members of the boards in "rural" districts. It is no less reasonable and desirable that, if the division into "urban" and "rural" is to be maintained, they should take the same position on the future boards for the sanitary management of urban districts. *We believe that the constitution, mode of election, and duties of local boards, whether for urban, suburban, or rural districts, should be uniform throughout the provinces of England.*

16. There is no question of graver import or requiring greater attention than that of the compulsory acquirement of land by local authorities for certain purposes essential to the improvement of the public health. The treatment of this momentous subject by the Commission appears to us neither complete nor satisfactory. No general principles have been laid down as to the extent to which these powers should be granted; nor has the question been solved as to the mode of their purchase, in order on the one hand to protect the rights of owners so far as such protection may be consistent with the public safety, and on the other hand to save ratepayers from the great uncertainty and expense attending transactions of this nature under the present law. In what manner and on what conditions local authorities—whether those of large towns or those which might act over larger areas—should be empowered to provide *sites* for dwellings of labourers and artisans where densely populated parts of towns have been or may be demolished for purposes of public health (*e.g.*, under Mr. Torrens's Act)—whether such authorities should be empowered to acquire land for burial-grounds and mortuaries, for hospitals for fevers and other pestilences, for disinfecting establishments, for public slaughter-houses, for recreation-grounds, as well as for water-supply and for sewage utilisation,—these and other like questions require the most careful consideration, and are as yet left unanswered by the Commission.

17. For all these purposes and many others, involving both appeal and compulsion, an intermediate authority to consider and report on applications of local authorities would be invaluable. And moreover, we cannot too strongly urge on the Legislature the necessity of limiting the powers and functions of the central authority within the narrowest bounds consistent with effective action. Not only should local impatience of interference be considered and obviated by constitutional means, but a suitable authority, intermediate between the local and central, should be constituted in every county or sufficiently large area, as likely to be more cognizant of the wants and circumstances of every smaller district, and better able to judge of minute details inseparable from the daily working of Local Boards, than a government inspector.

18. The last important reason which we shall adduce for *wider* administrative areas is, that they would supply a superior machinery for the appointment of scientific officers, whether medical or engineering, of high and special qualifications.* On these points we beg to refer to communications from two provincial physicians,† whose opinions on such a question are entitled to great consideration.

19. The Local Government Bill, brought in lately, and soon afterwards dropped, by the Right Honourable G. J. Goschen, M.P., contained, in Part iii, some important clauses relating to the constitution, jurisdiction, and business of County Boards. These clauses fully justify our remarks on this head, and lead us to hope that provisions similar in principle will form part of any future Bill for the amendment of local government and the creation of sanitary authorities.

20. We have now to examine those portions of the Report of the Sanitary Commission which relate to medical and scientific officers (Second Report, vol. i) in connexion with the "Memorandum on the Duties of Medical Officers of Public Health" (vol. ii), which expresses very ably the principal needs and resources of local government in this respect.

21. With a large proportion of the statements and recommendations contained in these important documents we concur. Nevertheless there are principles asserted and suggestions made which appear to us open to serious objection.

22. It must be observed that the Memorandum (vol. ii) in treating of Medical Officers of Health, refers almost entirely to the Poor-law Medical Staff; while the Report, although accepting that staff as sufficient

* See extract from Mr. Chadwick's Report. (See Appendix A.)

† See extracts from Dr. Strange's and Dr. W. Budd's letters. (See Appendix B and C.)

for rural districts (*i.e.* for those portions of unions which outlie the proposed Urban districts) treats more fully and specially of the Medical Officers of Health to be appointed by "urban" authorities; and the two series of proposals are by no means always consistent.

23. We have thought it advisable to compare both with two very important "Minutes" relating to the duties and qualifications of officers of health, which were successively issued by the General Board of Health. The earlier of these was signed by Lord Ashley (Earl of Shaftesbury), Edwin Chadwick, and T. Southwood Smith, soon after the appointment of the first Board. The later, dated December 20, 1855, was signed by the Right Honourable W. Cowper, President of the altered Board.*

24. These able documents treat of the duties of the health officer, as distinct from those of the medical practitioner. The Report of the Commission assumes that such duties are, as a rule, to be performed only by the practitioner. The former refer to the higher, more special, and distinctive duties and relations of the office; the latter to the more common and subordinate. *We earnestly deprecate the present attempt to substitute this lower view of the office for the earlier and higher.*

25. The very position and duties of the Poor-law Medical Officers of this country at once point to the valuable assistance they would render to the chief officer of health of a district, as reporters of sickness and its causes; and as deputies and assistants in sub-districts their services would be indispensable. Our estimate of the functions to be discharged by the medical officer of health, of the special qualifications requisite, and of the time to be devoted to the discharge of these duties, contemplates a class of officers entirely special and without the distractions and difficulties which ordinary practice would necessarily entail.†

26. In the earlier "Minute" of the General Board of Health occurs the following sentence: [Not to extend to services provided for by private practice.] "Except in cases where existing disease may be alleviated by the immediate removal of any of the hereinafter specified causes, the general duties of the officer of health shall in no case comprehend treatment for the cure or alleviation of disease."

In the later "Minute" we find the following paragraph: "IV. The occupation of an officer of health will not usually be inconsistent with his devoting a portion of his time to certain other professional engagements; but, where possible, it will be well to debar him from the private practice of his profession:—first, because the claims of such practice would be constantly adverse to those of his public appointment, the duties of which (especially at times of epidemic disease, when his official activity would be most needed) private practice could scarcely fail to interrupt and embarrass; secondly, because the personal relations of private practice might render it difficult for him to fulfil with impartiality his frequent functions of complainant; and thirdly, because, with a view to the cordial goodwill and co-operation of his medical brethren, it is of paramount importance that the officer of health should not be their rival in practice, and that his opportunities of admonitory intercourse with sick families should not even be liable to abuse for the purposes of professional competition."

27. It is almost impossible to overrate the importance, or to question the practical wisdom, of the above recommendations. We cannot account for the fact that they have been utterly ignored in the Report and Memorandum issued by the Commission. The discouragement which this Commission has given to the separation of private practice from public employment is the more remarkable, inasmuch as sufficient evidence has been produced from English districts, as well as from continental states, to show that the union of the two occupations generally results in the failure of at least one of the objects of the practitioner, and often in the imperfect or perfunctory discharge of public duty.

28. No complete statement of the special duties of the *Medical Officer of Health*, properly so called, is to be found in the Report of the Sanitary Commission, although it contains a brief and imperfect summary of certain rudimentary duties, under four heads (vol. i, p. 34); and although the Memorandum (vol. ii, p. 353-4) refers particularly to certain forms of return, which the officer is to fill up and forward to the central office. In fact, no duties are here specified but those which concern his communications with the central department or its inspectors. After referring to the very important suggestions to be found in the evidence taken by the Commission itself; to the opinions of many eminent authorities at home and abroad given in reply to questions circulated by the State-Medicine Committee of the General Medical Council‡; and to the before-

mentioned Minutes of the General Board of Health; we confess our surprise that so limited and imperfect a view of the duties of this office should have been taken by the Commission.

29. The Commission proposes that it should be obligatory on every local authority to appoint at least one medical officer of health. The "urban" authorities will, therefore, have to appoint about a thousand such officers, who may or may not be poor-law medical officers. There must also, according to the plan of the Commission, be medical officers of health for every rural district, who are to be the poor-law medical officers. But as, according to the Earl of Devon, there are only 3,435* district poor-law medical officers, even including the metropolis, it appears difficult to determine where the 4000 poor-law medical officers of health so frequently mentioned by the Commission, are to be found.

30. No definite arrangement for co-operative duty is suggested between the officers of "rural" and those of "urban" authorities, although the intermingling of their respective spheres of labour would, on the plan of the Commission, be of constant occurrence. Yet the Commission proposes (vol. i, p. 175) that in districts, such as the greater number of "urban", where two classes of medical officers may coexist in the same area, the relation of the health-officer and the destitution-officer should be arranged by the local health-authorities, with the approval of the central authority. Not to dwell on the vast accumulation of work which these arrangements would entail on the central authority, we object to so indefinite a scheme of medico-sanitary organisation, believing that in operation it would prove unsatisfactory and ineffective.

31. We note also that, both as regards the public and the poor-law medical officer, the proposals of the Commissioners are in the last degree unsatisfactory; for while—as if doubting the competency of the latter to discharge with thorough efficiency the varied and responsible duties of health-officers in chief—they suggest that "assistance and encouragement should be given to medical officers of health to study all sanitary questions" (vol. i, p. 35), they neither state in what form this encouragement is to be given, nor do they explain how, when, or where professional men, whose time and energies are absorbed in the necessary struggle for existence, are to apply themselves to the systematic study of preventive medicine. Again, in order to protect the health-officers in the "discharge of their duties without fear of personal loss", the Commission—very properly recommends that they "should not be removable from office by any local authority, except with the sanction of the central authority" (vol. i, p. 35). But the Commission neither suggests any principle on which special remuneration for the sanitary work of these officers should be calculated, nor seems to recollect that the faithful discharge of public duties may involve the ruin of private practice; so that, unless the salary be large—in which case the scheme of the Commission will be enormously expensive—the protection against arbitrary removal will be of very trifling value. For, while the antagonism between public fidelity and success in practice is notorious and very real, the Commission assumes throughout that it does not exist, and fails to perceive that the allegiance of officers who depend mainly on private practice must be a divided one.

32. We must also enter an earnest protest against the idea that duties, requiring for their beneficial exercise much tact, prudence, matured judgment, and large experience, can, as a general rule, be safely entrusted to the inexperience of "young men entering on practice," by whom they would be discharged "only so long as they were acceptable, and then resigned to younger men, fresher from the schools." (Memorandum, vol. ii, p. 355.) These words seem to us to betray as utter a misconception of the nature and importance of the office as does the highly objectionable proposal (vol. i, p. 35, also p. 176, Resol. 22; and vol. ii, p. 354), that medical officers may themselves become nuisance-officers, or, as the latter are now improperly termed, "inspectors of nuisances". There are many reasons for relieving the medical officer, especially if he be a practitioner, from the onerous and damaging responsibility of searching out and reporting on nuisances. They ought to be referred to him by a subordinate officer specially appointed to discover them. The qualifications of this nuisance-officer should be defined either by the Act or by the central department. Regulations are also needed to promote the more efficient performance of the duties of this office. We see nothing of the kind suggested by the Commission.

33. Here we may remark that the Report of the Commission omits to recommend the enactment of any special and stringent regulations for the suppression of infectious diseases. All reference to measures by which the spread of this class of diseases may be arrested or controlled appears to be limited to a notice of certain provisions in the Sanitary Act, 1866, and to three lines in the next paragraph, page 48,

* Copies of these documents may be had on application to our Honorary Secretaries.

† Attention is particularly requested to the striking observations made by the late lamented Dr. Symonds, during our interview with Ministers in May 1868. (See Appendix D.)

‡ We refer especially to the communication of Dr. Alfred Taylor, Mr. Michael, and Dr. Pappenheim of Westphalia (*Report of General Medical Council on State Medicine*, pp. 12, 29, 59, 61.)

* A return which we have received from the office of the Poor-Law Board gives 3298 as the present number of district medical officers under the Poor-Law.

proposing that the central authority should "institute inquiries, and authorise the gratuitous dispensing of medicines and the speedy interment of the dead." Assuredly, if this destructive class of diseases is to be effectively encountered, some more complete and decisive enactments are required. Unless the regulations imposed are such as will meet epidemics at their first outbreak, so as to crush them in the bud, it will be found, as it has been, almost impossible to stay their course at any subsequent period. In relation to this subject, we beg to call attention to certain important amendments proposed by the Manchester and Salford Sanitary Association to Clause 26 of Mr. Goschen's Bill, which was equally deficient in this respect. (See Appendix E.)

34. While we perceive with satisfaction that the Commission (vol. i, pp. 61-177) recommends the registration of sickness, we doubt whether the method thereof should be wholly left, as proposed, to the Registrar-General, without insisting upon the necessity of considering in the first place the sanitary needs of the localities from which the returns are collected, and in which they ought to be promptly applied to local sanitary action. It is in regard of this function that a skilled and comparatively independent officer of health becomes indispensable; and the question yet to be solved is, what should be the maximum and minimum extent of area and population over which a chief health officer, acting also, according to Dr. Farr, as "Registration Medical Officer," could most efficiently and economically act. The proposal (Memorandum, pp. 353-4) to make the medical officer of the workhouse the official medium for collecting and transmitting returns of sickness is unsupported by reason or argument. For unless he is to revise and correct, which is not proposed, and for which he may not have the requisite qualifications, the Superintendent Registrar might perform quite as efficiently the merely clerical duty. A proper machinery for the local revision of mortuary and sickness returns, by a skilled and independent officer, would be provided by vesting the appointment of the chief health officers, debarred from private practice, in intermediate authorities; and to county justices, it may be observed, the legislature has committed the appointment of public analysts.

35. We propose that the right of separate appointment, by municipalities, of chief health officers, should be limited to large cities and towns, the authorities of which might be willing (as in Liverpool) to render their health adviser independent of private practice by a salary which shall, in the judgment of the central authority, suffice to secure the devotion of his entire time and thought to his public duties. All other towns would enjoy the advantage of superintendence by an officer of the same high class, appointed by a county or other intermediate authority. There would, moreover, be no necessity for the exceptional arrangements suggested by the Sanitary Commission (vol. i, p. 35; vol. ii, p. 354), which would leave certain very important scientific observations to be made only in those districts, the officers of which "desired, or were willing," to undertake them, a very imperfect and unsatisfactory method of public administration. *The system should be uniform throughout the country.*

36. While heartily approving of the proposal that "medical officers of health should be appointed subject to the veto, and should not be removed without the sanction of the central authority," we assert unhesitatingly that to compel all local boards to appoint their own officers, even subject to the above conditions, would be to force into action motives of personal interest and prejudice, of local favouritism, and of political-party ascendancy.

37. Nevertheless, while objecting, on the whole, to the project of health officers emanating from the Sanitary Commission, we strongly recommend, consistently with our previous suggestions, that, in the absence of an officer specially appointed for the purpose, the Poor-law medical officer should be authorised to act, and be suitably remunerated for acting, as an assistant or deputy health officer. Without indulging in any extravagant eulogy of this most useful and ill-requited body of men, we not only feel sure of their general fitness to perform all duties which it would be expedient to commit to them, but we are also convinced that their co-operation is absolutely essential to the proper working of any sanitary system; and their official recognition might enable the chief health officers to undertake wider districts than would otherwise be possible.

38. A fundamental reform in the administration of Poor-law medical relief would be essential to the well-working of a medico-sanitary organisation, and to a proper registration of sickness. The main provisions of the Irish Medical Charities Act ought to be introduced, and dispensaries established in every district, with such modifications of the system as may render it applicable to England. We strongly urge the adoption of a regulation under the above Act which prevents the appointment of any medical officer under the age of twenty-three years, and we also recommend that a special examination in certain matters of preventive and legal medicine be required, after a future date, to be

named in the new sanitary law, of all medical candidates for office of that age.

39. A precise inquiry would be necessary to determine the comparative cost of the two systems—the one proposed by the Sanitary Commission, the other now sketched in outline by ourselves.* But it is obvious that, with a sufficient corps of chief health-officers, the inspecting staff in immediate connexion with the central authority need not materially, if at all, exceed the number now actually employed by the various central departments, which are to be consolidated, we hope, under one Minister of Health. Without a body of superior health-officers, *either* many necessary duties of superintendence and inspection (hardly noticed in the Report of the Commission) must remain unperformed, *or* an equally numerous body of district inspectors, under the central authority, must be appointed to execute them, at a great national cost.

40. Confining our remarks to the existing inspectorates, we heartily agree with the Sanitary Commission, that simplicity and economy alike demand their union under one chief, and their redistribution in *circuits*, analogous to the registration divisions, or the districts of Poor-law inspectors, which circuits might constitute the larger public health areas, except for any special purpose, as the control of river basins. In every such circuit it might be advisable, for efficient administration, that the central authority should act through *three* inspectors, with different qualifications—one legal, one engineering, and one medical or scientific. In the Memorandum (sec. 13), at least *sixty-one* general inspectors, now in office, are enumerated, and of these *not more than fourteen or fifteen are medical*. The latter would, therefore, be all required on a reformed system—eleven or twelve for circuits, and three or four for special investigations. The Commission seems not to require that there should be such completeness of organisation as is here suggested; yet without it we doubt whether any system of local government and public health administration can fulfil successfully its intended objects.

41. What seems to us the fatal objection to the scheme of sanitary administration proposed by the Commission, is that it presupposes the frequent intervention of the central authority and its officials, not only in the great movements of the sanitary system, but in many minute local details. It is to be worked—or at least regulated—from the centre, by inspectors who, not necessarily residing in the districts which they superintend, cannot know more of local circumstances and peculiarities than they can glean during brief and hasty visits. This mode of administration has the threefold disadvantage of being costly, of being inefficient, and of keeping the country in a state of perpetual tutelage. If, on the other hand, the inspectors, or rather chief officers of health, highly trained in all the departments of public medicine, were resident in their districts, each one of them would be a centre of instruction whence sound and enlightened views on all sanitary matters would emanate, so as gradually to enlighten the public mind, stimulate local action, and reduce to a minimum the need of interference by the central authority. The Commission, however, would make that the exception, which we maintain ought to be the rule, and appears to be so scrupulous of permitting any competition by "men of higher attainments and qualifications" as actually to recommend (Memorandum, vol. ii, p. 354) that "such exceptional arrangements should be made under the direct sanction of the public health minister." Should these views unhappily be adopted, we have before us the dreary prospect of a dead level of official respectability and routine, under the patronage and protection of the central authority.

42. With respect to the proposed central authority, we thoroughly appreciate the importance of providing that every existing department, including several under the Home Office, the Privy Council, the Board of Trade, and the Poor-law Board, besides the General Register Office, the Lunacy Commissioners, and the General Medical Council, should be severally and individually represented in a Supreme Council of Health, to be presided over by the one minister.

43. We deem it unnecessary to comment further on this very important Report, by way of either support or criticism, although there are other particulars on which we might dilate. We conclude by repeating our desire for a careful personal inquiry in the various localities throughout the country, before legislating permanently on the details of sanitary administration.

APPENDIX.

A.—Extract from "General Report on the Sanitary Condition of the Labouring Population," 1842, p. 355.—"Whatsoever administrative arrangements sustain narrow districts and narrow practice, sustain, at a great public expense, barriers against the extension of knowledge by which the public would benefit, and any arrangements by which such districts or confined practice are newly created will aggravate existing evils."

B.—Extracts from Letters from Dr. Strange to Dr. Rumsey, February 26th

* See also "Memorial" of Joint Committee to Her Majesty's Ministers, May 1868, paragraph 5.

and March 15th, 1871.—(1) "In my old paper (1846) I spoke of a hundred and sixty officers, or about four for each county, as the quantum required. But I am one of those who, like yourself, have reduced our estimate of the number of district-officers that would be necessary.

"For instance, I think that for such a county as this (Worcestershire), excepting the Dudley district,* one officer could do the work if he had a proper office, clerks, etc., provided for him. . . . My fear is that every town like this (Worcester), Bath, Cheltenham, etc., will be allowed to appoint an officer of its own. This would be fatal to the well-working of the scheme.

"I would therefore advocate arrangements on a large scale, because, if the districts were found to be too large, it would be easier to divide them hereafter than to alter the petty arrangements made by each local authority."

(2) "I think that about a hundred officers, independently of the metropolis, would be required. Counties of not more than two hundred and fifty thousand population might perhaps be superintended by one officer, provided there was no great town in them. Where the principal town is large enough to pay an officer of its own, the rest of the county, in many cases, might be managed by one officer, although others doubtless would require more. Towns containing less than sixty thousand inhabitants, if appointing independently their own officer, would be sure to pay him badly, or perhaps distribute the work among the Poor-law medical officers. It is to guard against this that we must enlighten the public mind."

C.—Extract from Letter from Dr. W. Budd, F.R.S., to Dr. Rumsey, May 8th, 1870.—"On main points we are quite agreed as to what should be the character of the new sanitary organisation. I am strenuous, in the first place, for a county administration; not only because this offers the only safeguard against metropolitan absolutism, both in theory and practice, but because the elements of a county organisation already exist, and have already been largely and successfully employed in the suppression of disease—to wit, in the sheep's small-pox and the cattle-plague. In legislating on such matters, it is always best to go, as far as possible, on the old lines.

"As regards the appointment of the Poor-law officers, on condition of their acting only as deputies to the chief, I have no objection to the proposal. The only difficulty, I fear, would be as to the funds required to remunerate them for their additional labour. . . . I acknowledge that in naming from £500 to £800 (for the chief officers) I pitched the salaries too low. I was not quite prepared for the question at the time, and was no doubt impressed by what seemed to me to be the master impulse of the whole Commission—the dread of adding to expense. At the same time, I think that some err in over-estimating the number of superior officers necessary for the work. In exactly the same measure in which you increase the number of these functionaries, you tend to diminish the salary of each. In these matters it is important to go on principle, and I hold this to be a principle which lies beyond dispute, that it is incomparably better for the success of the work to have a few well-paid and very able men, than to have a number of inferior capacity at a lower salary. . . . Having thought over the matter as regards the county of Devon, since I gave evidence, I am prepared to stand by my suggestion that three officers—one for each Parliamentary division (Evid. 9,319) or Coroner's division (9,320) would be sufficient.

"This should always be borne in mind—1, that the sum to be distributed among the superior officers in each county will be a stated and limited sum; and 2, that the money, being partly for Imperial and partly for local purposes, will most probably be drawn in part from the rates, and in part from the Consolidated Fund."

D.—Extract from Report of Deputation. Dr. Symonds's Speech, May, 1868.—Dr. Symonds urged that the Government should encourage the creation of a new order of medical men who would give their undivided attention to sanitary matters, and to questions of medical jurisprudence. He then proceeded to say that the medical profession had been growing more and more anomalous in sanitary matters, and so great an amount of work had come to be imposed upon the profession, that it was getting to be more than the shoulders of medical men could bear. Medical men were chiefly educated for the care of the sick; and, in the practice of professional duties over some years, a great deal of the knowledge which they primarily possessed would be found to have slipped away from their memories when they were suddenly examined upon some particular point requiring minute investigation. Now, the medical man, when called upon to give evidence in a court of law, had to do so on three different heads. He had to give evidence such as an ordinary witness would on points which would be within general observation; then he had to give evidence of matters which had come within his knowledge as a professional man; then he was called upon to speak as to circumstances of which he was supposed to possess a knowledge by an acquaintance with chemistry and natural science. But it must be stated that a man might have possessed a great amount of knowledge of chemistry and natural science at an earlier time of his life without being able to prove his knowledge in a law-court; and he might be a most able practitioner, yet, when called upon to discharge the duties of a medical jurist, might show great shortcomings. Then medical men were differently qualified in different parts of the country, and while some were educated well, others were educated ill. Surely, under these circumstances, it was not right that men should have the administration of the sanitary laws with only a general professional knowledge. This was a most important point, for the people had the right to have the best and most efficient officers to be obtained; what was required in Lincolnshire was demanded in Lancashire, and it was not right that there should be any difference in the qualification of the men who were to administer these important laws either in the one place or the other. It seemed to those who attended there, that a new order of medical men should be called into existence, upon whom should devolve the consideration of all those questions, who should be able to advise and instruct in all matters of sanitary science, and who would be able to answer off-hand all points which might easily have passed from the mind of general practitioners. Such a new order of medical men, by their influence on the public, by the education of the public in the laws of health, would do a vast amount of good among all classes of Her Majesty's subjects. The deputation asked that there should be a Royal Commission to consider these most important matters, and those present were sure that research would show the necessity for the appointment of such men as officers of health, who would give confidence to all.

E.—Amendments Proposed by the Manchester and Salford Sanitary Association in Clause 26 of the dropped Bill on "Rating and Local Government". Obligations of Sanitary Authorities, of Persons under their jurisdiction, and of Medical Practitioners with respect to Disinfection and the Disposal of Dead Bodies.—Every sanitary authority shall, by constructing, purchasing, or hiring,

* The population of the county of Worcester proper is now 338,848, on an area of 472,165 acres—more by far, in my opinion, than could be properly managed by one officer, if he were to superintend the registration of births, deaths, and diseases. Perhaps two officers might suffice, and be appointed, for instance, one for each parliamentary division.—H. W. R.

or contracting for the use of the places and things hereinafter mentioned, provide its district with proper places furnished with proper apparatus for disinfection of clothes and other articles, with a proper carriage for the conveyance of infected persons or of persons suspected of being infected, and with hospitals to which persons incapable of taking proper precautions against infection and affected or suspected of being affected with infectious diseases may be removed.

The Local Government Board may, on the application of any ratepayer within the area subject to the jurisdiction of a sanitary authority, require such sanitary authority to provide a proper place or proper places for the reception of dead bodies accordingly.

The places and things provided by any sanitary authority, or union of sanitary authorities, in pursuance of the foregoing requisitions of this section, shall be subject to the approval of the Local Government Board.

The occupier, or person in charge, of a house or tenement in which a person is ill of fever, or any infectious disease, shall give immediate notice thereof to the sanitary authority, or to some officer of the sanitary authority, having jurisdiction over the area within which such house or tenement is situated, and such sanitary authority shall furnish such occupier, or person in charge, with printed recommendations, approved of by the Local Government Board, respecting the disinfection of clothing and other articles, and precautions to prevent the spread of infectious diseases. Such occupier, or person in charge, shall, from the date of such notice, obtain and send to the said sanitary authority at intervals not exceeding ten days, the certificate of a legally qualified medical practitioner, that proper precautions have been taken to prevent the spread of such infectious disease to other persons, until the said occupier, or person in charge, obtain and send to the said sanitary authority the certificate of a legally qualified medical practitioner, that no person in such house or tenement is ill of fever or any other infectious disease, and that such house or tenement, or such parts of it as require to be disinfected, and the clothes and other articles in and about it requiring disinfection, have been satisfactorily cleansed and disinfected.

Any medical practitioner, attending a person who is ill of fever or any other infectious disease, shall give immediate notice, in the manner and form hereinafter described in schedule—to this Act, of the infectious character of such disease, to the occupier or person in charge of the house or tenement in which such person who is ill of an infectious disease is, and also to the sanitary authority having jurisdiction over the area within which such house or tenement is situated, for which such medical practitioner shall be awarded by the said sanitary authority such remuneration as shall be approved of by the Local Government Board.

The occupier or person in charge of any house or tenement in which an inmate is dead, and which is situated within the area subject to the jurisdiction of a sanitary authority which has provided a place or places for the reception of dead bodies, shall either keep and retain the dead body of such inmate in a room in which persons do not live or sleep, or shall give immediate notice of the death of such inmate to such sanitary authority, and if such inmate has died of an infectious disease, or if the dead body of such inmate is in such a state as to endanger the health of the inmates of the house or room in which it is retained, such sanitary authority may, on the certificate of its officer of health, or of a legally qualified medical practitioner, make any order or orders which a justice may now make, on the certificate of a legally qualified medical practitioner, respecting any dead body of a person who has died of an infectious disease or any dead body which is in such a state as to endanger the health of the inmates of the house or room in which it is retained.

Any person failing to give any notice required by this section shall be liable to a penalty of any sum not exceeding £20, and if any owner or occupier of a house or tenement in which a person is ill of fever or any other infectious disease fail to send to the sanitary authority having jurisdiction over the area within which such house or tenement is situated, any certificate required by this section, such authority shall, on the certificate of its officer of health, or of any legally qualified medical practitioner, exercise the powers and do the things which a nuisance authority may now exercise and do on the certificate of a legally qualified medical practitioner.

The guardians of any union, or the guardians of any two or more unions, and any sanitary authority, and any two or more sanitary authorities, may, with the approval of the Local Government Board, make mutual arrangements as to carrying into effect the foregoing provisions and any expenses incurred by such authorities in pursuance of such arrangement shall be deemed to be expenses incurred by them in the performance of their duties.

If any sanitary authority fails to comply with the foregoing requisitions of this section, or makes default in the performance of any duty which it is bound to perform in pursuance of the forty-ninth section of the Sanitary Act, 1866, as amended by this Act, the Local Government Board may, on the application of any ratepayer within the area, subject to the jurisdiction of the defaulting authority, or of any person aggrieved by such default, require the sanitary authority to remedy the default complained of, and if it fails to do so within a specified period, may suspend all the powers of such authority in its character of sanitary authority and delegate to the County Board of the County in which the district, or the greater part in area of the district, is situate, or to any person or body of persons, the powers of such sanitary authority until the default is remedied.

Any body of persons to whom such powers may be delegated shall, if they are not a body corporate, be (incorporated) a body corporate for the purposes of their establishment.

The form of this notice should be such that medical men would be obliged to state the names of the infectious diseases attended by them, as well as their infectious character.

Every sanitary authority should be required to make yearly returns to the Local Government Board as to the names of the diseases of which it has notice, their duration, etc. This would provide machinery for the registration of infectious diseases in private practice. These points were not before the General Committee of the Manchester and Salford Sanitary Association.

MUSHROOM POISONING.—A sad case is reported from Cornwall, which should serve as a caution to gatherers and eaters of mushrooms. At Flushing, near Falmouth, on Tuesday last, a boy and girl, aged respectively six and twelve years, died through eating the poisonous fungus known as toadstool, in mistake for mushrooms. The mother, Mrs. Rusden, is also in a precarious condition, having partaken of the same gathering, and two or three fowls were killed. A woman in Truro had a narrow escape a few days ago, having bought a lot of toadstools, which were thought to be mushrooms, of a girl who had a large basket full for sale.

THIRTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in *PLYMOUTH*, August 8th, 9th, 10th, and 11th, 1871.

THE following is the list of names of those members of the Association who entered their names at the Reception-room at Plymouth. Other members of the profession residing in the country around were also present in large numbers.

Adams, William, Esq., London
Adkins, Joshua E., Esq., Yealmpton
Alford, Henry, M.B., Taunton
Alford, Richard, Esq., Weston-super-Mare

Alford, Stephen S., Esq., London
Althaus, Julius, M.D., London
Anderson, F. B., Esq., Hessle, Hull
Anstie, F. E., M.D., London

Archer, —, M.D., R.N., Stoke
Armstrong, Leonard, Esq., South Shields
Askwith, R., M.D., Cheltenham

Atchison, Surgeon-major T., London
Atwell, G. H., Esq., Altrincham
Aveling, J. H., M.D., London

Axford, W. H., M.B., Bridgewater
Baker, Alfred, Esq., Birmingham
Baker, Albert, M.D., Dawlish
Baker, J. Wright, Esq., Derby

Barham, C., M.D., Truro
Barnes, Robert, M.D., London
Barrett, S. B. C., Esq., Pewsey
Barter, C. S., M.B., Bath

Bartlett, W., Esq., London
Beatty, T. E., M.D., London
Begley, W. C., M.D., Hanwell
Bennet, Henry, M.D., London

Bolton, J. A., M.D., Leicester
Bone, R. A., M.D., R.A., Plymouth
Bott, Thomas B., M.D., Bury
Brittan, F., M.D., Clifton

Broadbent, S. W., Esq., Durham
Brown, George A., Esq., Tredegar
Bryan, J. M., M.D., Northampton
Bull, Henry G., M.D., Hereford

Bulteel, Christopher, Esq., Stonehouse
Burder, G. F., M.D., Clifton
Ceely, Robert, Esq., Aylesbury
Chadwick, Charles, M.D., D.C.L., Leeds

Charlton, Edward, M.D., D.C.L., Newcastle-on-Tyne
Cheves, Alex. B., M.B., Millbrook
Chubb, Charles W., Esq., Torpoint

Clark, James, M.D., Chasetown, Walsall
Clay, R. H., M.D., Plymouth
Clayton, M. H., Esq., Birmingham
Coates, Matthew, Esq., Devonport

Colthurst, J. B., Esq., Bristol
Corner, F. M., Esq., London
Corrie, S. Robertson, Esq., Leeds
Corry, J. C. S., M.D., Belfast

Cresswell, P. R., Esq., Dowlais
Crocker, Alfred, Esq., Devonport
Crossby, H. E., M.D., Nice
Dale, G. C., M.D., London

Dansey, George, M.D., Stoke
Davey, J. G., M.D., Bristol
Davies, Andrew, Esq., Swansea
Davies, David, Esq., Bristol

Day, W. E., Esq., Bristol
Day-Goss, Samuel, M.D., London
De la Garde, P. C., Esq., Exeter
De la Rue, P. F., Esq., Devonport

Denham, J. S., M.D., South Shields
Doidge, J. G., Esq., Launceston
Dolman, A. H., Esq., Derby
Dyke, T. J., Esq., Merthyr Tydfil

Eccles, G. H., L.R.C.P. Ed., Plymouth
Eccles, J. H., Esq., Plymouth
Edlin, Edward, Esq., Bourne
Eddowes, W., Esq., Shrewsbury

Elliot, John, Esq., Kingsbridge
Elliot, John, jun., Esq., Kingsbridge
Ellis, Heber D., Esq., Poole
Evanson, R. T., M.D., Torquay

Falconer, R. W., M.D., Bath
Felce, Stamford, M.R.C.P., London
Fitch, Frederick, M.D., Kidderminster
Fothergill, J. Milner, M.D., Leeds

Foulerton, J., M.D., London
Frank, P., M.D., London

Fulcher, G. A., Esq., Hanwell
Gamgee, Sampson, Esq., Birmingham
Gaye, H. S., Esq., Newton Abbot
Gervis, W. S., M.D., Ashburton

Godson, Alfred, M.B., Manchester
Gooch, J. W., Esq., Eton
Good, Thomas, Esq., Launceston
Greenwood, John W., Esq., Ossett,

Wakefield
Griffith, S., M.D., Port Madoc
Grubb, Philip, Esq., Warminster
Hall, C. Radclyffe, M.D., Torquay

Hall, J. G., Esq., Swansea
Hall, William, Esq., Salford
Harmar, James, Esq., Birmingham
Harper, Charles, Esq., Bath

Harper, Thomas, Esq., Plymouth
Harris, Henry, M.D., Redruth
Harrison, Reginald, Esq., Liverpool
Hart, Ernest, Esq., London

Hastings, George W., Esq., Malvern
Haughton, Rev. S., M.D., L.L.D., F.R.S., Dublin
Hawkins, Clement, Esq., Cheltenham

Hawkins, C. W., Esq., Stonehouse
Haydon, N. J., M.D., Bovey
Heath, Christopher, Esq., London
Henry, A., M.D., London

Hicks, James, Esq., Plymouth
Hill, Berkeley, Esq., London
Hingston, C. A., M.D., Plymouth
Holland, P. H., Esq., London

Hooper, Charles, Esq., Aylesbury
Hornby, Thomas, Esq., Barnsby Moor
Hounsell, H. S., M.D., Torquay
Hovell, D. de Berdt, Esq., London

Howatt, H. R., M.D., Glasgow
Hudson, J., M.D., Redruth
Husband, W. D., Esq., York
Hutchinson, Jonathan, Esq., London

Jackson, G., Esq., Plymouth
Jagielski, V., M.D., London
Jessop, A., Esq., Castleford
Johnson, George, M.D., London

Johnson, Henry, M.D., Shrewsbury
Jones, Edmund, Esq., Ross
Jones, John, Esq., Tisbury, Llanelly
Jordan, Furneaux, Esq., Birmingham

Kelly, W. M., M.D., Taunton
Kempthorne, John, Esq., Callington
Kersey, R. C., M.D., Littlebourne
Kerswill, George, Esq., Looe

Kerswill, J. B., Esq., St. Germans
Kerswill, R. W. P., Esq., St. Germans
Kite, W. J., Esq., West Bromwich
Lang, John, M.D., Southport

Langmore, J. C., M.B., London
Langworthy, G. V., Esq., Modbury
Leah, Thomas, Esq., Stonehouse
Leverson, H. S., Esq., Truro

Liddle, John, Esq., London
Liddon, W., M.B., Taunton
Littleton, Thomas, M.B., Plymouth
Littleton, William, Esq., Saltash

Longmore, Thomas, Esq., C.B., Deputy Inspector General, Netley
Lord, C. F. J., Esq., Hampstead

Lund, Edward, Esq., Manchester
Mac Cormac, William, Esq., London
McEwen, William, M.D., Chester
Mackenzie, J. I., M.B., Sidmouth

Mackintosh, Angus, M.D., Callington
McNalty, G. W., M.D., Military Hospital
Macnamara, Rawdon, M.D., Dublin
Macreight, W. W., M.D., Torquay

Mair, George, M.B., R.N., Keyham
Martin, William, Esq., Hammersmith
Mason, Frederick, Esq., Bath
Maunder, C. F., Esq., London

May, Joseph, Esq., Devonport
May, J., Jun., Esq., Stoke

May, J. H. S., Esq., Plymouth
Meade, R. H., Esq., Bradford
Meadows, Alfred, M.D., London
Mellor, Thomas, Esq., Manchester
Michell, Sloane, Esq., Dolton
Montgomery, J. Barclay, M.D., Penzance
Moore, M. M., Esq., Devonport
Morgan, W. F., Esq., Bristol
Murphy, C. O., Esq., Manchester
Murray, John, M.D., Indian Army
Nankivell, C. B., M.D., Torquay
Newham, C. A., Esq., Wolverhampton
Nicholson, R. H. B., Esq., Hull
Owen, A. W., Esq., Torrington
Owen, T. E., Esq., Totnes
Paine, W. H., M.D., Stroud
Parks, C. H., Esq., St. Columb
Parsons, D. W., Esq., Liverpool
Parsons, Franklin, M.B., Beckington
Payne, J. F., M.B., London
Pearse, W., Esq., Bodmin
Perry, H., Esq., Stonehouse
Philipson, G. H., M.D., Newcastle-on-Tyne

Pollard, William, Esq., Torquay
Prideaux, Alfred, Esq., Liskeard
Pridham, Charles, Esq., Paignton
Probert, John, Esq., Merthyr-Tydfil
Prowse, W., Esq., Amersham

Raby, John, Esq., St. Germans
Radcliffe, W., Esq., Plymouth
Roberts, L., Esq., Exeter
Roberts, William, M.D., Manchester

Robson, James, Esq., South Shields
Robson, R. N., Esq., Durham
Rodd, Richard R., Esq., Stonehouse
Rogers, T. L., M.D., Rainhill

Rogers, W. H., Esq., Yealmpton
Rolston, G. H., Esq., Devonport
Rolston, John, M.D., Devonport
Rosewall, G. B., Esq., St. Ives

Ross, J. C., Esq., Budleigh Salterton
Row, F., M.D., Devonport
Rugg, G. P., M.D., London
Shapter, Thomas, M.D., Exeter

Shettle, R. C., M.D., Reading
Sibson, Francis, M.D., F.R.S., London
Skeate, Edwin, Esq., Bath
Sleman, R., Esq., Gunnislake

Slyman, W. D., Esq., London
Smith, Protheroe, M.D., London
Smith, T. Heckstall, Esq., St. Mary Cray
Smith, William, Esq., Redditch

Smith, W. H., Esq., Bridgewater
Southam, George, Esq., Manchester
Square, William, Esq., Plymouth
Square, W. J., Esq., Plymouth
Stear, Henry, Esq., Saffron Walden
Steele, Charles, Esq., Clifton
Steele, A. B., L.K.Q.C.P., Liverpool
Steele, W. H., M.B., Devonport
Stephens, W. B., Esq., Plymouth
Stephens, W. K., Esq., Helston
Stevens, J. M., Esq., Plymouth
Stewart, A. P., M.D., London
Swain, P. W., Esq., Stoke
Swain, W. P., Esq., Devonport
Swayne, J. G., M.D., Clifton

Taylor, William, M.D., Cardiff
Taylor, C. B., M.D., Nottingham
Thomas, D., M.D., Ystalyfera
Thompson, D., Esq., Launceston
Thomson, Spencer, M.D., Torquay
Thorold, E. F., M.D., Plymouth

Tilton, Rowland, Esq., Stonehouse, Gloucestershire
Turton, F., Esq., Wolverhampton
Underhill, Thomas, M.D., Tipton
Vigurs, C. R. C., Esq., Ladock

Wade, W. F., M.B., Birmingham
Wakefield, William, Esq., Devonport
Wallis, A. J., Esq., Totnes
Waters, Edward, M.D., Chester
Webster, Thomas, Esq., Bristol

Wells, S. S. D., Esq., H.M.S., Ganges
West, Edward L., L.R.C.P. Ed., Launceston
Westall, Edward, M.D., London
Whipple, John, Esq., Plymouth

Whipple, Connell, Esq., Plymouth
Wild, T., Esq., Manchester
Wilkinson, M. A. E., M.D., Manchester
Williams, A. Wynn, M.D., London

Williams, John, M.D., Pontypool
Williams, T. Watkin, Esq., Birmingham
Willis, R., Esq., Horrabridge
Wilson, George, Esq., Launceston

Winterbotham, W. L., M.B., Bridgewater
Wood, William, M.D., London
Woodford, F. H., M.D., Taunton
Woolcombe, R. W., Esq., Stoke

Woodman, John, Esq., Exeter
Workman, J. W., Esq., Reading
Worley, W. H., Esq., London
Young, J. E., M.D., Devonport

Young, W. B., Esq., Reading

TUESDAY, AUGUST 8th.—(Continued from p. 193.)

OUR last issue contained a report of the proceedings of the First General meeting, up to the vote on the report, and its nearly unanimous adoption. We now take up the proceedings where that report left them.

Mr. HUSBAND, the President of Committee of Council, said that as the meeting had adopted the report, it would be the duty of the Committee of Council to appoint a secretary *ad interim*, and it would also be necessary to make alterations in the rules. The reason, he said, the Committee of Council should appoint a secretary *ad interim* was that the general meeting only could elect a secretary, and in the period between this and the next year, the Committee of Council would have to set out what should be the secretary's duties, and what would be expected of him. The proposed alterations in the rules had been before the Association a very long time in the columns of the JOURNAL, and he submitted them to the meeting.

On the motion of Dr. STEELE, seconded by Mr. HECKSTALL SMITH, it was agreed that the proposed alterations should be taken *en masse*, as proposed by the President of the Committee of Council. These proposed alterations were:—Rule 4. To insert "President-elect," and to omit "Secretary."—Rule 6. To expunge this rule, and to substitute the following: "Each retiring President of the Association and President of Council shall be appointed a Vice-President for life by a vote of the members at the Annual Meeting." Rule 7. To add "the Vice-Presidents" after President-elect; to insert the word "and" between President of the Council and Treasurer, and to erase "and the Secretary."—Rule 8. In this and every rule where "District" is prefixed to Branch, to erase the word "District," and to erase the words "the Secretary of the Association."—Rule 9. To omit the words between "the President of the Council" and "shall be elected."—Rule 10. To omit the words between "Treasurer" and "shall be elected."—Rule 11. To erase the words after "There shall be one paid Secretary" in first section, and to substitute "who shall reside in London, and devote his whole time to the business management of the Association and of the JOURNAL office." To erase the words "otherwise" in seventh line and "an annual or special" in eighth line, and to insert "each Annual Meeting."—Rule 13. To erase the words "Secretary shall call," and to substitute

"President of Council shall direct to be called."—Rule 14. Between "shall" and "be recommended," to insert "express his desire in writing, and shall be."—Rule 15. To add "Members may be admitted on and after July 1st in each year, and the subscription for such part of a year shall be half a guinea." To erase the words after "such member" in eighth line, and to substitute "as long as his subscriptions remain unpaid, provided due notice shall have been given of such withholding."—Rule 16. To erase the words after "from his" in fourth line, and to substitute "liabilities to the Association."—Rule 24. In tenth line, to insert "a copy of the laws" between "Association" and "and."

These, after a few suggestions regarding verbal alterations, were adopted.

Dr. WADE, of Birmingham, moved a resolution that in Law 8, paragraph No. 3, of the duties of Council, the "25" be altered to "10," and to omit the words and "one Secretary from each Branch." He said the objection he made to the secretaries sitting on the Council as representing, was a practical as well as a theoretical one. The branches should be represented directly, instead of indirectly, on the Committee of Council, which was the real managing body of the Association. He heard that local branch secretaries were very hard-worked, and if so, they had other duties to attend to beside assembling at the Council meetings, and besides they got no honour from the appointment to serve. He quoted the returns of attendances of local secretaries, showing that not more than one and a half per cent. of them attended at the Council meetings, and he hoped that if his motion were not carried, the members of the Association would think over his proposal and its bearings.

Dr. FELCE seconded the motion, and it was supported by Dr. DAVEY of Bristol.

Mr. HUSBAND said it was requisite that those who attended the Committee of Council should know the work of the Association, and he was sure he would have the cordial agreement of all who knew the work and how it was carried on, when he said that the Committee of Council had received the most important services from gentlemen who had come there as secretaries of branches. [*Hear, hear.*] He might be called an "old Tory" in thus objecting to a change of this character, but he would point out that the Council was chosen by the members of the Association, and the addition of the local secretaries as representing the branches made as good a working mixture as the Association could have. This had worked well, and he should be sorry if the Association now ruled that these secretaries should no longer be allowed to represent their branches.

Dr. STEELE said his constituents would feel deprived of a great privilege if the secretaries of local branches were not to represent those Branches as at present, for this was the only way by which members had effectual and certain representation on the Committee of Council; and if it were struck out, the Lancashire Branch might not have a single representative on the Committee of Council. He hoped that some attention would be given to the question of paying the expenses of those secretaries who attended by the Branches whom they represented. This was done by some Branches, and if it were done by all there would be a larger attendance of the secretaries, who were men eminently qualified to know the feelings and views of their brother members in their Branches. He hoped the motion would be negatived. [*Hear, hear.*]

Dr. SIBSON said he quite agreed with Mr. Husband that a great advantage was derived from the presence of the Branch Secretaries; still, the question of representation might be considered by the Council. As the Association had doubled its members since the last numbers of representatives on the Council were fixed, it would be just and wise to consider what proportion the number of representatives bore to the now enlarged number of members. [*Hear, hear.*]

Dr. WADE said he would undertake, with the consent of his seconder, to withdraw the motion if the Council would undertake to meet the whole question. He had no objection to the names of gentlemen being on the Council when they attended, but he objected to the names remaining if the representatives did not attend.

Mr. HECKSTALL SMITH held that all Branch Committees ought to consider whether they would pay their secretaries' expenses for attending the Council Meetings.

Dr. BRYAN said this motion evidenced a thorough want of consideration for the feelings of Branch Secretaries. Even if the secretaries did not attend, the right of attending was at least a compliment to them for their labours. It would entail a great expense upon a member living in Cornwall or Wales to attend in Birmingham or London, just for a Council meeting; but this was a right which local secretaries should have for their labour. [*Hear.*]

The motion was then withdrawn.

Dr. STEELE (Liverpool) then proposed the motion of which notice was given:

"That every associate, who is a member of the Council, and desirous of a seat on the Committee of Council, shall send to the General Secretary, not later than three months prior to the Annual Meeting of the Association, a declaration signed by himself, and in the following terms: 'I, A. B., of C., member of the British Medical Association, hereby declare that I am a candidate for a seat on the Committee of Council of the said Association. (Signed)———.' Together with a nomination-paper signed by six members of the Association, in the following terms: 'We, the undersigned, members of the British Medical Association, certify that A. B., of C., is a fit and proper person to be a member of the Committee of Council of the said Association.' The names of the eligible candidates, with the names of the six associates by whom they shall have been respectively nominated, shall be published in the BRITISH MEDICAL JOURNAL not later than three months prior to the Annual Meeting of the Association."

He said he had no objection to reduce the number of those who were to certify to the fitness of the candidates. The purpose of the proposed resolution was, he said, obvious, for at present the mode of election was as unsatisfactory as it could be, for it always came on late in the day. [*No, no; always early.*] Well, let it come on when it might [*laughter*], the members were called upon at once to elect without previous opportunity of considering who were likely to serve well, or of knowing those who were to be proposed. Pieces of papers were handed about for persons to propose others; and it had happened that the persons elected had afterwards said they could not serve. But it was not so much against these practices that his resolution was directed, but it was to meet the objections to the present plan, which was considered by many to make the Committee of Council a mere family party. He had it from some that no one could expect to be elected to the Committee of Council who did not belong to a certain clique. It might be that this was not correct; and if it was not, it was quite as necessary to alter a condition of things which created dissatisfaction, and gave rise to such suspicions. If this motion were adopted, the Association would be enabled to select the best men, and who would have pledged themselves to do their duty.

Mr. HUSBAND regretted anything should come before the meeting from Dr. Steele which he himself could not support. He said that no gentleman would, he would venture to say, sign such a declaration as this motion set out, and have it published in the JOURNAL for two or three months before the election. Moreover, the Branch Meetings for election of the Councillors from whom the Committee of Council were elected, did not take place till within a few weeks—sometimes a week or ten days—of the Annual General Meeting. Altogether he held the motion to be impracticable, and said the present mode of representation had its great advantages. Every member of the Council was elected in his own part of the kingdom by his colleagues who knew him well, and the result was that the Association had a Council of good men ready to do the Association excellent service. But if this motion were carried, he for one would not sign such a declaration. [*Hear.*]

Mr. HECKSTALL SMITH denied that there was any foundation for the hint that the Committee of Council was a family party.

Dr. STEELE, in reply, said he thought this motion might have been agreed to; and if it were not, he should persevere in bringing forward the subject. He held that the Committee of Council was not a fair representation of the general body; and he did not think his motion was so impracticable as it had been declared.

The motion was then negatived, nine hands only being held up for it.

Mr. NICHOLSON, of Hull, then proposed to insert "2" for "3" in Law 16, line 2, having reference to the time a member's name shall remain on the books after his subscription shall remain unpaid.

This was seconded and agreed to unanimously.

Mr. HUSBAND then moved—"That the Committee of Council be empowered to appoint a Secretary *ad interim*."

Mr. A. BAKER seconded this motion, and added to it that the Committee of Council should also have power to make rules to govern the secretaryship.

This was carried *nem. con.*

Mr. SOUTHAM moved that the two auditors, to whom the Association were before indebted, Dr. Fox and Mr. Church, should be re-elected auditors.

Dr. H. HARRIS seconded the motion, which was also adopted, with the addition, on the suggestion of Mr. Husband, that the auditors should have the power to call in a professional auditor with the assent of the Treasurer.

The meeting then concluded, with thanks to the President, shortly before midnight.

WEDNESDAY, AUGUST 9th.

The Second General Meeting was held in the Devonport Town Hall on Wednesday, which—pictures included—has recently undergone renovation, and looks uncommonly well. There was a very full muster of the members of the Association, the special attraction being the Address in Medicine of Dr. George Johnson. Mr. WHIPPLE, the President, having taken the Chair, the Corporation of Devonport, headed by the Mayor (Mr. J. May), in his robe and chain, and the Town Clerk (Mr. Woollcombe) presented an address.

His WORSHIP said he begged to be allowed in the name of the town councillors and burgesses of the borough to welcome the Medical Association to Devonport. He hailed their advent among them with great satisfaction. He looked upon the object of their Association as primarily the advancement of the art and science of medicine, and as such the amelioration of the condition of society at large. He recognised, also, in those annual gatherings, a desire, and a very laudable desire, for recreation after the hard work that daily practice entailed on most of them, and he hoped that their visits to the numerous public establishments, as well as the beauty of the surrounding scenery, would enable them to enjoy their hard-earned holiday. [*Applause.*]

The Town Clerk then read the address as follows:—"Gentlemen,—We, the mayor, aldermen, and burgesses of the borough of Devonport, have great pleasure in welcoming the numerous and distinguished members of the medical profession who have honoured us with a visit at the present time. The united influence of your Association, embracing the most eminent and distinguished members of the profession, has already led to results of the greatest value. The discharge of your functions, always freely exercised by individuals for the benefit of rich and poor, assumes a vastly increased importance by that personal communion which, leading to the interchange of knowledge acquired by long and patient research, not only adds to the honour of your profession, but still more advances the welfare of mankind. The researches of your body have already demonstrated the vast amount of mortality due to preventable causes which, now perfectly obvious, have hitherto been ignored. On us, as a civil corporation, is now cast the heavy responsibility of giving effect to those searching measures which are within our power, and of promoting those further improvements, the necessity of which you have made apparent. We shall rejoice if we are able to co-operate with you in promoting the further remedial legislation so urgently required for the public health. Your body may well claim to be sanitary pioneers, and we trust we shall not fail in any efforts which may be required to facilitate your progress." [*Applause.*]

The PRESIDENT, in reply, said it was with no little feeling of gratification that he returned thanks for himself, and the Association by which he was surrounded, for the very flattering reception that had been accorded to them. That was the second address of the sort, he believed, that had been presented. He was sure that he only reiterated the feelings of every one of the Associates when he expressed the deep sense of the high compliment that had been paid them. [*Applause.*]

Mr. T. WATKIN WILLIAMS (Secretary) stated that the Council had decided to recommend that Birmingham should be the place of meeting in 1872, and Mr. Alfred Baker President.

Mr. UNDERHILL, of Birmingham, begged to request in the most earnest way that the Association should hold their meeting in that town next year. He need not say much in favour. The geographical position of the town was of great importance; and though it could not offer perhaps the great natural advantages which that beautiful locality could, there were nevertheless attractions about it in relation to manufacture and the rapid advancement of science that would recommend it to their notice. He could offer them a most hearty welcome. With regard to the suggestion that Mr. Alfred Baker should be elected President, he might say that that gentleman had been elected unanimously by the Branch, and he could say to those who did not know him so well as he did, that Mr. Baker's social qualities were of a very high order. [*Applause.*]

Dr. CHADWICK (Leeds) thought Birmingham very suitable for a place of meeting, and moved that the recommendation should be adopted.

The Rev. Dr. HAUGHTON (Dublin) in seconding the resolution, referred to his personal knowledge of the hospitality and good qualities of Birmingham. An interesting feature of medical inquiry, alluded to in the address, was the good effected by the Association, not so much in cure as in the prevention of disease. They in England were naturally alarmed at the dread approach of cholera. It was observable, and was a phenomena well worthy of attention, that Birmingham had been singularly free from that disease. It would be for the friends there to tell the Association the reason of this.

The motion was carried by acclamation.

Mr. ALFRED BAKER, who was heartily received, in thanking the

meeting for the honour they had conferred on him, said he hoped they would find any defect of his more than made up by the services of those gentlemen who would be associated with him. The whole inhabitants of the town would join in giving a welcome, and he had every confidence that a successful meeting would be held in his native town. In such a meeting many would have the gratification of renewing old friendships and making new ones. [*Applause.*]

Mr. HUSBAND called attention to the fact that it would be impossible to appoint a new secretary for some time. It was proposed by the Council, therefore, that Mr. Williams should be asked to continue to hold office for six months until his successor should be appointed; they likewise suggested that he should receive for that period, in consideration of the additional labour that would be involved, £200 instead of £150.

The proposal was adopted, Dr. Falconer, Dr. Stewart, Mr. Gamgee, and others, speaking in its favour.

Mr. WILLIAMS, in reply, said he should be most happy to do all that he could to initiate his successor into his duties. [*Applause.*]

A subcommittee was then appointed to define what those duties should be.

Dr. GEORGE JOHNSON then delivered the Address in Medicine, which was listened to throughout with the greatest attention by the large body assembled in the fine hall.

When Dr. Johnson had finished his address there were loud and long continued cheers.

Dr. A. P. STEWART immediately arose to propose a vote of thanks to Dr. Johnson, who, he said, had eloquently addressed them on many points of special interest and importance at this time, and what they had heard would be carried to different parts of the kingdom to fructify in the minds of the large professional audience. The address they had just heard formed a worthy sequel to the addresses of such men as Sir William Jenner, and the other high authorities who had gone before.

A MEMBER in the body of the meeting seconded the motion, and said he hoped the address would spur medical men to investigate the phenomena of disease, and to do more than stand idly by when they came to a bedside where they found a difficult case.

The vote was carried with acclamation, and the meeting separated.

THURSDAY, AUGUST 10th.

The Third General Meeting was held in the Royal Hotel, Plymouth; the President in the Chair.

Dr. EDWARD WATERS read the Report of the Reform Committee. This was as follows.

The Reform Committee of the British Medical Association, appointed at the annual meeting at Newcastle in August 1870, have to report that they have been unable to effect a settlement of the question of Medical Reform during the past session; but, as stated in the Report of Council, "the Committee are of opinion that the field has been cleared for action; and arrangements have been made which, it is hoped, will conduce to a settlement of the long vexed question before the next annual meeting of the Association."

The withdrawal of the Bill of the Government in 1870, in consequence chiefly of the refusal of the Direct Representation Committee of the Association to accept any amendment of the Medical Acts which did not embody direct representation of the profession in the General Medical Council, constituted the Association the champion of medical reform, and threw on it the responsibility of undertaking medical legislation, with a view to the realisation of the oft expressed will of the Association. The Reform Committee appointed to carry out this object met in Birmingham on December 27th. Dr. Waters was appointed chairman; and a Subcommittee, consisting of Dr. Waters, the President, the President of Council, Dr. Falconer, Dr. Stewart, Mr. Michael, and the General Secretary, was appointed, with power to act. It was resolved to draft a Bill based on the Government Bill of last session, but embodying the principles contended for by the Association. Before coming to this decision, the Committee, in a spirit of loyalty to the profession and to the public, carefully considered the provisions of all other schemes of reform which had been promulgated. In the hope that the Government might be influenced by the numerous petitions for direct representation on the Medical Council which had flooded the House of Commons, not only from members of the Association, but from thousands of the registered practitioners of the United Kingdom, it was deemed advisable to test the opinion of the Government on the clauses of the proposed Bill of the Association, and to endeavour to obtain from the Government the adoption or approval of the demands of the Association. The Reform Committee sought, therefore, an interview with the Lord-President of the Privy Council, as the author

of the Bill of last session. The request was granted; but, in consequence of the enforced absence of his lordship on a mission to the United States, the Committee were on the 14th of February received by the Right Hon. W. E. Forster, Vice-President of the Privy Council. Mr. Forster was accompanied by Mr. Simon, the Medical Officer of the Privy Council. The Committee submitted to the Vice-President the continued existence in the profession of a determination to accept no measure of medical reform which did not concede direct representation, compulsory registration, improved examinations, and the annulling of honorary degrees in medicine by the reinstatement of the withdrawn eighteenth clause. The fact that the medical authorities in Ireland had recently decided in favour of direct representation in the Medical Council by a majority of eleven to one was also laid before him. The Vice-President stated, in reply, that the Government would not undertake the question of medical reform this year, owing to the great pressure of other public business; but would give its careful consideration to such a measure as the Committee had indicated, when brought forward.

On Tuesday, February 28th, the Reform Committee held a meeting in London. Mr. Dalrymple, M.P., who had engaged to press forward the amendments of the Association in favour of direct representation, if the Government Bill of last session had passed the second reading in the House of Commons, and who has always aided the previous and present Committees by his advice and co-operation, as well as Mr. Hart, the editor of our JOURNAL, were present. It was unanimously agreed to ask the Right Hon. Mr. Headlam, M.P., to whom the Medical Act of 1858 is virtually due, he having, with the support of Sir Charles Hastings and the Association, triumphantly carried, contrary to general expectation, on July 1st, 1857, the second reading of his Bill by a majority of 147, to take charge, in conjunction with Mr. Dalrymple, of the Bill of the Association. A meeting, attended by several members of Parliament, was held in the House of Commons the same evening; and Mr. Headlam consented to take charge of the Bill of the Association. The same evening, Mr. Headlam gave notice in the House of his intention to bring in the Bill. On the following day (March 1st), Dr. Stewart and the Chairman, authorised by the Committee, went through the Bill of the Association, clause by clause, with Mr. Headlam, and, in doing so, strictly adhered to the principles enunciated and repeatedly endorsed at the general meetings of the Association.

All the details of the Bill having been thus settled, Dr. Lush, M.P., and Mr. Brady, M.P., gave notice of two other and separate Bills, differing widely from each other: one, the "*Lancet* Bill", promoted by the staff of that journal, introduced by Dr. Lush; the second, the Bill of the Irish College of Surgeons, introduced by Mr. Brady. Under these circumstances, Mr. Headlam and Mr. Dalrymple deemed it unwise to proceed with the Bill of the Association. They were strongly of opinion that the introduction of three Bills—rival schemes, as they would be described—would damage the profession in the House of Commons. They were convinced that both the measures referred to were impracticable; as the Vice-President of the Privy Council had, indeed, declared with regard to the *Lancet* Bill, to the deputation which waited on him in support of it; and that it would not be wise to risk the measure of the Association by attempting to press it forward at the same time. The Reform Committee yielded to the experience and advice of Mr. Headlam; and they have in consequence deferred pressing the Bill of the Association during the past session. They did not, however, attempt any opposition to the other Bills, but, on the contrary, left the course free for the supporters of them. The result has been, that both Bills were withdrawn on June 14th, and that for the present session there is an end of medical reform.

Your Committee have to report that, though the present session has proved barren of medical legislation, their knowledge and experience of parliamentary tactics have been materially increased. The power of the Association has been greatly strengthened by its steady and continued adhesion to the principles it has so repeatedly affirmed; and the delay of twelve months has only made more clear that no measure of medical reform will ever be accepted by the profession which does not give a full and adequate representation of the whole profession in the General Medical Council.

In conclusion, the Committee have to repeat that the ground has been cleared for action. The peaceful termination of the momentous events which have convulsed Europe since our last anniversary gives the Association a better chance of being listened to by the Legislature; and the communications which the Committee have had with several gentlemen interested in the question, and others, lead them to anticipate in the next session of Parliament more definite results than have hitherto been attained.

EDWARD WATERS,
Chairman of the Reform Committee.

Dr. BRYAN moved that the Report be adopted, and the Committee reappointed.

Mr. NICHOLSON seconded the motion, which was carried unanimously.

Dr. G. H. PHILIPSON then read the Report of the Committee on the Observation and Registration of Disease, which was as follows.

The past year has been full of promise of the ultimate success of the efforts of this Association to bring about a national registration of disease. At the general meeting, held at Newcastle-on-Tyne, on August 12th, 1870, it was resolved—"That a deputation from the Association should seek an interview with the President of the Poor-law Board, to represent to him the views of the Association with respect to the registration of disease, and that Dr. Rumsey, Dr. Sibson, Dr. A. P. Stewart, Dr. Morgan, and Dr. Ransome be requested to form the deputation."

In accordance with this resolution, the above named gentlemen waited upon Mr. Göschén, in conjunction with a deputation on the same subject from the Poor-law Medical Association, and several other gentlemen interested in the question. After a careful inquiry into the views of the deputation, Mr. Göschén said that the arguments in favour of the registration of disease were very clear and strong, and that every one must accept them. The chief points to be considered were by what machinery it could be carried out, how rapidly, and at what cost. He thought, however, that the question was one for the Government, and not for his department, and he remarked that it would be undesirable to go into the matter until the report of the Royal Sanitary Commission had been considered by the Government.

The report of this Commission appeared in the spring of the present year, and contained very important and conclusive arguments for a registration of disease, apparently in every respect identical with that proposed by this Association. We append an extract from this report, from which it will be seen that the Commissioners were fully impressed with the importance of the subject, and with the necessity both of obtaining speedy returns of new cases of diseases occurring amongst large bodies of the population, and of making these returns immediately available for the suppression of epidemic disease. It does not appear, however, from the recommendation of the Commission, that any definite plan for obtaining these objects is put forth, nor any arrangement made for transmitting the records through a local officer of health. Your Committee recommend, therefore, that a memorial be addressed to Her Majesty's Government, praying that in any measure of sanitary reform this most valuable aid to the suppression of disease should be fully provided for, and that arrangements should be made by which health officers could make immediate use of the returns of disease before they are transmitted to the central offices of the Government.

Your Committee regret that they have to announce the discontinuance of the returns made for the last four years by the Northumberland and Durham Medical Society. Although those made at Manchester and Salford, St. Marylebone, and Birmingham still continue, the fact that this influential body is unable to carry on the undertaking is only another proof of the need of a truly national registration of sickness.

Mr. DYKE (Merthyr Tydfil) said he had great pleasure in moving the following resolution on this Report.

"That this Association, whilst it gratefully acknowledges the favourable reception accorded to its views on the subject of the registration of disease, both by the Government and the Royal Sanitary Commission, desires to urge the importance of making the returns accurate, and immediately so available in the localities from which they are procured; and therefore points out the need of a superior health-officer in every area of sufficient size, by whom, amongst other duties, the returns could be collected, and immediately applied to the wants of the district. Also that the Committee on the Observation and Registration of Disease be reappointed."

Dr. WILKINSON said the subject was a most important one, and he had great pleasure in seconding the motion. This was carried unanimously.

Dr. A. P. STEWART then proceeded to read the Draft Report of the Joint Committee of the British Medical and Social Science Associations. Before, however, he had finished, the time for Mr. Lister's address had arrived; and Mr. Lister, who at the moment entered the room, was warmly cheered by the large audience which had met to hear him. The further reading of the Committee's Report was postponed until after the Address in Surgery; and Mr. Lister was again greeted with hearty cheers when he presented himself to give this address, part of which was extemporaneous.

When Professor Lister had finished speaking, he distributed small portions of the material he used in his treatment.

Mr. MAY, the Mayor of Devonport, then rose to propose the vote of thanks to the Professor, a resolution, he said, to which all would agree with pleasure. The marked and sustained attention which they had all

shown to this long lecture, the delivery of which must have been a great strain upon the worthy Professor, proved that it was far too short for them, though it had occupied two hours. [*Cheers.*] Those living on the south of the Tweed were at all times ready to acknowledge that the school of Edinburgh held a proud position, and had given many bright names to the science; and the meeting of the Association, having heard Professor Lister, would readily believe that the mantle of those bright and worthy men who had preceded him had fallen upon him. [*Cheers.*] To him it was given to maintain the honour and the great name of his school, and he (Dr. May) proposed that the cordial thanks of the meeting be given to the Professor for his valuable address.

Mr. MACNAMARA seconded the motion, and said the Professor had charmed the ears of all who had heard him, and enlisted their sympathies. The Professor had made some observations reflecting upon the reasoning powers of some of his professional brethren, as shown in their opposition to his system; but even this might be turned to compliment by the Professor, for all knew that error was rapid in its progress and truth was slow. [*Cheers.*] There was one germ which prevailed throughout the theory the Professor had propounded, a germ which the Professor must be proud of, for it was the germ of truth. [*Cheers.*]

The vote was carried with acclamation, and the meeting separated.

FRIDAY, AUGUST 11th.

The Fourth and Last General Meeting was held on Friday afternoon in the Assembly Rooms at the Royal Hotel, Plymouth; the President, Mr. WHIPPLE, in the Chair.

Dr. A. P. STEWART proceeded to finish the reading of the Report of the Joint Committee of the Social Science and British Medical Associations. He complained that the Royal Commissioners, in their Report lately upon some of the points dealt with in the Joint Committee's reference, had entirely ignored the recommendations of the Committee.

Mr. GEORGE HASTINGS moved the adoption of the Report, which he said was a valuable contribution on the subjects concerning which it treated. The only subject upon which he would express any regret was, that he had not seen at this meeting a gentleman who had contributed greatly to the value of the Report—Dr. Rumsey of Cheltenham—and it was a great calamity that that gentleman was not present to give his views in support of the Report. It must be a subject of congratulation and of great interest to the members of the Association to look back and see what had been done in regard to the matters dealt with in the Report. The Committee was appointed at the Dublin Meeting in 1861, and since that date very considerable and important results had followed from the Committee's labours. [*Hear, hear.*] In the first place, after full consideration the Committee concluded that they could not deal with the questions involved as Associations, and that nothing less than the power of the State was requisite. [*Hear, hear.*] The Committee accordingly asked for a Royal Commission to investigate the subjects to be dealt with, and the Committee was successful, for the Royal Commission was issued. [*Cheers.*] It could not be too widely known that it was owing to the efforts of the Joint Committee of the two Associations that this Royal Commission was issued. That Commission had now reported; and he could say, though he did not agree with the Report, that the Commissioners had discharged their duty with zeal and intelligence; they had brought together a large amount of information which had never before been collected, and had laid the basis of legislation upon the subject. [*Hear, hear.*] He had no doubt that within three years we should have upon the Statute Book an Act to consolidate the laws on this subject; and it was in a great measure to the number and the variety of the laws, and to the difference in their administration, that the evils existing were due, and much good would be done if the legislature could be induced to codify the sanitary laws. He did not agree with the proposed scope of the measure which purposed to deal with sanitary laws. He thought the measure would not work well if its area were to be limited to the hands of such small bodies as vestries and boards of guardians. The purposes of the measure were so diverse and important that they would require the most statesman-like and appreciative minds in a county to carry them out, and they should not be entrusted to any less body than that of a county representation. If the Associations pressed for this representation they would obtain it; and any educated man could see that it was impossible that these important duties could be entrusted to the representations of small areas. There was another point with regard to the appointment of health-officers which would have to be considered. The idea which had been broached as to the Poor-law medical officers being the health-officers was a grave mistake. No one had a higher opinion of the Poor-law medical officers than he had, but he held that they were not fitted to be the primary health-officers. They might be employed as the assistant health-officers, but the primary health-officers should be men

divorced from all State duties; they should be educated men, subject to no sinister influences from any quarter; and if men could be obtained of this character, improvement would soon be seen in the health of the people. [*Cheers.*] He could see why there was an endeavour to place the position of health-officers in the hands of underpaid and ill-educated men, and this was because the power of supervision should fall to some central authority. He hoped this would not be, for only those who knew a district could administer it. He did not wish to decry the usefulness of a central authority in some matters, but he did not think a central authority would be useful in this case. He trusted the Association would not relax its efforts in this direction, for the aim of the benevolent profession which this Association so ably represented was not only to cure disease but to prevent it; and if it brought its vast influence to this end it would continue the great work it had so well carried on.

Dr. LIDDLE (Whitechapel) seconded the motion, and said that when they saw the names of the gentlemen who had sat upon this Committee they were sure that the subjects dealt with in the Report would be pressed upon the Government. Nothing could be more absurd, he thought, than the making of a parochial or union area; but he was not quite sure that a county area was the right one. As an instance of the inconvenience of having a particular line of area, he referred to his experience of a nuisance arising on the borders of Essex, near where he lived on the borders of Middlesex, and the neighbours who experienced the effects of this nuisance could not interfere because they lived out of the county. He therefore thought that there should be some central authority to direct in such cases as this, for whatever area was fixed there would be people outside that area who would be affected by the nuisances within it, and they should have the power of dealing with it. [*Hear, hear.*] Respecting the Poor-law medical officers being health-officers, he agreed with the mover in thinking it would not be of advantage to have this combination. It was to be remembered that the Poor-law medical officers were under the local authorities, and most of the men composing the local boards were the owners of the property which was often needed to be reported on; and what, he would ask, would be the effect of the health-officer, who was also Poor-law medical officer, reporting upon a nuisance existing upon these properties? [*Hear, hear.*] This was a question he need not answer; and it must be apparent that a health-officer should be a gentleman having power over a large area, which was what a Poor-law medical officer could not have, for it was necessary that his attention should be confined to small localities. It was important for those whose care devolved upon Poor-law medical officers that these gentlemen should not have their attention diverted to the wants of a large district; and all officers of health should be gentlemen entirely independent of private practice. It was impossible to combine private practice with public duties, for the one was necessarily sacrificed to the other. He had been medical officer for the district of Whitechapel for many years, and had had experience of the working of the two positions, and he had been able to exercise power over matters with which he had to deal only because he was not dependent upon his position, but had private means.

Dr. STEWART said the question of area had purposely been dealt with in general terms. The Committee did not all go with the views of Mr. Hastings upon this point as to the area, and they went no further than to say that there should be full local inquiry made, so as to prevent any administration being settled upon defective data.

The report was then adopted; and, upon the motion of Mr. HASTINGS, it was agreed that the Committee should be reappointed.

Mr. ERNEST HART said some confusion was caused by the Committees appointed last year not being called together. He held that it was desirable a circular-letter should be sent by the Secretary informing gentlemen of the particulars of the Committees they were elected to, and of the time when they were to be called together.

It was agreed that the Secretary should issue such a circular-letter as was suggested.

Mr. T. WATKIN WILLIAMS, the Secretary, read the Parliamentary Bills Committees' Report (printed in the JOURNAL last week).

Mr. ERNEST HART moved that the Committee be thanked for their labours, the Report adopted, and the Committee reappointed, Dr. Stewart to be chairman and convenor. Facts, the mover said, came constantly within his knowledge to prove to him that no Committee of the Association rendered greater service to the profession and the public than this Committee. The Committee had had cognisance of every Bill affecting sanitary and social legislation, and members of the Committee were in constant attendance in the lobby of the House of Commons. He knew from personal experience that the Committee, as representing the Association, was much respected by the Committees of the House of Commons, the officers of the departments, and by the ministers themselves; and the Government now looked to the Com-

mittee for the Association's advice, action, and criticism, upon all subjects affecting the health of the people and the interests of the profession. [*Cheers.*]

The motion was seconded by Dr. LEWELLYN, and carried unanimously.

The Report of the Poor-law Committee (printed in last week's JOURNAL) was then brought up and read by Mr. E. Hart.

Mr. DYKE moved that the Committee be thanked for their labours, be reappointed, and that Mr. Ernest Hart be chairman and convener.

Mr. LIDDLE took occasion to urge his objection to the system of gratuities, for paying per case gave rise, he said, to evils which were obvious. The vaccinator ought to be paid an adequate salary, and should not be placed in a position of competition with the other practitioners in his neighbourhood.

Mr. T. WATKIN WILLIAMS said he found his patients would not take their children to the public vaccinator, and that was the experience of others.

A MEMBER said that it would be an expensive process for the country if medical gentlemen were appointed to be vaccinators, and vaccinators only, for the districts throughout the country. He would support the views in the report, and he thought the Committee had done much for the Association; it had greatly increased the Association's influence, and it would do much more if individual members of the Association would bring their influence to bear upon members of Parliament. If members of the Association did this, the medical profession would exert its proper power in the State.

Mr. ERNEST HART stated that the Committee were very anxious to have the views of private members of the Association upon the several questions considered by the Committee.

Dr. HEAD added that he thought it was undesirable to have members of the medical profession vaccinators, and vaccinators only, for this would be a degradation to science, and would bring discredit upon a noble profession. [*Hear.*]

The motion was then carried *nem. con.*

Mr. E. HART drew attention to the fact that one other Committee had not brought its report up—a report bearing upon the collection of subscriptions by local secretaries. As this matter had not been submitted to the General Meeting, he thought the subject should be referred to the Committee of Council.

Mr. HUSBAND said he was glad, rather than sorry, that this report had not been brought before the meeting, for he thought such questions should be first dealt with on the Committee of Council.

Mr. T. WATKIN WILLIAMS said he had handed the report to a member of the Committee, and that this member had desired to make alterations.

Mr. E. HART said he should not accept the explanation; but he thought, with the Chairman of Committee of Council, that it was unnecessary to discuss the question then.

This subject then dropped.

Dr. FALCONER then moved votes of thanks to—The Mayors of Plymouth and Devonport; the Lords Commissioners of the Admiralty; Admiral Sir H. Codrington, K.C.B.; Vice-Admiral H. Stewart, C.B.; Inspector-General Davidson, C.B.; Captain the Honble. F. A. C. Foley; Major-General Sir W. Staveley; Colonel Westmacott, Royal Engineers; Colonel Clifford, Royal Artillery; Colonel Suther, Royal Marines; Dr. Gallwey, P.M.O. Citadel, Plymouth; Right Hon. the Earl of Mount Edgcumbe; Dowager Countess of Mount Edgcumbe; Right Hon. Earl of St. Germans; Earl Morley; Colonel Coryton of Pentillie; W. H. Pole Carew, Esq., of Antony; Admiral Tucker of Trematon Castle; W. Radcliffe, Esq., of Warleigh House; Sir Massey Lopes, Bart., M.P., Maristowe; Chairmen of the Bristol and Exeter, South Devon, and Cornwall Railways; the Chairmen of South Devon and East Cornwall Hospital; of Plymouth Public Dispensary; of the Plymouth Institution; and of Plymouth Public and Cottonian Libraries; Dr. Barham and Members of the Royal Cornwall Institution.

Mr. SWAIN seconded the motion, and said that those members of the Association who had visited the neighbourhood for the first time, had found what the medical residents there had long experienced—that the officers of the army and navy and the gentry had the greatest respect for the profession, and, indeed, they had always treated its members with the greatest consideration. [*Cheers.*]

Mr. HUSBAND said he could not leave Plymouth without saying, on the part of the Committee of Council, that they fully appreciated the kindness which they had met with at the hands of the gentlemen in the locality. He suggested that the Secretary should be instructed to write to the gentlemen thanked, and convey to them these thanks in an official manner.

The vote was carried with acclamation.

Dr. HENRY proposed that the Association should give its warm thanks

to the Local Secretaries and the Treasurer for organising the successful arrangements which had been made for receiving the Association.

Dr. A. P. STEWART seconded the motion, and said what the gentlemen referred to had done had been carried out at great expense and anxiety. As this meeting was so large, the labour had been greater than in any other; and though the kindness of the Committee had been such as to diminish the value of the Association as a scientific meeting [*a laugh*], yet what had been done had been offered for the gratification of the Association.

The PRESIDENT bore testimony to the heavy work which Dr. Littleton had undertaken and carried out—work which entailed his continuing in harness from eight o'clock one morning until two the next; and said he well deserved the thanks of the meeting.

The vote was carried amid cheers.

Mr. HUSBAND then took the President's chair, vacated at this point, and he proceeded to propose a vote of thanks to Mr. Whipple, who, he said, during his long life and long professional career had gained the respect and esteem of all who knew him. [*Cheers.*] The President was an honour to the profession and the Association; and those members who had been present had much to thank him for in his personal kindness and for the manner in which he had presided over the meetings. [*Cheers.*]

Mr. HASTINGS seconded the motion, and said no one could take greater pleasure than himself in seeing the Association founded by Sir Charles Hastings under the presidency of a gentleman like Mr. Whipple. [*Cheers.*]

The motion was carried amid cheers, after a few words from Mr. SWAIN, who, as a young practitioner in the town, said he was happy to bear testimony to the upright and generous nature of the President.

The PRESIDENT briefly acknowledged the compliment paid to him by the Association, and the meeting then broke up.

THE DINNER.

The public dinner was held at St. George's Hall, Stonehouse, on Thursday evening. Upwards of two hundred gentlemen were present, and a repast of the most *recherché* description was provided by Mrs. Budd, of the Duke of Cornwall Hotel. Mr. Whipple presided, and was supported by the Bishop of Exeter, the Mayor of Devonport, the Mayor of Plymouth, General Sir Charles Staveley, Professor Lister, Dr. Charlton, Mr. T. Woollcombe, Dr. Falconer, Dr. Sibson, Mr. Ernest Hart, Dr. Chadwick, and others. The band of the Royal Marines was specially engaged, and whilst justice was being done to the excellent things provided, the band performed a choice selection of music.

The CHAIRMAN, after the removal of the cloth, proposed the usual loyal toasts. He next gave "The Bishop and Clergy of the Diocese," and the toast was drunk with much enthusiasm.

The BISHOP responded, and met with a very hearty reception. After the applause had subsided, his lordship said he was very glad indeed to have the opportunity, not only of returning thanks to the President and members of the British Medical Association for the earnestness with which they had just drank the toast of the Bishop and Clergy, but also of expressing the warm feeling with which he was quite sure the whole of the profession he was connected with regarded the medical profession. [*Applause.*] It might be that now and then there were differences of opinion between them. It might be that the clergy were looking to one thing when the medical profession were looking to another. It might be that the latter had to study the revelation that God had given in His works, and that the former had to study the revelation God had given in His word. It might seem to the clergy that those whom he was addressing did not lay stress enough upon the one, as no doubt it sometimes seemed to the medical profession that the clergy undervalued the other. Such differences there might always be; but he was sure they did not mark the reality of conviction, and he thought and was sure they really would not keep them apart. He knew there were few who had better opportunities of recognising such a profession than the clergy. [*Cheers.*] They all knew how much was owed to the medical profession. They all knew of the unwearying attention which constantly marked all that was done by the great body of the medical profession. The clergy knew better than many others how their hearts were in their work, and they knew how valuable that work was. They also knew what they had to do in this country in the great battle of sanitary reform which they had to fight. [*Cheers.*] They had to fight against the prejudices, ignorances, and vested interests of people who selfishly forgot that there were higher callings; but during that battle the medical profession would find that the clergy were heartily with them. The clergy desired their success, and they would do what they could to promote it, and as time went on, and the medical profession made further and further advances to do all it could to soothe human pain

there were none who would follow them with so warm an interest, who would watch them with so much admiration as that profession to which he belonged, whose duty was so kindred to their own—[*hear, hear*—] for they would never forget that when their Master came down, the way He took to prove that His mission was from Heaven was by going everywhere to heal the sick. [*Loud cheers.*]

The CHAIRMAN next proposed "The Army, Navy, and Volunteers," coupling with the toast the name of Sir Charles Staveley.

Sir CHARLES STAVELEY, in responding, wished to be permitted to say that the British army was at present in the hands of the doctors. The patients complained of the want of proper circulation. There had been no end of prescriptions, but the doctors were at variance, and they were to have a surgical operation on the 1st November next. [*Laughter.*] Some thought that would be a complete cure, but some considered the after treatment would be homœopathic. Be that as it may, he was sure the British nation would not spend £16,000,000 without looking to an effective army one day or another. [*Hear, hear.*] It was a most satisfactory thing to find the interest the nation had taken in the Berkshire campaign. With regard to the navy, he would say that accidents would happen in the "best regulated families." Ships would get ashore now and then, but he thought they would agree that the navy was never in a better condition than it was at the present time—as good as any two navies in the world. [*Loud applause.*] In the campaigns with which he had been connected he had learnt that the army owed much to the medical profession. [*Applause.*]

The CHAIRMAN proposed "Prosperity to the British Medical Association."

Dr. HUSBAND was called upon to acknowledge the toast. He spoke of the society as the most influential and the greatest medical association that ever existed. It was a society which had held its own against the most powerful Government. [*Hear, hear.*] The British Medical Association went on year by year increasing, until it had attained in point of numbers the position to which it was entitled. Last year they were in the north, and this year they had been invited to the splendid locality of Plymouth, where he was afraid there had been a strong rivalry between the charms of scenery and science. The sections, perhaps, had not been so largely attended as they might have been, but the community would have a great advantage, for many would go from Plymouth refreshed by the splendid scenery, and with health and vigour to carry on their labours, labours which were for the lessening of pain and sorrow. [*Cheers.*] They had to thank the Chairman, and those amongst whom they had come, for their splendid hospitality, and for the sympathy and kindness which they had everywhere met. But whether they came from the north, or whether they were residents in the south, they were each determined to do the best they could for the community to which they belonged. [*Applause.*] He referred to his connection with the Association, which had extended over thirty years, and concluded by proposing the health of Mr. Whipple, speaking of him as an excellent example of the good old English gentleman, and one who had done so much to promote the good of the meeting. [*Cheers.*]

Dr. WHIPPLE, in responding, said he felt a little nervous after the high and what he could not but deem lavishing compliment paid him by his respected friend who had just sat down. When the requisition was presented to him asking him to accept the recommendation of the Medical Society of the North of England he was astonished beyond measure, indeed he was flattered to the utmost possible degree; and, although he differed with the medical men who signed that requisition, he felt, however unequal he might be to perform the task, it was his duty to comply. He had done so, and he could assure them that he had not had any occasion to regret it, except it was a feeling that they might have chosen a far better man. [*Cries of "No, no."*] He did not, notwithstanding, disguise himself of the fact that for the past forty years he had worked hard and industriously in raising himself to the elevated position he then occupied. [*Hear, hear, and cheers.*] When he came to Plymouth he knew only one individual, and he need hardly add he felt in no small degree flattered now to possess the acquaintance of so many friends as he did, and especially to be paid so great a compliment as he enjoyed by the visit of so great an Association to the south of England. [*Hear, hear, and cheers.*] It was true he lived a long way off in the far west, and for men whose time was fully occupied, and whose brains were at work day and night to promote medical science, to visit this neighbourhood he could not but regard as the highest compliment that could be paid to him and others. They had been very fortunate, for while the members had been enabled to attend here in the path of duty, they had, at the same time, had an opportunity of devoting a portion of their time to pleasure. [*A laugh.*] He hoped on another occasion to join them again, if not at Plymouth, elsewhere, and with results as satisfactory as they had been at Plymouth. [*Cheers.*]

Dr. SIBSON proposed "The health of the President-elect, Mr.

Baker," and, in so doing, observed that no doubt it was very difficult for the members, amid so many beauties and interests which Plymouth could pride itself upon to keep within the strict objects of the Association. They were, however, about to transfer their next meeting to the very centre of the land, to a town the type of England, a place full of work, pervaded with smoke, and where everything spoke of labour. They would find there a number of gentlemen who were zealously devoted in the development of true medical science. The change would be from the exquisite country which gave birth to Sir Walter Raleigh, to the land which prided itself on the true English characters of Watt and Bolton. It was true he laboured under somewhat a difficulty, because he only had three days' acquaintance with Mr. Baker. It would be vain, therefore, on his part, to speak of the President-elect's merits. This, however, he was sure, judging from what he had heard, Mr. Alfred Baker was the right man in the right place. They would find around him a band of hard working medical men, true and hospitable in trying to do their work well. [*Cheers.*] In conclusion, he coupled the name of Mr. Baker with the toast.

In the absence of Mr. Baker, Mr. WADE replied, and expressed a hope that they would be satisfied with the reception they would meet with when they visited Birmingham.

Dr. CHADWICK gave the health of the Treasurer, Dr. FALCONER, who responded, and concluded by proposing the healths of their Irish and Scotch members.

Mr. LEICESTER responded in an appropriate speech.

Dr. RADCLIFFE HALL proposed, in a very able and eloquent speech, the healths of the Mayors of Plymouth and Devonport, and said that people often heard of *esprit de corps*, but here the Association had seen *esprit de corporation*.

These gentlemen responded, and acknowledged in very grateful terms the flattering way the members of the Association had thought fit to speak of the entertainment afforded them.

The healths of the readers of addresses in medicine and surgery, readers of papers, the general secretary, the local secretary and his co-secretaries, and "Our Next Merry Meeting," brought the proceedings to a successful close, the concluding speakers being Dr. Charlton, Dr. Johnson, and Professor Lister.

MEETING OF COMMITTEE OF COUNCIL,

Held at Plymouth, August 8th, 1871.

PRESENT: W. D. Husband, Esq., F.R.C.S. (in the Chair), Dr. Falconer, Mr. Baker, Mr. Clayton, Dr. Littleton, Mr. Heckstall Smith, Dr. Chadwick, Mr. Whipple, Dr. Sibson, Dr. Charlton, Mr. Harrison, Dr. Wilkinson, Mr. Nicholson, Dr. Bryan, Mr. Southam, Dr. Philipson, Dr. Edward Waters, and Mr. Williams, General Secretary.

The following resolutions were agreed to.

"That the army and navy medical and surgical staff be invited to attend the meetings of the British Medical Association; and that they consider themselves as members of the Association during the meeting in Plymouth."

The Report, as prepared by the President of Council, the Treasurer, and the Secretary, was considered, and, after some few alterations, was approved.

Meeting of Committee of Council, held at Devonport, August 9th, 1871.

Present: W. D. Husband, Esq., F.R.C.S. (in the Chair), Dr. Falconer, Mr. Baker, Dr. Sibson, Dr. Stewart, Mr. Clayton, Mr. Andrew Davies, Dr. Fothergill, Dr. Wilkinson, Mr. Southam, Dr. Underhill, Mr. R. Harrison, Mr. Heckstall Smith, Dr. Chadwick, Dr. Steele, Mr. Nicholson, and Mr. Williams, General Secretary.

The following resolutions were adopted unanimously.

1. "That Mr. Watkin Williams be requested to continue his services as Secretary up to the 31st of December next; and that he be presented with the sum of two hundred pounds, instead of the usual salary; and that the thanks of the Association be given to him for his zealous services during the eight years he has held the office of Secretary.

2. "That a Subcommittee be appointed to define the duties of the 'Secretary and Manager of the Journal Office', and to issue the necessary advertisements."

T. WATKIN WILLIAMS, *General Secretary pro tem.*
13, Newhall Street, Birmingham, August 16th, 1871.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 19TH, 1871.

THE ANNUAL MEETING.

THE annual meeting has closed, leaving all those who have visited Plymouth deeply and pleasurably impressed with its agreeable incidents. They were favoured by unclouded skies, and welcomed in a locality which combines the charms of exquisite land- and sea-scape with the varied animation and striking spectacles of a great port and arsenal, spreading contiguous moors, ancient keeps, and modern grounds, of singular beauty; and those who were most bent on holiday making were puzzled to know whether they should devote themselves to the inspection of the breakwater, the Eddystone Lighthouse, Brunel's masterpiece (the Albert Bridge), the iron-clad forts, the turret-ships, the gunnery and torpedo experiments, the review, the ships and victualling yards; or to the beauties of the Dart, the Tamar, and the Yealm; the ancient memories of Cothele; the more modern beauties of St. Germain's and Mount Edgecumbe; the bay and caves of Torquay, or the wilds of Dartmoor. Some conscientious lovers of laborious relaxation found opportunities, we verily believe, to explore all these sources of gratification without failing to do justice to public and private entertainments in the spare hours. So large a contingent of the Association have penetrated into the fastnesses of Cornwall, and are occupied with inspecting dolmens, menhirs, and cromlechs, that at this moment the inhabitants of that province are probably in better plight for medical aid of any kind than any other in the kingdom. The sudden taste for archæological research developed by so large a number of our associates is a surprising proof of their skilful versatility. It will be seen that the exertions of the local Committee and its officers, and the great courtesy of the resident gentry and local authorities, as well of the Three Towns as the two services, placed before the members so full a programme of interesting occupations and of healthful and delightful relaxation, that it is hardly surprising that the scientific ardour and the weight of sacrificial business duties were largely outmatched by the counter-attractions under their eyes. On the first night the general meeting was well attended; the second and third day the attendances faded away; until at last only such admirable utterances as those of Dr. George Johnson and Professor Lister could hold an audience together; and even for papers so widely interesting as those of the Public Health Section, the audience in the sections barely exceeded a score. On the last day of the meeting it became almost impossible to hold more than a faithful few to their work. The papers read were, however, in many cases, of high value, and had audiences "fit though few". Many of them will amply repay publication *in extenso*, and of these we shall present the full text, while all will appear in abstract, with reports of the discussions which occurred. It was the standing consolation of an eminent magistrate to those about him who complained of the narrow limits of the court, that "We sit in the newspapers". This will also be the

satisfaction to those authors of papers whose auditors were more select than numerous. Every annual meeting has its own characteristic features by which it is afterwards specially remembered. The annual meeting at the Three Towns will, we think, long live in the memory of those who constituted it as one of the most enjoyable ever held.

It will be a matter for serious consideration at the next and subsequent annual meetings whether it will not be desirable to subdue the otherwise naturally growing tendency to allow the holiday making to override the scientific and working objects of these annual meetings. The annual meetings of the Association offer the finest professional platform which exists for the propagation of opinions in the profession, the publication of researches, and the enunciation of facts. In no other way and at no other time can they be placed before so large a critical audience, receive so universal a journalistic circulation, or attract so much attention here and abroad. The natural course of events would be, therefore, that these meetings should continue to attract papers of more and more value; and it was the operation of this cause, and the great increase in the scientific *prestige* of the Association, which necessitated recently the formation of a multiplicity of sections. The reaction from the years of sectional activity to those of continuous pleasure-making requires to be checked. Next year will afford a favourable opportunity for steering a course which will consist with the happy medium. The immediate natural attractions of Birmingham are not so overpowering as those of the Three Towns. And although the well known hospitality and public spirit of the profession in Birmingham, their numbers, social position, and earnestness of purpose, will most certainly succeed in giving features of great attraction to the renewed visit of the Association to the town which claims to be considered as its cradle, the managers of the meeting will succeed without difficulty in so moderating the extraneous attractions as to keep members free from irresistible temptations to desert the sectional and general meetings. For this purpose it may be desirable to give up the public breakfasts and to commence sectional business at nine o'clock each morning. If each section had the opportunity of sitting for nine hours—three each day—that might suffice for a great deal of work; the general meetings might be held from twelve to two each day, and the afternoons left free for those outings and healthful amusements of which medical men in August know well the value, feel the necessity, and appreciate the pleasure. Some such scheme, or a variation from it, keeping the same ends in view, would meet, what we gather from numerous sources to be, a general desire.

The meeting now concluded has, however, been remarkable for important business changes, of which we relegate the discussion to another place. It has been distinguished for the excellence of its annual addresses, for the great importance of the reports of committees presented, for the unmistakable evidences of the constantly growing power, the political and social usefulness of the Society, and the earnestness and devotion which its most active members bring to its important work. The reports of the Committees tell their own tale.

Never before has the Association covered so large a ground of public usefulness, or influenced so strongly public opinion. It does so by virtue of its great and growing numbers, of its educated intelligence, of its high aims, and of the singleness of

purpose with which those aims are supported. In proportion as these qualifications are strengthened will it flourish and continue to extend benefits to the profession and the public. To insure success in that high endeavour, we need only adopt the motto of the Three Towns which have just earned our gratitude for a memorable reception—ONE AND ALL.

MEDICAL REFORM.

THE subject of medical reform has again been brought before a general meeting of the Association. Dr. Charlton, the retiring President, in his valedictory remarks, while expressing regret that the last year had not been marked by progress in medical legislation, stated that all that had occurred tended more and more to confirm the oft repeated declaration of the Association that no measure of medical reform will be acceptable to the profession which does not embrace the two propositions—viz., the one single portal by which all shall enter the medical profession, and the full and adequate representation of the whole body of the profession on the General Medical Council. The Report of Council declared that the Reform Committee had strictly adhered to the principles enunciated and repeatedly endorsed at the general meetings of the Association.

On Thursday, August 10th, the day appointed for receiving the Reports of Committees, precedence was given to the Report of the Reform Committee of the Association nominated at Newcastle. Dr. E. Waters, the Chairman of the Committee, read the Report, which specified in detail the labours of the Committee in settling the clauses of the Bill of the Association; the arrangement with the Right Hon. Mr. Headlam, M.P., and Mr. Dalrymple, M.P., to introduce the Bill into the House of Commons; and the notice given by Mr. Headlam of his intention to bring it in. The Bill of the Association was based on that of the Government of last year, but modifying the powers to be granted by it to the Privy Council, and appointing direct representatives of the profession on the General Medical Council to the extent of one-fourth of its numbers. This Bill embodied the demands of the Association; but two other Bills, widely differing from each other, were also subsequently given notice of by members acting in the interests of the *Lancet* and the Irish College of Surgeons. Mr. Headlam thereupon urged the Committee not to press their Bill, as by so doing the profession would present a divided appearance before the House, and damage the cause of medical reform. The Committee felt bound to adopt Mr. Headlam's advice, on account of his weight and long and extensive experience. They refrained from pressing the Bill of the Association. The other Bills, though unopposed by the Association or its Committee, no sooner reached the stage of the second reading than they were withdrawn; and the session was thus lost to medical reform. The principles contended for by the Association have, however, acquired increased force. For the fifth time they have again been placed before a general meeting of the Association, and have been unanimously approved. The Reform Committee has been reappointed; and it may with reason be fairly hoped that success will yet crown the efforts of the Association.

OUR SISTER SOCIETY.

THE members of the British Association have held a special meeting, of which a brief note will be interesting and suggestive to our members. The Association is weak, notwithstanding its great popularity, the two or three thousand pounds collected as "gate-money" at its annual meetings, the munificent local subscriptions by which its expenses are annually defrayed, and the liberal grants of Government and the generous donations of individuals. The "want of union" is felt, and a very general craving for that support which a powerful organisation lends to the efforts of individuals. The Association, it was pointed out, takes one huge meal a year, and lies in a semi-dormant state during the rest of the period; and the question before the meeting was,

whether its habits could not be altered for the better. Its energy is magnificent, but at the same time discontinuous and spasmodic; and, though the inhabitants of cities such as Dundee or Bradford may for once in a generation receive a visit from the Association, for twenty or twenty-five years they are left to grow up—and they do grow up—in ignorance of the very existence of this great peripatetic body. Could the Association retain a more permanent hold upon these large towns, it would surely be of advantage to both parties. The town, on the one hand, would greatly benefit by being kept in connexion with the central body; whilst the Association, on the other, would gain in influence, not to mention meaner considerations of a metallic nature. Existing local scientific societies might be organised as autonomous with associated branches, their proceedings published throughout the year, and political influence would be acquired. In other words, the leading spirits of the British Association are proposing to assimilate its constitution to that of the British Medical Association—no small compliment to the wisdom of the founders of this Society, who placed early in the hands of the medical profession the means of becoming, unaided by subsidies, and by small annual subscriptions, possessed of a powerful social and political organisation, a continuous record of their scientific proceedings, a complete local system of connected societies communicating by a weekly sheet, and operating through a common centre. This organisation the great sister Association, rich in all that constitutes material and intellectual wealth and prosperity, is now endeavouring to emulate.

THE UTILISATION OF SEWAGE.

MR. HOPE's paper on this subject, at the Public Health Section of our annual meeting, excited considerable interest, and we shall take an early opportunity of presenting it either in summary or at length to our members. The members of our profession are largely consulted on this subject by public authorities, and are deeply interested in obtaining accurate information on this vital subject of modern economics—how best to live on the earth in masses without defiling or impoverishing the soil and water. At the meeting of the British Association at Edinburgh which has just closed, this subject was much debated, and a valuable preliminary report was brought up from the Committee on the Utilisation of Sewage, to whose proceedings we have already referred, and towards whose expenses of investigation various corporations have subscribed £1600. The experiments are still in progress. Mr. Hope gave in a detailed report on the experiments made at Breton's farm. He stated that in the three hundred and seventy-three days, from June 12th, 1870, to July 15th, 1871, the amount of town-sewage received was 85,999,445 gallons, giving a daily average of 230,562 gallons. The effluent water discharged on to the farm in the same period amounted to 39,449,178 gallons, giving a daily average of 115,012 gallons. The diluted sewage pumped on to the farm was 96,944,653 gallons, giving a daily average of 264,876. The temperature of the sewage and effluent water was found to be very uniform as compared with that of the air, being lower during extreme heat and higher during extreme cold. This was very noticeable during the severe frost of last winter.

Reports were read of the Earlswood sewage farm, and the irrigated lands of Tunbridge Wells, both of which seem to be conducted on defective principles and to yield results satisfactory, but less so than might be attained by providing for a more efficient sort of filtration. An interesting report furnishes us with information as to Forbes and Price's process, which it may be well to note. This process, it was stated, was in operation at Tottenham. The sewage, after passing through some depositing tanks which had been constructed for the lime process, was pumped up at the rate of 800 or 1000 gallons per minute along a carrier into a tank a hundred yards long, and of gradually increasing breadth. This tank took three hours to fill. As the sewage passed along the carrier the chemicals were mixed with it thus: Two boxes were placed over the carrier—one a few yards further along it than the other; the first contained the phosphate mixture, and the second milk of lime;

men were continually stirring the contents of each box, which were allowed to run continuously into the sewage as it passed beneath the boxes. The amount of the preparation added was not ascertained, but it was stated to be certainly much less than the proportion indicated by previous experiments (one ton to 500,000 gallons of sewage). The result of this preparation was to deodorise the sewage to a very considerable extent indeed; and when some of it was placed in a precipitating glass and allowed to stand, a speedy separation of the suspended matters took place. The milk of lime was added to precipitate the excess of phosphate added, and just sufficient milk of lime was allowed to flow in to neutralise the sewage—the reaction of which to test paper was obtained from time to time after the addition of the milk of lime. During the passage of the sewage thus treated through the large tank, the suspended matters were very completely deposited, and the supernatant body ran over the sloping edge of the tank at its extreme end, bright and clear, and almost odourless. Some of this water was collected, and was kept sealed up in a stone-jar until July 24th, when it was analysed by Dr. Russell. It was found after the interval of four months quite sweet, and without smell. The suspended matter was in very small quantity, and consisted merely of a little whitish-flocculent matter—doubtless lime, due to the slight excess used on the day when the sample was collected. The water was quite clear, and only on looking through a considerable depth could a brownish tint be detected. The analysis of it showed that it contained as much actual ammonia as ordinary dilute London sewage, and also a certain amount of albumenoid ammonia. It contained the merest trace of phosphoric acid, as indicated by the molybdate of ammonia test, and no sulphuretted hydrogen, nor any nitrates or nitrites. Some of the deposit had been taken out of the tank, and was drying in a shed, the water which separated from it forming little pools on the surface of the moss. Both this water and the precipitate itself were free from all offensive smell. It appeared, then, that the suspended matters were entirely removed by this process, but the actual ammonia, and, to a certain extent, the soluble organic matters, were entirely removed from the sewage when oxidised; but an odourless precipitate was produced which contained all the phosphate added, and contained it, doubtless, in the form of flocculent phosphate of alumina, the value of which as a manure was somewhat doubtful, being certainly not as great as the value of corresponding quantities of flocculent phosphate of lime. The valuable constituents of sewage, with the exception of the suspended matter and the phosphate acid, were not precipitated by this process, and could not be utilised unless the effluent were afterwards used for irrigation, in which case the milk of lime would not be added, and the clarified sewage would still contain a quantity of phosphoric acid. The advantages of its use, if it were found to answer, from an economical point of view, would be the deodorisation of the deposit in the tank and of the sewage itself, which was certainly at present a great desideratum, especially as regarded the tank.

A very strong opinion was expressed that more ought to be heard about Leighton's process, and that the Association ought to report upon it. This is a very interesting process, which is in use at Newcastle-under-Lyne, and may be distinguished from the plans of irrigation and precipitation as that of filtration. The principal article there used as a filtering medium is charcoal, which every chemist knows to be the best deodoriser which can be applied. Mr. Leighton pointed out that the question of the treatment of sewage requires, for its satisfactory solution, two results—first, that the effluent water shall be pure; and second, that this shall be done economically. Now, as to the first point, the effluent water, according to Weare's process, is far purer than that of the best that has been named as resulting from irrigation; and as regards the second, the process can be carried out at a large profit. It is obvious that irrigation, in its most perfect form, can be applied only where the neighbouring land is exceptionally suitable. For general application, it is entirely unsuitable. Even under the best circumstances, it gives a surplus of manure to a small area of land, and leaves the rest of the country starved of necessary fructifying elements. By Weare's process, on the contrary, the whole of the valuable properties of the

sewage is arrested and manufactured into a form capable of distribution over the whole country in a perfectly innocuous form. By it, in fact, the circle is completed; the elements withdrawn from the country in the form of food are again returned to it in the form of manure—and the value of the manure has been determined by practical experience. The farmers who used it the previous year were so satisfied with its results that the applications for it were this year far greater than could be met. The company could have sold six times the quantity their works were able to produce. And when it is mentioned that the cost of the materials used, and of their manipulation, does not exceed £2 per ton, while the manure sells readily for £4 per ton, the economy of the process becomes manifest. Moreover, it is capable of universal application. It is a mere question of the multiplication of works. The results are in all respects superior to any which have been exhibited in the reports we have just heard; and as the object of the appointment of a Committee of the British Association was to obtain information on the best methods of the utilisation of sewage, he hoped that next year the omission he had now pointed out would be supplied.

It is satisfactory to know that Dr. Cobbold has microscopically scrutinised an ox fed from the sewage-grown plants of Buta's farm, and found the beast free from parasites of every kind,

THE Cape mail, which arrived this week, brings news that the Assembly there have repealed the Contagious Diseases Acts.

THE Westminster Hospital received on Thursday last a second donation of £1000 from a kind and unknown benefactor, under the initials Z. D. W.

THE *Times* Constantinople correspondent telegraphs that cholera and fever are reported to continue raging in Persia; but the Persian authorities unfortunately take no precautions, and are said to be astonished that Turkey is adopting preventive measures.

THE *Times of India* says that cholera has broken out at Lingah, in the Persian Gulf; and the mail steamers have not been calling there of late in consequence. Cholera also exists at Bahrein, on the Arab littoral, and in the Turkish camp at Khatif. Dr. Hart, of H.M.S. *Euphrates*, serving in H.M.S. *Magpie*, in the Persian Gulf, has died of cholera at Bahrein.

THE COLLEGE OF PHYSICIANS' LECTURES.

THE next Harveian oration will be delivered by Dr. Arthur Farre, the Lumleian Lectures by Dr. Quain, the Croonian by Dr. Wilks, and the Gulstonian by Dr. Hensley.

MEDICAL QUALIFICATIONS.

THE following analysis of the medical licences possessed by the 133 candidates examined at the last meeting of the Court of Examiners of the Royal College of Surgeons of England may be interesting to our readers. M.D. Edinb., 1; M.D. Toronto and Queen's University, Canada, 3; M.B. Edinb., 3; M.B. Aberd., 2; M.B. Dub., 2; M.B. Toronto, 2; L.R.C.P. Lond., 2; L.R.C.P. Edinb., 6; L.R.C.P. Edinb. and L.S.A. Lond., 3; L.S.A. Lond., 27; L.F.P. & S. Glasg. and L.S.A. Lond., 1; and L.K. & Q.C.P. Ireland, 1.

SMALL-POX IN BRECON.

WE learn from the *Brecon County Times* that there has been an epidemic of small-pox in that place. It appears, according to the statement of the physician to the Brecknock Infirmary, that there have been forty-two cases, five of which were fatal, giving a death-rate, he says, of nearly 12 per cent. Thirty-nine out of the total number of cases were in one parish—St. John—and nine of this number of cases had never been vaccinated. The writer in question adds: "It is indeed sad to think that as many as 23 per cent. of these cases were totally unprotected by vaccination." This is a case, surely, in which a little official stirring up might be beneficial.

REPORTED ASIATIC CHOLERA AT WEST HARTLEPOOL.

ON Tuesday morning, an alarming, but happily to some extent unfounded rumour, gained publicity in West Hartlepool. On the previous morning, an ironworker in that town was seized with alarming symptoms of illness. Dr. Sutherland, who saw the case, at once pronounced it to be a case of aggravated choleraic diarrhoea. The case proved fatal.

MEMORIAL OF THE LATE DR. TANNER.

A MOVEMENT is on foot to perpetuate the memory of the late Dr. Tanner. It is proposed, if a sufficient amount be raised, to devote the interest of the principal to establish an annual "Tanner Scholarship", to be competed for by students, and awarded for proficiency in diseases of women. Some particulars are given in the circular which has been issued, and which is published elsewhere.

SEABOARD PREPARATIONS FOR CHOLERA.

THROUGH the early and energetic steps taken by the Privy Council, and the tour of Mr. J. Netten Radcliffe, the north-eastern ports and towns of England are more or less prepared to meet cholera should it appear, and now Mr. Radcliffe is about to proceed to the south-eastern ports on a similar mission. The port of London and the mouth of the Thames have been committed to the especial charge of Dr. Buchanan.

HEALTH OF THE CAMP AT SHOEBOURNNESS.

THE health of the camp, notwithstanding the great heat, has been throughout good. Mr. J. Wickham Barnes, the Senior Surgeon in charge of the medical arrangements, informs us that one hundred and twenty persons received medical relief, the majority of cases being consequent on exposure to the sun, ophthalmia, diarrhoea, and colic, more especially at the commencement of the meeting, and one case of small-pox, which was immediately removed to an isolated ward in the Royal Artillery Hospital. To obviate as much as possible illness from exposure to the sun at future meetings of the Association, the medical staff were unanimous in recommending that all volunteers attending the camp should be provided with proper head-gear and loose holland blouses. The medical officers appear to have received much courtesy and kindness from Colonel Chermiside, the Camp Commandant, and from Dr. Harrison, R.A.

THE INTRODUCTORY ADDRESSES AT THE LONDON SCHOOLS OF MEDICINE.

THE Winter Session at the metropolitan medical schools will be opened on October 2nd, when the introductory addresses will be delivered by the following gentlemen. At Charing Cross Hospital, by Dr. T. H. Green; Guy's Hospital, by Dr. Oldham; King's College, by Dr. Rutherford; London Hospital, by Dr. W. J. Little; the Middlesex Hospital, by Dr. John Murray; St. George's Hospital, by Dr. John Clarke; St. Mary's Hospital, by Dr. Alfred Meadows; St. Thomas's Hospital, by Mr. Le Gros Clark; Westminster Hospital, by Dr. Basham. No introductory address will be given at St. Bartholomew's Hospital. The Lecturer at University College has not yet been appointed.

DIARRHOEA IN LONDON.

THE fatal cases of diarrhoea, which in the three previous weeks had been 110, 201, and 225, further rose last week to 299, exceeding by 50 the average number of fatal cases returned in the corresponding week of the ten years 1861-70, after correction for increase of population; this increase, however, was scarcely so large as might have been expected from the excessive temperature which prevailed. These 299 deaths from diarrhoea last week included 234 of infants under one year of age, 34 aged one year, and but 31 of children and adults aged above one year. To cholera and choleraic diarrhoea 15 deaths were referred last week, against 17 and 18 in the two preceding weeks; 13 were of infants not exceeding one year, and two were adult females, both certified as "choleraic diarrhoea."

GUY'S HOSPITAL.

IN consequence of the closing of St. Thomas's Hospital at the Surrey Gardens, and the delay in the opening of the new hospital at Stangate, nearly all the accident cases occurring on the south side of the river have been brought here during the last month, as well as the more urgent medical cases.

SMALL-POX IN THE METROPOLIS.

THE deaths from small-pox in London, which in the six previous weeks had declined from 235 to 87, slightly increased again last week to 96; of these, 41 occurred in five temporary hospitals for this disease, including 16, 13, and 10 respectively in the institutions at Hampstead, Homerton, and Stockwell.

FEMALE STUDENTS IN PRUSSIA.

THE Königsberg academical authorities, having addressed a question to the Minister of Public Education (Herr von Mühler) concerning this matter, have received a reply from this dignitary which frustrates the hopes of the fair aspirants. The statutes of the University, he says, contain no provision for the case of a female student. Indeed, a like thing had not been thought of at the time of their being framed. It would therefore be necessary, he further argues, to alter the statutes, for which His Excellency, as at present advised, cannot see any cause. Then follows a categorical interdict against the admission of female persons to University lectures.

AUSTRALIAN MEAT.

THE *Food Journal*, in commenting on Australian meats, says that the great mistake which is liable to be committed is this, to expect that preserved meat, even when presented with the appearance of freshness, can ever compete with the fresh meat of this country; but, in truth, there is no necessity that it should. The working classes of this country do not live wholly on fresh meat. They freely consume salt beef and pork, bacon, ham, dried and salt fish; and there is an opening for preserved meat at a moderate price, as an addition to the food-supplies of the country. If the quantity of bacon imported could be doubled, it would be a great boon; but it will be a still greater boon to obtain increased supplies of colonial meat, which may approach more nearly in character to fresh meat.

THE LADIES AND THE UNIVERSITIES.

PROFESSOR MACDONALD, M.D., St. Andrew's, writes as follows on this subject.

"The shabby manner, to use no harsher term, in which the Senatus of the Edinburgh University has treated the ladies who were induced to matriculate as medical students two years ago, with the purpose of obtaining the degree in medicine to enable them to enter the practice of the medical profession, will be generally disapproved of, preceded as it was by the hasty, vindictive action of damages against Miss Jex Blake. Though a change of opinion may have induced a majority in the Senatus to alter the regulation regarding matriculated lady medical students, yet in common fairness to those ladies who had for two years practically engaged in the less attractive department of practical anatomy, should have been allowed to complete their curriculum of study. The threat to deprive those qualified medical lecturers of the Royal Colleges who were willing to lecture to the ladies is another instance of unfairness to all parties—at the same time it is not so harsh as it appears to be, as it only debars their lecturing to matriculated ladies. They may still instruct those who desire to receive a medical education beyond the walls of the Edinburgh University. All I have argued for is, that ladies should have the benefit of the very varied, extensive, and practically useful medical education. It is by no means necessary that all who are so educated should enter the practice of the profession—as is frequently the case with gentlemen. At the same time, some few may possess sufficient firmness of character and strength of matured constitution to fit them to endure the constant fatigue of practice, especially in the obstetric department and the treatment of the diseases of women and children. If we refer to the conditions of the curriculum of medical study, it is expressly stated to be completed in four years, and that a medical annus consists in attending either two six months' courses of lectures, or one of six months and two of three months during

the same year. It further provides that at least two of the four medical years shall be at a University embracing four six months' courses of lectures, and that all the other lectures may be attended beyond the precincts of the University. Therefore, if Miss Jex Blake or her fellow medical students have completed one or two medical years at the Edinburgh University, they may complete their whole medical curriculum where they choose, without further let or hindrance. As the medical faculty of the St. Andrew's University are favourable to the medical education of ladies, the second University medical year could be passed there, after completing the other subjects with the Royal College lecturers. Although there is not at present any general hospital, as it has been proposed to get a Ladies' Medical Hospital, I think it not unlikely that such an institution might be favourably supported in St. Andrew's. This would at once be followed by some additional medical lecturers, so that a more extended course of instruction, both in medical and general knowledge, might easily be secured in a nice healthy locality with good society. Referring to the vindictive persecution of Miss Jex Blake, I think for her clever and spirited conduct at the Infirmary meeting, and the active zeal with which she has carried on the whole movement, I think she is well entitled to have a public testimonial presented to her, for which I have subscribed five pounds, in hopes that a large number may be led to subscribe."

THE USE OF SECONDARY LYMPH.

OUR Manchester correspondent writes that the extent to which revaccination has been practised in Manchester during the last few months, has afforded rare opportunities for deciding some questions which were before held by some to be still *sub judice*: for example, the custom which has prevailed among the millowners of having all their work-people vaccinated, has settled the question of the value of secondary lymph, as compared with virgin lymph. Out of many similar experiences, the following may be quoted by way of illustration. A fortnight ago, a surgeon vaccinated 300 operatives; in 150 of these cases he employed virgin lymph; in the remaining 150, secondary lymph was used. The first series gave the following results: 19 cases were unsuccessful; in 16 cases, small papules and spurious vesicles resulted, while the remaining 115 all showed well marked primary vesicles. The second series gave very different results; for out of them, 50 were entirely unsuccessful, 86 terminated in papules and small spurious vesicles, only 14 yielding true primary vesicles.

THE RED CROSS AND FOREIGN DECORATIONS.

A MOTION asking permission for British subjects to wear foreign decorations offered for services rendered with Her Majesty's permission to the sick and wounded in the late war was negatived in the House of Commons on Friday of last week. It was pointed out that their acceptance could be restricted only to services performed in presence of the enemy, or while serving in a foreign country with the permission of the Crown. The object of the regulations of the Foreign Office was stated by Lord Enfield to be to prevent political intrigue, and to disturb them would lead to an immense amount of influence being brought to bear on the Foreign Secretary. On a later evening, however, Mr. Gladstone expressed a desire to relax the rules now in force, if the Secretary of State for Foreign Affairs, after inquiry into the matter, considered that they could be modified for the public advantage.

MEDICAL EXPERTS IN COURTS OF LAW.

MR. LAWSON TAIT sends the following reply to the letter of Mr. Lane and Mr. Norton, which appeared in last week's JOURNAL.

"Messrs. Lane and Norton go into the merits of the legal bearings of the case of malpraxis to an extent that I do not care to imitate. I care as little for their opinions as they seem to do for mine, and have no wish to prolong the discussion further than to say that the statement italicised in their letter, and on which their case would depend, were it true, is not correct. In the case they speak of, *the nasal septum has not fallen in, neither is the nose completely flattened*. The lower third of the nose is drawn backwards and the nostrils widened by the absence or altered position of the nasal spines of the superior maxillæ, but the bridge of the nose is quite entire, the case thus differing most materially from one of syphilitic destruction of the septum, and where the bridge falls in and the lower third becomes prominent by contrast. I never by any word or words ever hinted that the evi-

dence of the two 'London hospital surgeons,' Messrs. Lane and Norton, was less honest and conscientious than my own. My evidence was simply a narration of the facts of the case. I resolutely declined to give any opinion of the matter. Messrs. Lane and Norton, on the other hand, dealt with opinions founded on no facts whatever. And here I may say, that I had no knowledge, until I read their letter, that it was intended that I should meet Messrs. Lane and Norton, or that they were engaged on the case; otherwise I might have saved them the trouble of giving evidence. With the legal bearings of the case I have, as I said before, nothing to do; but I insist that the opinions given that the plaintiff's condition was to be explained by syphilis were rash and not in the least degree supported by the facts of the case."

MR. RICHARD WALLACE OF PARIS.

IT is stated by one of our daily contemporaries that a baronetcy is to be conferred on Mr. Richard Wallace, in recognition of his noble services during the siege of Paris.

THE CHOLERA ALARM IN LONDON.

CONSIDERABLE and uncalled for alarm was created in London on Tuesday by the prominent appearance of a letter in the *Times*, signed "James Edmunds, M.D.," in which the writer authoritatively stated that he had been called to a typical case of Asiatic cholera in Charlotte Street, Portland Place, at a very early hour that morning. On investigation, however, by one of the medical officers of the Privy Council, it was found that there was no reason to believe the case to be one of Asiatic cholera. The patient had been taken ill while returning from a school-treat. If Dr. Edmunds, instead of posting down to the *Times* office at three o'clock in the morning, and rushing precipitately into print to the unnecessary alarm of the metropolis, had communicated his story to the proper sanitary authorities, he would have been directing his energies in a better way. Dr. Edmunds has forwarded to us for publication a full account of the history and symptoms of this now notorious case, which no doubt in many respects resembled Asiatic cholera; but this is not the point at issue. Cases of choleraic diarrhoea are seen every autumn by practitioners, which, during an epidemic of Asiatic cholera, would very probably be classed as cases of that disease; but there was no reason to believe that, in the present instance, the case was anything more than one of this character assuming a severe type. Therefore, Dr. Edmunds was, we think, not at all justified in alarming the public mind as he has done. Mr. Forster's suggestion in the House of Commons on Tuesday evening should be borne in mind, that medical men, if they entertain suspicions regarding cases of diarrhoea, should communicate with the sanitary authorities, whose duty it is to carry out disinfection.

CHARGES AGAINST THE MANAGEMENT OF THE ROYAL ORTHOPÆDIC HOSPITAL.

CHARGES of a very serious character were brought by several members of the medical staff against the Committee of Management of this Hospital at a coroner's inquest recently held, which were fully published in the daily papers, and have caused considerable public attention. It appears that a child, five years of age, had been admitted for operation, and had died in the hospital a short time ago from diphtheria, and that since the month of April twelve others, including one of the nurses, had contracted the same disease, which proved fatal in the case of the nurse and five of the children. In addition to these cases of diphtheria, several of the patients had previously to this outbreak died of scarlatina. It was now alleged that all these deaths had been accelerated by the sanitary condition of the hospital. Dr. Matthew Wilks Bourne, the house-surgeon to the hospital, said that upon entering on his duties four weeks ago he found the general and sanitary arrangements of the hospital as bad as they could possibly be, both in regard to the diet, the cooking, the cleanliness, and the knowledge and attention of the matron and nurses. There was no order or regularity. The patients were left unwashed for days together, and the atmosphere of the wards was damp and moist, owing to the washing and scrubbing taking place at all hours of the day, instead of early

in the morning; that the walls of the wards were always wet with moisture, owing to this cause, and that all sorts of slops were thrown down the baths in the wards by the nurses. He believed all these deaths to have arisen entirely from the wretched sanitary condition of the hospital and the defective and neglectful system of nursing. He had frequently got up in the night to attend to the children while crying, the nurses not paying any attention to them. On the 3rd of August, before the death of the deceased, he had sent in a written report to the Committee, describing the condition of the hospital. He attended before the Committee, and read that report himself. While before the Committee he also made a verbal communication as to the gross mismanagement he had witnessed in the wards. He then left the Committee-room, and in five minutes afterwards he received a written note from the Committee requesting him to send in his resignation, on the alleged ground that he could not agree with other officers of the hospital. He admitted that several sanitary improvements had been carried out in the institution, but that the state of the hospital was still very defective. Mr. Tamplin and Mr. William Adams corroborated in many points the evidence of Dr. Bourne, both of whom stated that they had made complaints to the Committee, which had not received the attention which they deserved. The jury, after some deliberation, returned the following verdict: "That the deceased died from diphtheria; but we recommend the Committee to adopt and act upon the suggestions of their medical officers, especially with respect to the appointment of a regularly trained nurse." The publication of so many alleged acts of mismanagement will form abundant material for discussion by the general body of governors, which meets shortly. We have personally inquired into a number of the statements made, and visited the hospital; and, although we do not at present feel justified in giving a decided opinion on the results of our inquiry, we are confident that, in many points at least, the allegations of the medical staff are correct. The hospital, as regards cleanliness, is amply capable of improvement. Its arrangements are bad in many ways, and the nursing department especially requires reform. At the same time, we could not fail to observe, and it is only fair to say so, that the Committee have endeavoured in many ways to remove objectionable hygienic arrangements. At a meeting of the Committee held on Thursday evening, it was decided to postpone the consideration of the house-surgeon's conduct and the charges against the Committee and hospital authorities. The house-surgeon's resignation was accordingly not pressed.

SCOTLAND.

CHOLERA ON BOARD A DUNDEE BOUND SHIP.

INFORMATION from Dantzic, dated August 7th, says: "The *Progress*, Innes, from Königsberg, for Dundee, has put into the bay, with one seaman dead and another sick with cholera."

INFIRMARY AND DISPENSARY FOR STIRLING.

IT has been decided to erect an Infirmary and Dispensary at Stirling to supply a want much felt in the town and neighbourhood and the western district of Perthshire. The sum already subscribed for the erection of the hospital amounts to £2350, and for the annual maintenance £150.

THE ABERDEEN ROYAL LUNATIC ASYLUM.

THE medical report of this old asylum, drawn up by Dr. Jamieson, the medical superintendent, has reached our hands. Medically speaking, the report gives ample evidence of the continued success of the institution. Financially, the matter contained in the report does not recommend itself to us. Dr. Jamieson finds it necessary, and we think with justice, to protest against the low rate charged for the treatment of pauper lunatics, which, if it covered expenses before, is now stated to be quite inadequate, since so many of the incurables who require little attention and entail little expense on the institution are now removed to the fatuous wards of the poorhouse. If this be really the

case—if it be true that an institution in which the charitable element largely predominates is allowed to suffer in order that the rates may be kept down—the public should certainly know it. Dr. Jamieson says that "unless its annual income for some years to come exceeds its expenditure by a sum not less than £2000, it must be considered to be in a bad financial position." This we regret to hear, but unless the managers afford the charitable public ample evidence that Dr. Jamieson is mistaken, and that pauper lunatics cease to be treated to the detriment of the institution, we presume there is little chance of so large a sum finding its way annually into the hands of the Treasurer.

THE GLASGOW WESTERN INFIRMARY.

THE foundation-stone of this institution was laid with masonic honours on the 10th instant, that date having been probably fixed in order to take advantage of the presence of many who had been celebrating the centenary of Scott the evening before. The procession was a somewhat imposing one, including the Provost and magistrates, the Professors of the University, the Fellows of the Faculty of Physicians and Surgeons, as well as the usual masonic array. The hospital is in process of erection on a slight elevation just behind the University buildings, and a portion of it has already reached the basement storey. It is proposed, when the hospital is complete, that it shall contain about three hundred and sixty beds, but in the meantime only a portion of it is being proceeded with, the requisite funds for the whole undertaking being still wanting. It is proposed to erect in the first place, then, a portion capable of accommodating about 150 beds, and as funds are obtained the rest will be proceeded with. It is a pity that both the University and this hospital should remain in an unfinished state, but, considering the large amount which has been already subscribed, it can cause no wonder if a few years should elapse before a great effort can be made to raise the requisite funds.

LEITH: PRECAUTIONS AGAINST CHOLERA.

PRECAUTIONS are being actively taken to prevent the spread of cholera should it appear in Leith. The Old Charity School, King Street, has been acquired, and will be fitted up as a hospital for patients suffering from any epidemic that may visit the town. The building at the end of the West Pier has likewise been obtained, where cholera patients who may arrive in ships from foreign ports will be attended to. Notice has been given, by order of Her Majesty's Privy Council, to all ship-owners, shipmasters, and pilots, that any ship arriving in the roadstead from any infected port, must be inspected by the medical officer before it enters the harbour, and before landing any person or thing therefrom.

IRELAND.

BEQUESTS TO HOSPITALS IN DUBLIN.

MR. MULLINS, of Fitzwilliam Square, has left the following handsome bequests to Dublin hospitals: £1,000 to the Hospital for Incurables, £500 each to St. Vincent's, Jervis Street, and the Mater Misericordiæ hospitals, and the residue of his fortune, amounting to over £10,000, to trustees, for the purpose of building a convalescent home.

THE IRISH AMBULANCE.

M. THIERS has appointed Mr. O'Scanlan, the Director of the Irish Ambulance during the war, to be a Chevalier of the Legion of Honour. The principal persons connected with that ambulance will also receive decorations.

PRECAUTION AGAINST CHOLERA IN IRELAND.

THE supplement to the *Dublin Gazette* contains two orders in council respecting sanitary precautions against cholera, specially referring to steamships.

THE CHOLERA.

PRECAUTIONS AGAINST CHOLERA.

THE following memorandum on precautions against the infection of cholera has just been issued by the Medical Department of the Privy Council, and we earnestly impress upon all local authorities, medical officers of health, medical practitioners, and the public generally, the necessity for their becoming acquainted with this very salutary memorandum of advice.

1. As Asiatic Cholera is now prevailing in foreign ports within a week's voyage of this country, and may probably extend to others which have still quicker communication with England, it is not unlikely that, within the next month or two, occasional cases of the disease may be brought into the ports of this country.

2. A recent Order of Council, dated July 29th, has given power to the respective local authorities to deal with any such cases, if they arrive, in a way to protect the population, as far as practicable, against surprise. But as cases of choleraic infection have innumerable degrees of severity, it is possible that some such cases, slightly affected, will, notwithstanding the vigilance of local authorities, be landed without particular notice in English sea-board towns, whence then they may advance to other, and perhaps inland, places.

3. Former experience of cholera in England justifies a belief that the presence of imported cases of the disease at various spots in the country will not be capable of causing much injury to the population, if the places receiving the infection have had the advantage of proper sanitary administration; and, in order that all local populations may make their self-defence as effective as they can, it will be well for them to have regard to the present state of knowledge concerning the mode in which epidemics of cholera (at least in this country) are produced.

4. Happily for mankind, cholera is so little contagious, in the sense in which small-pox and scarlatina are commonly called contagious, that, if reasonable care be taken where it is present, there is scarcely any risk that the disease will spread to persons who nurse and otherwise closely attend upon the sick. But cholera has a certain peculiar infectiveness of its own, which, *where local conditions assist*, can operate with terrible force, and at considerable distances from the sick. It is characteristic of cholera, not only of the disease in its developed and alarming form, but equally of the slightest diarrhoea which the epidemic influence can cause, that all matters which the patient discharges from his stomach and bowels are infective, and that, if they be left without disinfection after they are discharged, their infectiveness during some days gradually grows stronger and stronger. Probably, under ordinary circumstances, the patient has no power of infecting other persons except by means of these discharges; nor any power of infecting even by them, except in so far as particles of them are enabled to taint the food, water, or air, which people consume. Thus, when a case of cholera is imported into any place, the disease is not likely to spread, unless in proportion as it finds, locally open to it, certain facilities for spreading by *indirect infection*. In order rightly to appreciate what these facilities must be, the following considerations have to be borne in mind:—*first*, that any choleraic discharge cast without previous thorough disinfection into any cesspool or drain, or other depository or conduit of filth, infects the excremental matters with which it there mingles, and probably to some extent the effluvia which those matters evolve; *secondly*, that the infective power of choleraic discharges attaches to whatever bedding, clothing, towels, and like things, have been imbued with them, and renders these things, if not thoroughly disinfected, as capable of spreading the disease in places to which they are sent (for washing or other purposes), as, in like circumstances, the cholera patient himself would be; *thirdly*, that if, by leakage or soakage from cesspools or drains, or through reckless casting out of slops and wash-water, any taint (however small) of the infective material gets access to wells or other sources of drinking-water, it imparts to enormous volumes of water the power of propagating the disease. When due regard is had to these possibilities of indirect infection, there will be no difficulty in understanding that even a single case of cholera, perhaps of the slightest degree, and perhaps quite unsuspected in its neighbourhood, may, *if local circumstances co-operate*, exert a terribly infective power on considerable masses of population.

5. It might be supposed that under those provisions of the Sanitary Act, 1866, which relate to precautions against dangerous infections of disease, security could be taken, as regards the infective discharges of cholera, against various kinds of personal conduct which would be dangerous to the public health; above all, that, under those provisions or otherwise, the universal disinfection of such discharges could be enforced. Undoubtedly everything possible in this direction ought to be done, wherever a case of cholera is known to exist; too much importance cannot be attached to the precaution of thoroughly disinfecting, without delay, all discharges from the stomach and bowels of persons suffering under the disease, as well as all bedding, clothing, towels and the like, which such discharges may have imbued; and of course neither choleraic discharges, nor any slops which may contain traces of them, should ever (even when supposed to be disinfected) be cast into any position from which they may get access into drinking-water. The duty of observing those precautions is one which ought never to be neglected; but populations cannot prudently stake their lives on the chance that it will be completely fulfilled for them. Apart from all questions of negligence, the degrees of cholera are too many, and the slight and incipient cases far too apt to escape observation, for any such defence against its infection to be more than partial. And the main object for endeavour must be to secure such local circumstances that cholera-contagium, though not disinfected, shall be unable to act extensively on the population.

6. The dangers which have to be guarded against as favouring the spread of cholera-contagium are particularly two. First, and above all, there is the danger of water-supplies which are in any (even the slightest) degree tainted by house-refuse or other like kinds of filth; as where there is outflow, leakage, or filtration, from sewers, house-drains, privies, cesspools, foul ditches or the like, into streams, springs, wells or reservoirs, from which the supply of water is drawn, or into the soil in which the wells are situate: a danger which may exist on a small scale (but, perhaps, often repeated in the same district) at the pump or dip-well of a private house; or on a large and even vast scale, in the source of supply of public water-works. And, secondly, there is the danger of breathing air which is foul with effluvia from the same sorts of impurity. Information as to the high degree in which these two dangers affect the public health in ordinary times, and as to the special importance which attaches to them at times when any diarrhoeal infection is likely to be introduced, has now for so many years been before the public, that the improved systems of refuse-removal and water-supply by which the dangers are permanently obviated

for large populations, and also the minor structural improvements by which separate households are secured against the dangers, ought long ago to have come into universal use. So far, however, as this wiser course has not been adopted, temporary security must, as far as practicable, be sought in measures of a palliative kind. (a.) Immediate and searching examination of sources of water-supply should be made in all cases where the source is in any degree open to the suspicion of impurity; and the water both from private and public sources should be examined. Where pollution is discovered, everything practicable should be done to prevent the pollution from continuing, or, if this object cannot be attained, to prevent the water from being drunk. (b.) Simultaneously, there should be immediate thorough removal of every sort of house-refuse and other filth which has accumulated in neglected places; future accumulations of the same sort should be prevented; attention should be given to all defects of house-drains and sinks through which offensive smells are let into houses; thorough washing and lime-washing of uncleanly premises, especially of such as are densely occupied, should be practised again and again. (c.) Disinfection should be very freely and very frequently employed in and round about houses, wherever there are receptacles or conduits of filth, wherever there is filth-sodden porous earth, wherever anything else, in or under or about the house, tends to make the atmosphere foul. In the absence of permanent safeguards, no approach to security can be got without incessant cleansings and disinfections, or without extreme and constant vigilance against every possible contamination of drinking-water. [For detailed advice on disinfection, see the office Memorandum on that subject.]

7. In view of any possibility that the infection of cholera may again be present in this country, it is desirable that in each locality the public should ascertain to whom it practically has to look, in case of need, for its collective safety against such dangers as the above. The responsibility is, in a large proportion of cases, mixed. The most critical of all its branches, the responsibility of providing for the unpollutedness of water-supplies, is, in many very important places, in the hands of commercial companies; and it is to be hoped that these companies, informed as they must be of the calamitous influence which some of their number have exerted in previous epidemics of cholera, will remember, if the disease should again be present here, that each of them, in its daily distribution of water, has hundreds, or even thousands, of human lives in its hands. But, except to that extent, the responsibility for local defences against cholera, both as regards water-supply and as regards local cleanliness and refuse-removal, is vested in the Local Authorities—the “Sewer-Authorities” and “Nuisance-Authorities” of recent statutes. These Authorities—the Town Councils, Improvement Commissioners, Local District Boards, Boards of Guardians, and select and common Vestries, of their respective areas of jurisdiction—are all, either electively or directly, so constituted as to represent the will of the local rate-paying population; and each such population has had almost absolute means of deciding for itself whether the district which it inhabits shall be wholesomely or unwholesomely kept. It is greatly to be wished that the former of these alternatives had, from long ago, been the desire of every local constituency in the country. It may fairly be believed that, in considerable parts of the country, conditions favourable to the spread of cholera are far less abundant than at former times of visitation; but it is certain that in very many places the conditions of security are wholly or almost wholly absent; and it is to be hoped that, in all this large class of cases, the authorities, under present circumstances, will do everything which, in the remaining time, can be done to justify the trust reposed in them by the Legislation for the protection of the public health.

8. It is important for the public very distinctly to remember that pains taken and costs incurred for the purposes to which this Memorandum refers, cannot in any event be regarded as wasted trouble and expense. The local conditions which would enable cholera, if imported, to spread its infection in this country, are conditions which day by day, in the absence of cholera, create and spread other diseases—diseases which, as being never absent from the country, are, in the long run, far more destructive than cholera; and the sanitary improvements which would justify a sense of security against any apprehended importation of cholera would, to their extent, though cholera should never reappear in England, give amply remunerative results in the prevention of those other diseases.

By direction of the Lords of the Council, (Signed) JOHN SIMON.
Medical Department of the Privy Council Office, April 10th, 1871.

THE CHOLERA IN GERMANY.

REPORTS from Königsberg dated August 15th, state that on Saturday last 40 persons were attacked by cholera, 19 deaths occurring from the epidemic on the same day. On Sunday, 38 were seized, and 16 died. The police authorities have ordered that no vessel shall be allowed to leave the port of Königsberg without having its crew medically examined. At Neufahrwasser, some cases of cholera had occurred on board ship. Dantzic is still untouched. The authorities have taken the most stringent measures to prevent its being imported. The news that cholera had broken out at Elbing is unfounded.

Later reports from Königsberg (August 16th) state that the number of persons attacked with cholera the day before yesterday was 62, and the deaths from that disease 22.

THE CHOLERA.—The Corporation of Rochester have made the necessary arrangements for a supervision over ships arriving in the port in case any persons suffering from cholera should be brought in them. They have also prepared for a strict sanitary supervision of the city. The Chatham Board of Health have done the same for the town of Chatham.

BREACH OF QUARANTINE.—At Hull, on Wednesday, the master of a vessel trading to Cronstadt was summoned for a breach of the Privy Council quarantine orders. The defendant had taken his ship into dock, in the midst of the town, before the crew had been medically examined, although he had been warned. His excuse was that he could not afford to lose a tide. Mr. Travis imposed the maximum penalty, £20, and expressed the opinion that it was not sufficient to meet the case.

THE BRITISH ASSOCIATION.

SECTION D—BIOLOGY. DEPARTMENT OF ANATOMY AND PHYSIOLOGY.

Monday, August 7th.

This section met in the Anatomy Class Room, Dr. Allen Thomson presiding.

Report on the Heat of the Blood during Arterialisation.—Dr. ARTHUR GAMGEE, F.R.S.E., read a report on this subject, in which he drew attention to the researches of previous observers, stating that these had been carried on with imperfect methods. He first quoted the results of his experiments on the specific heat of blood, which showed that this was almost exactly the same as that of water—experiments which were necessary in order to proceed to a determination of the heat of arterialisation. He then described the elaborate apparatus which he had devised, and proceeded to state the results at which he had arrived. From his experiments on the heat of arterialisation of perfectly reduced blood, he has arrived at the conclusion that the mean rise in temperature during the absorption and combination of oxygen with the blood-colouring matter of perfectly reduced blood, amount to 0.097 of a degree centigrade. The maximum heating found was 0°.111 c., and the minimum, 0°.083 c. The author then made observations on the total amount of heat units representing approximately the heat due to the arterialisation of the whole blood passing through the lungs in a day. The amount of blood passing through the lungs in one day amounts to more than ten tons, and it was estimated that the heat resulting from the arterialisation of the whole blood amounted to 527 heat units (the heat unit taken being the kilogramme of water heated 1° c), an amount more than sufficient to heat the whole quantity of air inspired, and to saturate it with moisture at the temperature of the body.

Dr. RUTHERFORD said that the subject had puzzled many investigators, but the report Dr. Gamgee had given of the heat of the blood was highly satisfactory. He hoped Dr. Gamgee would continue to work at the subject, in order to obtain the heat of the venous blood which went to the lungs, and had no doubt that his results in regard to that would also be satisfactory.

Some remarks were afterwards made by Dr. Ray Lankester, Professors Rutherford and Williams, and the President.

Experiments on Inoculation in the Lower Animals.—Dr. JOHN CHIENE then read a paper on "An Experimental Inquiry into some of the Results of Inoculation in the Lower Animals." The paper described a series of experiments, in which rabbits were inoculated with cancerous matter obtained from the human subject. The result may be shortly stated in the following words:—(1) That cancer cannot be produced in rabbits; (2) that cysts, containing cheesy matter, arise at the points of inoculation; (3) that these cysts do not differ from the local appearances which arise after the application of any irritant to the subcutaneous tissue of the rabbit.

Professor WILLIAMS said he had had some experience in inoculation both with rabbits and birds. The birds he had experimented upon numbered fifty or sixty, but they all died, the cause of their deaths being the inoculation; but he did not find it so with rabbits. He thought that in birds inoculation produced infection.

Several other members took part in a discussion which followed.

Dietaries in the Workhouses of England and Wales.—Dr. EDWARD SMITH, F.R.S., Medical Officer of the Poor-law Board, read a paper on "The Dietary in the English and Welsh Workhouses." He referred to the fact that schemes of dietary are agreed upon by the combined action of the local authorities, the guardians of the poor, and the central authority; and showed that, as the dietary should correspond with that of the labouring classes, it must vary in different localities, and be based upon knowledge. The dietary is thus prepared by the guardians, and examined and sanctioned by the Poor-law Board. He explained the steps which have recently been taken by the latter to give advice to the former and to establish greatly improved dietaries. This was initiated by the Hon. C. P. Villiers, who first made the appointment of medical officer to the Board, and carried into effect by the Earl of Devon and his successors as Presidents of the Poor-law Board. It is now laid down by that authority that the foods to be selected shall be those in ordinary use in the several localities, and that the kind and quality of food shall be adapted to the wants of the several classes of inmates. The chief differences of food are found in the quantity of meat supplied and the mode in which it is served, and the use of oatmeal, cheese, milk, and puddings. In many of these points the dietaries in Dorset and Westmorland were contrasted. Then he showed, from inquiries made by

him for the Government some years ago, that the quantities of food obtained by the working classes per adult weekly were, in Dorset—bread-stuffs, 13 lb.; sugar, 3½ oz.; fats, 4½ oz.; meat, 7½ oz.; milk, 12 oz.; and cheese, 12½ oz.; while in Westmorland the quantities were—bread-stuffs, 12½ lb.; sugar, 10½ oz.; fats, 6½ oz.; meat, 21½ oz.; milk, 120 oz.; and cheese, 2 oz. He then showed what is the typical diet of children at various ages, and to able-bodied and aged adults, and the quantity of the several foods in workhouses. Children under two years of age get milk, bread, and rice pudding; from two to five years, pudding on three days, meat and potatoes on three days, and soup or other food on one day. From five to nine years there is one other day of meat and potatoes, and commonly one of soup. From nine to sixteen that of adults. For able-bodied, bread and gruel at breakfast and supper, varied by broth or cheese in the several localities; at dinner, meat in some form on four days, and pudding or cheese on three days. For aged, tea and bread and butter at breakfast and supper; at dinner, meat in some form five days, with pudding or cheese or other food on two days. The standard of measurement of the sufficiency of this food is that which he gave to the Government when advising on the Lancashire cotton famine—viz., 4,300 grains of carbon and 200 grains of nitrogen daily; and the model dietary which he had framed for the Midland Counties supplied more than this to the adults. He then pointed out, whilst the above-mentioned quantity of food supported the health and strength of the inmates, except perhaps as regarded children, there are still many workhouses where the dietary is very unsatisfactory. In some, gruel and bread are given at breakfast and supper to nearly all the inmates, or where meat in a separate form is not given, or where a very small quantity, as two ounces or three ounces of raw meat two or three times a week, or where bread and cheese alone are given to some classes in eighteen out of twenty-one meals weekly, or where soup containing no meat is given thrice a week, or where meat when given is given only when cold; whilst, on the other hand, there are workhouses in the manufacturing districts where meat and bread are given in great excess. He was of opinion that the time may arrive when the Government will prepare several schemes of dietary for different parts of the country; but in the meantime, improvements are now in rapid progress. He exhibited tables showing the quantities of food taken by the working classes, and the dietary which he had recommended for use in workhouses in the Midland Counties; and he also read the details of the dietary which Professor Christison had desired for the Edinburgh charity workhouse in 1854, supplying oatmeal and butter milk at breakfast and supper, and meat soup with bread at dinner.

Tuesday, August 8th.

Professor FLOWER, F.R.S., read a paper on "The Composition of the Carpus in the Dog." Professors TURNER and STRUTHERS on "The Anatomy of Certain Whales." The Professor, in concluding, alluded to the great difficulties, and even risk to health, attending the dissection of these enormous animals. It was difficult to say whether it was worse on the sea-shore in a wet day, or in the confined and putrid atmosphere of the College-room. No one who had not tried it could realise the difficulties.

Muscular Anomalies on the Darwinian Theory of the Origin of Man.—Professor MACALISTER communicated a paper on this subject. He set out by stating that three arguments from anatomy are usually brought forward in support of the evolution theory of the origin of man. The first of these is derived from embryology, the second from rudimentary structures, and the third from anomalies. The object of this paper is to endeavour to determine the precise value of the last of these arguments. This may be stated thus:—It is the experience of anatomists that structures are variable, and that in scarcely two subjects are the parts similar to each other, and often very great varieties are noticed. As these varieties simulate the normal arrangements in lower animals, it is inferred by some that they are evidences of a genetic affinity. The first point to determine is—Do the anomalies of parts in man resemble the normal structures of lower animals? The evidences in determination of this point were drawn by the author from the muscular system, and he classified muscular anomalies according to their relation to lower animals. The first class consists of those separate muscles which are normal in lower animals, and only rarely present in man—such are the muscles known as occipito-scapular, peroneus quinti, levator, clavicular, etc. The second class consists of those separate muscles which exist as anomalies in man, but do not exist as normal in lower animals, such as the sixteen abnormal laryngeal muscles described by different authors. The third class consists of such muscles as are distinctive of man, and which are sometimes anomalously absent in him, and, still more rarely, some of the peculiarly human muscles are rarely present as anomalies in lower animals. The fourth class consists of muscles common to man and other animals, but which normally are differently arranged in both.

In man such muscles are often found arranged according to lower animal types, and this class contains by far the largest number of anomalies. How to account for these anomalies has long been a point of dispute. There are two hypotheses which seem competent to account for them. One large series like the second class is accounted for on functional grounds; but this hypothesis is incompetent to explain the occurrence of all, as some anomalies are sources of weakness, and absolutely destroy function. That function is a factor, however, seems plain from three considerations:—1, muscles which have a great variety of function have a wide range of variation; 2, muscles which have no function, like those of the whale's paddle, are very variable; 3, those muscles which have single definite functions vary very little. The second hypothesis is that of reversion, that such anomalies are produced by the tendency to revert to some earlier structural condition of some former stage of parental condition.

In the course of a discussion which followed, Professor MACALISTER thought we were shut up at present to the evolution hypothesis, and the proper way to pursue this investigation further would be to tabulate all the muscular anomalies in man, and do the same in regard to the lower animals, and compare the two so as to see whether the grouping of anomalies in man was the same as in the lower animals. He had drawn out such a table regarding man, and would leave it to some one better qualified than he was to make out a similar table regarding the lower animals.

Subsequently Professor RUTHERFORD, F.R.S.E., London, exhibited a model of the circulation constructed by him with a view to elucidate the phenomena of the pulse and the blood pressure. With the aid of the apparatus, he showed how the pulse is produced, why it is that with dilated capillaries there is a pulse in the veins, and why there is no pulse in the veins when the capillaries are contracted. He further showed why it is that the arterial is higher than the venous pressure, and the causes of variation in the amount of the arterial pressure.

Dr. E. RAY LANKESTER read a paper "On the Existence of Hæmoglobin in the Muscular Tissue, and its relation to Muscular Activity."

Dr. ARTHUR GAMGEE read a paper "On the Magnetic and Diamagnetic Properties of the Blood."

The Section then rose.

Spontaneous Generation.—Dr. FERRIER gave an account of certain experiments made by him in conjunction with Dr. Burdon Sanderson, with a view to discover the circumstances which determine the existence of bacteria in the liquids and tissues of the body. The paper had reference to certain results obtained in the course of an investigation into the ultimate nature of contagion. It was shown that in the test liquids which they used for the detection of organisms in contagious fluids, no spontaneous evolution of organisms takes place. The occurrence of organisms in these liquids was in proportion to the degree of external contamination. Fungi (*penicillium*) is the chief form which is derived from the air. The occurrence of bacteria is, however, due to water. It was shown that every kind of water, with the exception of freshly distilled water, teems with invisible germs of bacteria. These cannot be detected by the microscope, or by the electric beam in the manner adopted by Professor Tyndall. The purest-looking ice-water was found to contain as many germs as others which had not the same apparent purity. Different varieties of water possess the zymotic power, as they term it, in different degrees. The water supplied by the London water-companies was examined, and different degrees of bacteria impurity were found to exist. They further showed that the animal liquids and tissues do not in the normal state contain the germs of bacteria, and that the occurrence of these, and consequent putrefaction, was due to contact with surfaces or ordinary water. Bacteria seemed to be the pioneers, if not the producers, of putrefaction. It was found that meat, milk, wine, etc., do not putrefy if they are kept from contamination with water, or any surface which has not been superheated, or rendered innocuous by some anti-zymotic which is fatal to the life of bacteria. The experiments further showed that there is no developmental connection between bacteria and torula—consequently Hallier's theories fall to the ground.

Dr. JOHN DOUGAL read a paper "On the Relative Powers of various Substances in Preventing the Generation of Animalcules, or the Development of their Germs, with special reference to the Germ Theory of Putrefaction."

Dr. CHARLTON BASTIAN described some new experiments he had made in relation to the origin of life, and said that the result of these led him to the conclusion that living matter might arise *de novo*, and that this living matter might go on to the development of certain common organic forms, just as surely as any speck of crystalline matter in a fluid might take on and assume certain definite characters which belonged to that saline substance in its crystalline condition. His experiments

showed that living organisms had been found in fluids exposed to a temperature higher than was sufficient to destroy germs.

In the course of some discussion,

Dr. M'KENDRICK said that the experiments he had made did not warrant him in adopting the conclusions on either side of the question. With regard to Dr. Bastian's experiments, he observed that the germs or ova of living creatures must always be more delicate and likely to be destroyed than the creatures themselves.

Dr. LANKESTER considered the question to be still open. He did not see why theologians should denounce the supporters of spontaneous generation, because the Church in former ages had believed that organic beings might arise from inorganic substances. Dr. Bastian wished them to believe that his experiments had proved spontaneous generation; but there were other and more interesting spheres of observation, and he (Dr. Lankester) thought that it was in the slimy deposits in the depths of the sea that they must look for the solution of the difficulty. The question should not be regarded as irreligious. Philosophers were quite justified in looking for the truth, and no theory or view should be suppressed that might at last turn out to be true.

Professor ALLEN THOMPSON, in closing the Section, thought he should not be acting unfairly in saying that the question was still undecided. [*Hear, hear.*]

A paper was given in but not read, on account of the want of time—"On the Origin and Sources of Fibrin in the Animal Economy", by Dr. John Goodman.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, August 14th.

THE CONTAGIOUS DISEASES ACT.—On vote 9 of the Army Estimates, a long discussion on the working of the Contagious Diseases Acts was raised by Mr. W. Fowler, who moved to omit the pay of the police employed under the Acts. He took the opportunity of discussing the recent report of the Commissioners, and drew from it materials for impugning the principle of the Acts.—Mr. Henley also spoke earnestly against this legislation, and warned the House against departing in these matters from moral principles founded on Christianity.—Mr. Bruce, on behalf of the Government, urged that it was impossible for them to sweep away those Acts at once in the face of the evidence as to the diminution of vice and disease which they had brought about, and of the admitted necessity to replace them by legislation of a wider character, as to which the Government had not had the opportunity yet to make up its mind.—Mr. Tipping approved the general working of the Acts, and with much antiquarian learning—going back as far as forty centuries—argued that repressive measures had always failed.—Mr. Mundella, on the other hand, opposed the Acts, and quoted some of the most unsavoury details of the evidence against them.—Mr. G. Gregory complained of the unfairness of calling on the House to decide in the absence of the evidence; and Mr. Percy Wyndham condemned the not always unintentional misrepresentations of the opponents of the Acts; while Mr. R. Gurney supported the reduction of the vote with a view of stopping compulsory examination; and, after some observations from Mr. Cardwell, deprecating precipitate judgment, Mr. Fowler's amendment was negatived by 56 to 44.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS.

THE following is an abstract of some of the unconfirmed minutes of the meeting of the Council on the 10th instant.

Messrs. John Taylor Porter, L.S.A., and James Gleadall, L.S.A., both of Sheffield, elected Fellows of the College on the 13th ult., were admitted as such, their diplomas of membership bearing date respectively April 22nd and August 21st, 1840; and Mr. John Buck Stedman, L.S.A., of Godalming, Surrey, was elected a Fellow, his diploma of membership bearing date March 5th, 1841.

The Council having confirmed their resolution of the 13th ult., removing Mr. Frederick Henry Morris from being a Member of the College, it was resolved that the Secretary do inform him of such removal, and do call upon him to return his diploma, as required by Clause 5, Section XVII, of the Bye-laws; and that Dr. Hawkins, the Registrar to the General Council of Medical Education and Registra-

tion, be informed that his removal was in consequence of his conviction for a criminal offence.

The following donations were accepted, and thanks of the Council voted :—From Sir William Fergusson, Bart., a copy of the engraving of Henry VIII presenting the Charter to the Barbers and Surgeons, and a copy of the same in oil; from Mr. Edward Cock, three copies, in different stages, of the engraving of Sir Joshua Reynolds's picture of John Hunter, together with an engraving of the picture of Sir Astley Cooper.

Letters were read from Drs. Hawkins, Carpenter, and Pitman, representing respectively the General Medical Council, the University of London, and the Royal College of Physicians, in reference to the formation of a Joint Examining Board for each division of the United Kingdom. The scheme was approved by the University of London, subject to a slight alteration in Resolution x thereof; and also by the Royal College of Physicians.

Mr. Birkett, in the absence of Mr. Quain, and in pursuance of the notice given by the latter at the last meeting of the Council, moved that a Committee be appointed to investigate the expenses of the College in all its departments, and to report thereon, with a view to the diminution of expenses where practicable; and, the motion having been seconded by Mr. Hancock, and the votes of the Council taken thereon, a majority was in favour thereof; whereupon Messrs. Hilton, Quain, Hawkins, and Birkett, were elected members of such Committee.

Mr. Hawkins gave notice of the following motion for the next meeting of the Council after the quarterly meeting in October; viz., to take into consideration the question of placing those who pass the examinations for the fellowship in classes according to merit.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, August 10th, 1871.

Garton, William, St. Helen's, Lancashire
Pearce, Joseph Channing, The Manor House, Brixton
Wheeler, Daniel Martin Brumwell, Chelmsford, Essex

The following gentlemen also on the same day passed their first professional examination.

Hansell, William Charles, Guy's Hospital
Kessen, Andrew Emerson, Guy's Hospital
Le Mottée, George Herbert, King's College
Paul, Frank Thomas, Guy's Hospital
Spark, Sidney Walter, Guy's Hospital
Whitmore, William Tickle, St. Bartholomew's Hospital

ARMY MEDICAL SERVICE.—List of the candidates of Her Majesty's British Medical Service who were successful at the competitive examinations held at London in February, and at Netley in August 1871, after having passed through a course at the Army Medical School, Netley.

| Order of merit and names. | Studied at | No. of marks. |
|---------------------------|-------------------------------|---------------|
| 1. Crombie, A. | Edinburgh | 5965 |
| 2. Stuart, G. B. | Melbourne and Edinburgh | 5775 |
| 3. Irving, L. A. | Dublin | 5335 |
| 4. McCracken, J. A. | Belfast | 5320 |
| 5. Beamish, J. M. | Cork | 5150 |
| 6. Clery, J. A. | Dublin | 5060 |
| 7. Cruikshank, B. | Aberdeen | 5040 |
| 8. Coats, J. | Glasgow | 5005 |
| 9. Williamson, J. G. | Dublin | 4640 |
| 10. Bradford, H. | London | 4630 |
| 11. Fawcett, W. J. | Dublin | 4482 |
| 12. Joynt, H. W. | Dublin | 4475 |
| 13. Saunders, W. E. | London | 4470 |
| 14. Leckie, D. | Glasgow | 4342 |
| 15. Charlton, W. J. | Dublin | 4310 |
| 16. Ruxton, J. | Aberdeen | 4300 |
| 17. Anthonisz, A. H. | Aberdeen | 4185 |
| 18. Tobin, W. | Dublin | 4170 |
| 19. Molloy, O. | Belfast | 4145 |
| 20. Moylan, W. J. | Dublin | 4120 |
| 21. Exham, R. | Cork | 4056 |
| 22. White, W. L. | Edinburgh and Aberdeen | 4016 |
| 23. McNamara, J. | Cork | 4013 |
| 24. Harman, R. | Dublin | 3980 |
| 25. Wilson, J. B. | Sheffield, Edinb., and Galway | 3860 |
| 26. Leake, G. D. N. | London | 3812 |
| 27. Martin, J. W. | Dublin | 3812 |
| 28. Robinson, R. H. | Dublin | 3683 |
| 29. Gabbett, P. R. D. | Montreal and London | 3677 |
| 30. O'Connell, M. D. | Cork | 3636 |
| 31. Palmer, C. de M. | Dublin | 3566 |
| 32. Ward, E. C. R. | Dublin | 3558 |
| 33. Finlay, W. | Dublin | 3537 |
| 34. Sullivan, W. P. | Dublin | 3513 |
| 35. Joynt, E. H. | Galway | 3486 |
| 36. Dickson, J. R. | Kingston, Montreal, & London | 3450 |

MEDICAL VACANCIES.

THE following vacancies are announced :—

ATCHAM UNION, Salop—Medical Officers for the St. Chad's and St. Mary's Districts.
BARNESLEY UNION, Yorkshire—Medical Officer for the Wombwell District.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon.
BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.
BRISTOL—Surgeon to the Police.
BURY UNION, Lancashire—Medical Officer for the Tollington No. 1 District.
CHESTER GENERAL INFIRMARY—Visiting Surgeon.
COVENTRY PROVIDENT DISPENSARY—Surgeon.
DERBYSHIRE GENERAL INFIRMARY, Derby—Resident Assistant House-Surgeon; Two Dental Surgeons; Non-Resident Dispenser.
DEVIZES DISPENSARY, Wilts—Surgeon.
DEVIZES UNION, Wilts—Medical Officer for District No. 1.
DURHAM COUNTY HOSPITAL—Physician.
FEENAGH and KILMEEDY, co. Limerick—Medical Attendant to the Royal Irish Constabulary.
GLASGOW POLICE—Casualty Surgeon for the Central Division.
GREAT EASTERN RAILWAY—Surgeon to the King's Lynn District.
GREAT EASTERN RAILWAY PROVIDENT SOCIETY—Surgeon for the East Anglian District.
GREAT NORTHERN RAILWAY—Surgeon for the Sutton Branch.
HOLBORN UNION—Medical Officer for District No. 1.
ISLINGTON—Medical Officer of Health.
KING'S LYNN UNION, Norfolk—Medical Officer to the Workhouse and Infirmary.
KING'S LYNN—Admiralty Surgeon and Agent for.
MIDDLESEX HOSPITAL—Physician; Assistant-Surgeon.
NEWCASTLE UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Feenagh Dispensary District.
NORFOLK and NORWICH HOSPITAL—House-Surgeon.
OMAGH UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Eastern Division of the Omagh Dispensary District.
QUEEN'S COLLEGE, Birmingham—Demonstrator of Anatomy.
QUEEN'S HOSPITAL, Birmingham—Fourth Physician.
ROYAL INFIRMARY, Bristol—Surgeon.
ST. GILES and ST. GEORGE, Bloomsbury—Resident Assistant Medical Officer at the Workhouse.
SETTLE UNION, Yorkshire—Medical Officers for the Horton and Settle Districts, and the Workhouse.
SOUTHAMPTON UNION—Medical Officer for District No. 2.
UNIVERSITY OF DURHAM—Medical Tutor at the Newcastle-upon-Tyne College of Medicine.
UNST, Shetland—Parochial Medical Officer and Public Vaccinator.
YORK UNION—Medical Officer and Public Vaccinator for District No. 4.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

LAW, W. T., M.R.C.S., appointed Resident Physician to the Royal Infirmary Edinburgh.
POPE, H. Campbell, M.R.C.S., appointed House-Surgeon to the Seaman's Hospital, Greenwich.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

*MARSHALL.—On August 11th, at 16, Ardgowan Square, Greenock, the wife of Dr. W. J. Marshall, of a son.

MARRIAGE.

*ARGLES, Robert, M.R.C.S., of 8, Radnor Place, Gloucester Square, to Rose Eleanor, elder daughter of Edwin Lendon, Esq., of Maidstone, on Aug. 12th.

DEATHS.

*KENDALL, Thomas M., F.R.C.S., L.S.A., at King's Lynn, aged 51 years, on August 15th. No cards. Friends will please accept this intimation.

*MANN, Robert, Esq., Surgeon, at Plas Elmy, St. Asaph, North Wales, late of Manchester, on August 14th.

BEQUESTS, DONATIONS, ETC.—James Stewart Forbes, Esq., of Wimbledon, bequeathed £5000 each to the Brompton Hospital for Consumption, the Middlesex Hospital, University College Hospital, St. Mary's Hospital, and the Asylum for Idiots, Earlswood; and £1000 to the Hospital for Sick Children, Great Ormond Street.—“S. S. C.” has given a second £1000 to the London Infirmary for Diseases of the Legs.—“Z. D. W.” has given a second £1000 to the Westminster Hospital.—Mrs. F. H. has given £250 to the National Hospital for Consumption, Ventnor, viz., £50 for chapel fund, £100 for curate, and £100 for maintenance of necessitous Protestant clergymen.—The Weymouth Sanatorium has received £180 under the will of Mrs. Balston.—William Gater, Esq., of South Stoneham, bequeathed £100 each, duty free, to the Royal South Hants Infirmary, and the County Hospital, Winchester.—“A Friend” has given £200 towards paying off the mortgage on the Eye Hospital, Birmingham.—The General Hospital, Birmingham, has become entitled to £100 under the will of Benjamin Chandler, Esq.

ADDRESS IN SURGERY,

DELIVERED AT

THE THIRTY-NINTH ANNUAL MEETING OF THE
BRITISH MEDICAL ASSOCIATION,*Held in PLYMOUTH, August 8th, 9th, 10th, and 11th, 1871.*

BY JOSEPH LISTER, F.R.S.,

Regius Professor of Clinical Surgery in the University of Edinburgh; etc.

MR. PRESIDENT AND FELLOW-ASSOCIATES,—My duty on the present occasion is to endeavour, if possible, to give you an address commensurate in interest with the very high honour of being selected to deliver it. With this object, instead of attempting a general review of surgery, which has been presented under various aspects by my able predecessors, I have concluded to bring before you a subject which, though in some respects a special one, is calculated, as I believe, to revolutionise almost every department of surgical practice; I mean the antiseptic system of treatment. The fact that my name is associated with this topic tended to make me shrink from such a course; but, on the other hand, I could not but feel that this very circumstance has led in all probability to my standing before you to-day, so that you might naturally expect to hear something from me on this subject, while it is at the same time my sincere conviction that I could not turn the present occasion to better account than by exciting in you a keener interest in the antiseptic system than it has yet elicited, and by placing you more in a position to diffuse its benefits among mankind.

Among the causes which have hitherto interfered with the general acceptance of this mode of treatment, by far the most prejudicial is the doubt of its fundamental principle, instilled by various authors who have opposed the germ-theory of putrefaction, and who, supposing themselves to be advocating the cause of truth, have not only, as it appears to me, espoused the side of error, but have unconsciously inflicted an amount of material evil upon their fellow-creatures such as mere speculative opinion is seldom able to produce. For few medical men in active practice have the leisure to sift and weigh the facts and arguments of such a discussion; yet, if they lose firm faith in the guiding principle of the treatment, the attainment of a full measure of success becomes with them a matter of impossibility. "Felix qui potuit rerum cognoscere causas" was never more applicable than here.

Another great cause of failure, and consequently of dissatisfaction with the system, is the want of practical initiation into the treatment. For, greatly as our means of carrying out the principle have improved of late, both in simplicity and in efficiency, mere description seems inadequate to convey a clear idea of the method of employing them. Hence, while there are now scattered up and down in this country and in various other parts of the world, gentlemen who, having witnessed the treatment in our wards, whether as students or as qualified practitioners, are attaining exactly the same kind of results as we do, success seems a rare exception for any who have not had such opportunities.

I propose, therefore, in the first place to bring shortly under your notice some considerations relating to the theoretical basis of the treatment; secondly, to exhibit before you the chief means that we now employ, and, so far as this can be done upon a table, the mode of using them; and lastly, by your permission, to state some facts which I hope you may regard as sufficient evidence that, by such means employed on such a principle, we have it in our power to obtain easily and securely results of a kind that without antiseptic management the surgeon would not be justified in aiming at.

With regard to the theory of the treatment, I propose to avoid all doubtful disputations, and simply bring before you a few facts, to which I invite your earnest attention and your candid judgment.

Those of which I have first to speak have reference to the well known experiment of Pasteur of boiling a putrescible liquid in a flask with an attenuated and contorted neck. It is now nearly four years since I introduced portions of the same specimen of urine into four glass flasks, so as to make each about one-third full, and, after washing their necks, drew them out with a spirit-lamp into tubes less than a line in diameter, and then bent three of them at various acute angles, while the fourth was left short and vertical, though equally narrow. Each flask was then boiled for five minutes, the steam issuing freely from the orifice; after which they were left with the ends of the necks still open, so that air might pass in and out freely in obedience to the condensation and expansion caused by the diurnal changes of temperature. The boiling, I need hardly say, was for the purpose of killing any organisms contained in the liquid or adhering to the sides of the glass: the bending of the necks in three of the flasks was with the view of intercepting particles of dust, which, according to the germ-theory, are the cause of putrefaction, as distinguished from the atmospheric gases; while the fourth neck was left short and vertical for the sake of contrast, to afford opportunity for dust to fall into the liquid, where such portions of it as had the nature of living organisms might propagate and induce in the fluid any changes of which they were capable. The result was, that in the vessel with short and upright neck two different kinds of fungi, visible to the naked eye, soon made their appearance, and these grew steadily till they had attained large dimensions, the liquid meanwhile gradually changing from its pale straw colour to a deep amber tint, implying alteration in its chemical constitution. But in the flasks with bent necks the fluid remains to this day entirely unaltered.* I regret that the distance from Edinburgh to Plymouth is too great to permit me to bring these objects before you. One perilous journey they have already had, when I took them from Glasgow to Edinburgh nearly two years ago, nursing them carefully during the railway journey, to the amusement of my fellow-travellers; and in the drive from the station to my house the violent rocking of the vehicle churned up their contents till the upper part of the body of each flask was full of a frothy mixture of the putrescible liquid with the atmospheric gases; yet no harm resulted, and the fluid in the bent flasks still retains its original pellucid clearness and pale hue. Bringing these in imagination before you, as represented in this diagram, consider what these facts imply. Let us not push them one tittle beyond their inevitable interpretation. The drops of moisture deposited in the bent tubes from condensation of the steam when the lamp was removed dried up in a few days, so that the necks have been for nearly four years open and dry from end to end. Comparing the capacity of the part of the body of the flask containing air with that of the narrow neck, it is manifest that a considerable portion of fresh air has passed into the flask every night, in consequence of the fall of the temperature, a corresponding portion passing out again by day, though not the same which entered; for the diffusion of gases would ensure its mixing freely with that previously present. Hence, during nearly four years this putrescible liquid, this boiled urine, has been freely exposed to the influence of the atmospheric gases, yet it has not putrefied. About half a year after the commencement of the experiment, I decanted a little of the liquid from one of the bent flasks into a wineglass, and found it sweet in odour and faintly acid to test-paper, while an honest search with a powerful glass failed to detect even the minutest organism. Covering the glass to prevent evaporation, I found it in two days stinking, while under the microscope it already teemed with various organisms, and a few days later it showed fungi to the naked eye. Thus the fluid was demonstrated to be still putrescible and a favourable nidus for organic development; yet both these changes have been prevented for nearly four years by the circumstance that the air, in gaining access to it, had to pass through a narrow bent tube of clean dry glass. Now such

* Some minute shining crystals have of late been deposited on the bottom of the flasks, probably from condensation through the very slow evaporation constantly going on.

a tube could not by possibility arrest any atmospheric gas. It cannot possibly have stopped anything but the atmospheric dust. It follows, therefore, not as a matter of theory, but as an inevitable inference from fact, or, in other words, as a truth, that, so far as this particular instance of a putrescible liquid is concerned, both the development of such organisms as the microscope enables us to detect, and the concomitant putrefactive changes, are occasioned by particles of dust suspended in the atmosphere, but not by the atmospheric gases. I confess, Mr. President, I am ready to blush for the character of our profession for scientific accuracy when I see the loose comments sometimes made upon this experiment; and I am tempted to doubt whether some of the commentators can have enjoyed the advantages of sufficient education either in chemical physics or in logic. The simplicity and perfect conclusiveness of the experiment constitute its great charm, and render it, as it appears to me, deserving of your careful consideration. Yet, having before published an account of it, although nearly two years have since elapsed, so as to add considerably to its weight, I do not know that I should have felt justified in bringing it forward on the present occasion, if I have not an additional fact to communicate respecting it besides the results of further lapse of time. We have seen that we have been forced to the conclusion that, though the gases of the air certainly pass into the body of the flask and out again every twenty-four hours, its dust, even though of extreme minuteness, must be arrested by the contorted tube. Now, inevitable as this inference is, it will be satisfactory to have it converted into the position of an observed fact. This Professor Tyndall's simple but beautiful mode of investigation with a condensed beam of light has lately enabled me to do. Having prepared two dry glass flasks, one of them having the neck drawn out and contorted, I arranged them, through the kind assistance of my colleague Professor Tait, so that the body of each was pierced by a beam of highly condensed sunlight in an otherwise dark apartment. The beam, scattered by the floating particles of dust, showed white in the surrounding darkness, within the flasks as well as without, proving that the air within the flasks was dusty like that outside. I now closed with sealing-wax the orifice of the unbent flask, and, leaving the other open, allowed both to remain undisturbed in the laboratory. A fortnight later I again submitted them to the solar beam, condensed as before, and now found that in both flasks alike the visible part of the beam terminated abruptly at the glass on each side, showing that in both the air was, as Tyndall expresses it, "optically empty," or, in other words, that it was destitute of even such minute particles of floating matter as could produce the faintest nebulosity. During the time between the two observations, the force of gravity had led to the subsidence of even the minutest floating particles; and, though the changing temperature of the laboratory had of necessity induced the daily entrance of air into the open flask, the bent form and fine calibre of the tube by which it was admitted had effectually filtered it of suspended material, though in a very dusty apartment.

The other class of facts in this division of the subject to which I am anxious to direct your special attention was also suggested by one of Tyndall's experiments with the condensed luminous beam—that, namely, in which he proved the perfect manner in which cotton-wool filters the air of its suspended particles, by blowing against the beam with a pair of bellows having a mass of the cotton tied over the nozzle; the result being that the beam, elsewhere white from illuminated dust, became perfectly black at the part on which the current was directed through the cotton-filter: hence the idea naturally suggested itself that cotton-wool might be used with advantage as an antiseptic dressing.* Of course it would be useless to apply ordinary cotton without special precautions, for, according to the germ-theory, putrefactive particles must exist among the fibres and

lie scattered over the wool. But if the cotton were impregnated with some volatile material capable of destroying the vitality of the septic organisms, and then placed upon the wound after washing it with a lotion containing the same substance in solution, the result ought to be, supposing the theory true, that, after the volatile antiseptic had become dissipated by diffusion from the dressing and from the wound, the cotton-wool, though destitute of any chemically antiseptic properties, should effectually prevent, by its filtering property, the access of any putrefactive agents, and keep the wound sweet, while in itself a perfectly bland and unstimulating application. Accordingly I prepared four samples of cotton-wool by diffusing through each one of the following substances—chlorine gas, sulphurous acid gas, carbolic acid vapour, and the vapour of benzine—four materials very dissimilar in chemical properties, but having a common hostility to low forms of life. Chlorine, sulphurous acid, and carbolic acid, are well known to have such a property; and, knowing that benzine is used by the entomologist for killing insects, and having ascertained by experiment the potency of its vapour for the destruction of pediculi, I thought it probable that it would also answer our purpose. I then dressed with these four kinds of prepared cotton-wool various suppurating sores, excoriations, and contused wounds, after washing the surface with the corresponding lotion, or in the case of benzine, with the undiluted material. The results in every instance corresponded exactly with theory. After about twenty-four hours' exposure at the temperature of the body, the cotton-wool was found to have lost the odour of the antiseptic, yet the blood, serum, or pus, as the case might be, remained perfectly sweet for an indefinite period, while healing advanced in the satisfactory manner that might be anticipated from the absence of all irritating quality in the dressings. There was, however, one circumstance, highly instructive in itself, which interfered sadly with the utility of this application; namely, that, if the discharge happened to be sufficiently copious to soak through the cotton-wool and appear at its external surface, putrefaction occurred throughout the entire mass of the moistened part down to the wound, even within the first twenty-four hours after the dressing, if the fluid were sufficiently copious to penetrate within that period. It is only when dry that cotton-wool can arrest the progress of microscopic organisms, which have ample room to develop among its meshes when filled with a putrescible liquid.

And now, gentlemen, allow me, at the risk of seeming tedious, to endeavour to bring home to you a little more closely the inference that is to be drawn from these facts. But, first, let me describe in detail the manner in which the dressing with carbolated cotton-wool was practised. The cotton-wool having been impregnated with about a two-hundredth part of its weight of the acid in the form of vapour, the surface of a granulating sore or abrasion was washed, together with a portion of the surrounding skin, with a solution of the acid in about forty parts of water. A piece of oiled silk of the size of the sore was then applied, to prevent the dressings from sticking through dryness. Over this was placed a piece of folded linen rag, rather larger than the oiled silk, and impregnated with the carbolic acid vapour in the same manner as the cotton-wool; the object of the rag being to absorb the discharge and prevent it from trickling down, as it was otherwise apt to do, below the slightly absorbent cotton, involving its early appearance at the surface and consequent spread of putrefaction to the wound. Lastly, a well overlapping mass of the carbolised cotton-wool was securely fixed by a bandage. The result, as before stated, was that, though all chemical antiseptic virtue left the dressing within a day or two, putrefaction was excluded by the cotton-wool for any length of time, provided the discharge did not penetrate to the exterior of the mass. Consider, now, the circumstances of the serum or pus that oozed from beneath the edges of the oiled silk into the folded rag—let us suppose a week after the application of the dressing, when all traces of the volatile antiseptic had certainly disappeared. Here was a highly putrescible liquid, not subjected to boiling, as in the flask experiment, or acted on by any chemical agent whatever, yet remaining free from putrefaction in a rag moistened with it at the temperature of the

* My friend Dr. Meredith, of the Indian Service, who attended Tyndall's first lecture on "Dust and Disease", just after a visit to Edinburgh, where he had been greatly interested with the antiseptic treatment, at once wrote informing me of this experiment, and asking if I did not think that cotton-wool might be turned to account for excluding the causes of putrefaction from wounds—a suggestion which I at once proceeded to act upon as above described.

human body, simply because it was covered over with pure dry cotton-wool. How, then, did this cotton-wool exclude the causes of putrefaction in the atmosphere? It certainly did not keep out any of the atmospheric gases. The same cause that led to the escape of the volatile antiseptic necessarily occasioned a perpetual intermingling between the external air and that between the meshes of the fabric, as any one acquainted with Graham's beautiful researches into the laws of gaseous diffusion must at once admit. The only constituent of the atmosphere which the cotton-wool could possibly exclude is its dust; and this we know, from Tyndall's experiment, it did exclude. Here, then, we have another inevitable inference from fact, another truth, and that in itself all-sufficient, with reference to the antiseptic system of treatment; the truth, namely, that pus, blood, and the dead tissues in contused wounds do not putrefy through the influence of the atmospheric gases, but through the operation of particles of dust, which may be permanently deprived of septic energy by the vapour of an agent like carbolic acid. I do not ask you to believe that the septic particles are organisms. That they are self-propagating, like living beings, and that their energy is extinguished by precisely the same agencies as extinguish vitality, such as heat and the various chemical substances to which I have referred, is certain, and is of the utmost practical importance. But if any one, in spite of these facts, and in spite of the strong analogy of the yeast-plant, and the various kinds of fungi which we term mould, prefer to believe that the septic particles are not alive, and to regard the vibrios invariably present in putrefying pus or sloughs as mere accidental concomitants of putrefaction, or the results, not the causes, of the change, with such an one I, as a practical surgeon, do not wish to quarrel. Nor do I enter upon the question whether spontaneous generation can take place at the present day upon the surface of our globe. To do this, would be to engage in doubtful disputations which I promised to avoid.

But I do venture earnestly to beg of all of you who are engaged in surgical practice, that you will give these simple facts your careful consideration; and if you think the interpretation I have given a sound one, do not let any statements, whether in books or in journals, shake your belief in the truth that putrefaction, under atmospheric influence, as it occurs in surgical practice, is due to particles of dust ever present in the atmosphere that surrounds our patients, and endowed with wonderful chemical energy and power of self-propagation, yet happily readily deprived of energy by various agents which may be employed for the purpose without inflicting serious injury upon the human tissues. With this as your guiding principle, you will find yourselves successful with the antiseptic system of treatment; but without it, whatever theory you adopt, you will ever be walking in the dark, and therefore ever liable to stumble.

And now I proceed to the second division of my subject—the exhibition of our principal means and methods of treatment. For preventing the access of putrefactive fermentation, the agent which we now commonly use is what we have termed the antiseptic gauze, of which these are samples—being a loose cotton fabric, the fibres of which are impregnated with carbolic acid securely lodged in insoluble resin, which holds the carbolic acid with remarkable tenacity, while at the same time a little paraffin is added to prevent the adhesiveness which the mixture of carbolic acid and resin would otherwise possess. The interstices between the fibres are kept free from these ingredients, so that the fabric, being porous, may be fitted for absorbing discharges. The carbolic acid is in considerable quantity in the gauze; but it is held so tenaciously by the resin that, on the one hand, when first applied, it is unirritating to the human skin, and, on the other hand, unless discharge be very copious, it will retain its virtues for upwards of a week at the temperature of the human body. Now supposing I were going to use this gauze for dressing any case in which a copious discharge was expected—as, for example, a large psoas abscess immediately after it had been opened—I should take a considerable quantity of the gauze (about as much as one can conveniently hold between the extended hands) and fold it three times so as to make it eight layers. But there would be no use in my having

the folded gauze of this extent, if I did not adopt some means for compelling the discharge to pass throughout the length and breadth of the dressing; and for this purpose some impermeable tissue must be interposed between it and the external air. That which we have found the most convenient is a cheap and light form of mackintosh, termed "hat-lining" by the India-rubber dealers. I cut a piece of this, nearly as large as the folded gauze, and then place it beneath the layer that is intended to be outward. The discharge then coming from the wound, situated opposite the middle of the gauze, instead of passing directly outwards through it, is compelled to traverse all the extent of the antiseptic dressing; and in that way, by using a sufficiently large piece, and with this arrangement of the mackintosh, you may be perfectly certain that, if you leave no putrefactive mischief in a wound or abscess, none will enter it, however profuse the discharge may be during the first twenty-four hours. That is one very important point gained. As the discharge diminishes, the intervals between the dressings are extended; and when it amounts to only a minim or two in twenty-four hours, the application may be left undisturbed for a week. The gauze is also extremely convenient in the form of bandage—an antiseptic bandage—which is put on to hold the main dressing in position; and instead of being a nidus for putrefaction, as a cotton-bandage would be, it increases at every turn the antiseptic efficacy of the dressing. Besides this, the bandage having a degree of stickiness, its turns do not tend to slip as those of a cotton-bandage do, which is an additional advantage.

Such, then, are the means by which, in ordinary cases, we ensure that putrefactive fermentation does not extend from without into the wound or abscess. Of course it would be of no use to apply such an external dressing if putrefactive particles in an active state were left within a wound. If a wound be presented for treatment, having been inflicted by another than the surgeon, some dust is sure to have been introduced; and we must first destroy its septic energy by washing the raw surface thoroughly with some liquid trustworthy for the purpose, such as chlorine-water, or sulphurous acid lotion, or a strong solution of carbolic acid, or of chloride of aluminium, for there are various preparations which may be used with efficiency. But when the surgeon operates on a previously unbroken integument, he has the opportunity of preventing the septic particles from entering in an active state at all, by operating in an antiseptic atmosphere. This is readily provided for in small operations by using a watery solution of carbolic acid with Richardson's apparatus for local anaesthesia. For making the spray more fine, I have found it convenient to have the lower end of the water-tube almost entirely stopped up, leaving only very minute apertures. The result is, as you see, an exceedingly satisfactory spray. For any small operation this answers the purpose perfectly well, provided always that you take the precaution of having the liquid filtered through a cambric handkerchief or some similar fabric, in order to exclude the grosser particles of dust, which otherwise would have the effect of blocking up the fine orifice at the nozzle of the apparatus—an occurrence which, under some circumstances, might be disastrous in its effect.

We have lately found that the strength of the solution employed for producing the spray may be considerably reduced. We have ascertained that it may be used as weak as one part of carbolic acid to a hundred parts of water; and that a spray made with such a lotion is thoroughly trustworthy as an antiseptic atmosphere.

The reduction of the strength of the spray is a matter of great importance. In the first place, it is a great comfort to the surgeon, as I can testify from experience. When we used a solution as strong as one part of carbolic acid to forty parts of water, my hands were constantly in a rough and uncomfortable state; but when the proportion is reduced to one to a hundred for the production of the spray, the hands experience no inconvenience whatever, and one can even breathe with comfort in such an atmosphere.

In the second place, it is equally advantageous for the patient, because the weaker the antiseptic application, of whatever sort it is, the less irritation do we occasion to the tissues of the

part treated with it. The antiseptic is always injurious in its own action; a necessary evil, incurred to attain a greater good. To suppose that it is useful by its own operation in some specific manner unknown to us, is an entire mistake. I know that, not only from theory, but as a matter of experience. At one time, I used the undiluted acid; and, in doing this, I could not avoid producing not merely irritation, but a certain amount of sloughing. Then I used a strong solution of carbolic acid in oil; then a rather strong solution in water; then a weaker watery lotion; and now we employ a solution as weak as that which I have described—one part of carbolic acid in a hundred of water—and that applied only in the form of spray, avoiding absolute drenching of the tissues at all, and avoiding also the injection of the wound by a syringe, as we used to do after the operation was completed, in order to destroy the organisms introduced; and, in direct proportion to the weakness of the solution used and to the smallness of its opportunity of acting on the tissues of the part, is the satisfactoriness of the results obtained, provided that the essential object of avoiding putrefaction is secured.

And now, supposing that I were, single-handed, about to change the dressing in the case to which I have alluded—a large psoas abscess—the spray is of extreme value. I wish that the spray shall play upon the surface of the body, in the angle between the dressing and the skin, as I lift the gauze. It would be very inconvenient if it were necessary for this purpose always to have an assistant to work the spray; but, by a little management, the spray can be worked perfectly well, as you see, by the surgeon himself. [This is done by placing the bottle of Richardson's apparatus against the ball of the thumb, and holding the India-rubber bulb to be compressed between the opposite side of the bottle and the fingers of the same hand.] Supposing this were the site of the incision in a case of psoas abscess, as long as I choose I can perfectly protect it with the antiseptic atmosphere, and then put on what we have called, for the sake of distinction, a "guard"—a piece of rag dipped in the one to one hundred watery solution of carbolic acid, after which the spray can be removed with security; the surrounding parts having then been cleansed from any discharge there may be, the spray is once more made to play on the part during the exposure of the wound until the permanent antiseptic dressing is re-applied.

But, gentlemen, though such a spray-producer is perfectly efficacious for a small operation, it does not make a cloud of sufficient volume for a large one, such as an amputation of the thigh or at the hip-joint. Therefore, with the object of securing the same result in such cases, I have had this apparatus prepared, which, I confess, is in a cumbrous and heavy form; but I hope it will be improved in that respect before long. Meanwhile, it is much better than nothing. Let me say a word or two, in the first place, as to the principle on which it is constructed. It appears that the best kind of spray which can be produced, is that which is formed on the principle of the atmospheric odorator, by having one tube set at right angles to another, the air-tube being larger than the water-tube, and the opening of the water-tube being exactly opposite the middle of the orifice of the air-tube. This makes the finest and best of all sprays. But, with a heavy apparatus like this, it would never do to have to move it about along with the nozzle, as is absolutely necessary in the instruments of ordinary construction on this principle. We must have tubes to convey the air and the water to a considerable distance; and this is very easily done by not merely having the liquid ejected by the force of the air blown over the orifice of the water-tube, but by having it driven through the tube by the force of the same pump that propels the air, the quantity of the water being regulated by a stop-cock. Then it was necessary to provide some ready means of clearing the fine end of the water-tube, in case of its obstruction by particles of dust. This is done by having the water-tube straight for a short distance from the nozzle, and then bent at a right angle, with a little milled cap to screw on at the angle, so that, in case of obstruction, the cap is screwed off, and the orifice of the water-tube is cleared at once with a needle or a bit of fine

wire. I have used this apparatus in various operations of late, among which I may mention my two last amputations, one in the thigh, the other in the arm, in both cases using nothing stronger than the one to a hundred solution for the spray, and the same for the sponges; except only, what I believe to be a wise precaution, that, when a sponge has become soaked with blood, it should be washed first with pure water, then dipped for a moment in a strong solution (one to forty), and then squeezed out of a solution of one to a hundred to give it the necessary blandness; and in both these cases putrefaction was entirely avoided. [The apparatus exhibited had two nozzles, attached to independent caoutchouc tubes, furnishing large clouds of spray, that could be directed, if necessary, to opposite sides of the part operated on. Two of Richardson's spray-producers, worked by two assistants, will answer the same purpose, though less efficiently.]

The antiseptic catgut-ligature is used for securing the arteries while the spray still plays over the wound. It is absolutely necessary that it should be properly prepared. I must not enter into the method of preparation, further than to say that catgut undergoes a remarkable change in its physical constitution when steeped for a long time in an emulsion of water and oil, so that it becomes quite transparent, and no longer liable to become soft and slippery when placed in water or in a watery discharge. But for this circumstance, the animal ligature would be an impossibility; but, if you use it properly prepared, you will, I believe, see good reason to be satisfied with it. That which I now show is extremely fine, much finer than any silk commonly employed; and yet with a piece like this I should not hesitate to tie the femoral artery in a stump. If you choose to use it thicker for a large vessel, you can do so. It is conveniently carried on a little winder, in a capsule appended to a caustic case. The catgut, as tied in the ordinary reef-knot with the ends cut short, seems to me to be a perfect hæmostatic. It has all the simplicity and universal applicability of the ligature, with, at the same time, the virtual absence of any foreign body from the wound. If putrefaction be avoided, it is rapidly absorbed, and you may reckon as certainly on the absence of any interference with primary union on the part of such ligatures, as if there were no ligatures at all. Should putrefaction occur, I was at first uneasy lest the prepared catgut might soften and permit hæmorrhage. I was, therefore, at the pains to test some of the prepared catgut in the following manner. I tied some pieces of it at intervals round a cylinder of India-rubber, so as to pinch the India-rubber to a considerable degree of constriction, and then introduced it into putrid serum of blood, and kept it for a week at a temperature of about 90 deg. At the end of this period, the India-rubber was still constricted, shewing that the catgut had retained its hold in the putrid liquid, in spite of the constant strain of the elastic material upon the knots. No doubt, in such parts of a wound as actually putrefy, the little bits of catgut must come away like shreds or sloughs of cellular tissue; but I am bound to add that this is only a matter of presumption: for, although I have used nothing but this ligature for securing vessels in wounds for more than two years, excepting torsion, which I comparatively rarely resort to, and though in certain classes of cases putrefaction cannot be avoided, in no instance have I seen the catgut knot come away, nor have I ever known secondary hæmorrhage or abscess caused by its use.

I have spoken of the injury that the stimulating carbolic acid lotion inflicts on the tissues by irritation. The great disadvantage of this is, that it causes an unusually large flow of serum during the first twenty-four hours or more; and you must provide a special exit for the serum, else you will have inconvenience from tension, which will lead to suppuration, though not of the putrefactive kind. For the purpose of guarding against this, I introduce, at the most dependent part of the wound, a strip of lint steeped in a solution of carbolic acid in about ten parts of olive oil, to serve as a "drain". This is drawn out under the spray in twenty-four or forty-eight hours. If you drew it out without providing an antiseptic atmosphere, you would certainly have putrefaction. In some cases, a fine

drainage-tube is convenient for this purpose, if well steeped in solution of carbolic acid. For, as India-rubber happily absorbs carbolic acid, the drainage-tube is antiseptic when introduced.

There is yet one other point to which I must allude, which is, that carbolic acid interferes with the cicatrisation of a wound, if it act directly on it. This agent operates with special energy on the epidermis. Sometimes this is a convenience. For example, if we dip the forefinger into a carbolic acid lotion, and hold it there for a second or two, we may be certain that the epidermis is so imbued with the carbolic acid, that it is for the time antiseptic, and therefore may be introduced into the cavity of an abscess or any other part which we wish to explore; and very valuable an antiseptic forefinger often is in that way. But this action of the acid on the epidermis makes it interfere with cicatrisation; and even the gauze, though generally perfectly free from irritating influence upon the sound skin or an old scar, will frequently, if applied directly to a wound, entirely arrest new epidermic formation, and sometimes excoriate a tender young cicatrix. Something, therefore, must be interposed to protect the wound from this effect of the antiseptic. What we have generally used hitherto for this purpose is what we have called the "oiled silk protective", consisting of oiled silk varnished with copal varnish, which makes it much less permeable to the carbolic acid. But, unfortunately, this is not a perfect protective. It acts admirably until it becomes moistened; but afterwards the water that penetrates the substance conveys the carbolic acid in. I have striven in various ways to get something perfect in that way; and I have lately been engaged in a manner which, though not yet completely successful, may be mentioned on account of its interest otherwise. Some time since, I tried the effect of an oil-paint on oiled silk, in the hope that the particles of pigment, closely packed, might serve considerably to intercept the carbolic acid, though the oily material that cements the particles is permeable to it. The result was such as I had hoped, except that the material proved too stiff for convenient use. A few weeks since, however, I happened to be going through an India-rubber factory, and there I saw, among other things, the process of mixing various pigments with caoutchouc; and it occurred to me, might not India-rubber, blended with some pigment, answer as a protective? The India-rubber is permeable to the carbolic acid; but with the pigment it might not be so. I first tried a coloured rubber that had been vulcanised, and then came out a most curious and interesting circumstance. The sulphur in the vulcanised India-rubber acting chemically on the discharge, the result was a stench like rotten eggs, presenting an excellent example of decomposition without putrefaction; for there was no putrefactive fermentation—no spread of the decomposition into the interior of the wound or abscess. It was limited to the exterior, and was simply the result of the chemical action of the nascent sulphur upon the discharges. And if, under such circumstances, we resumed the oiled silk protective, we again had perfect absence of unpleasant smell.

The necessity for avoiding any sulphur in the material was a great cause of embarrassment; for, as a general rule, the admixture of any foreign ingredient with caoutchouc causes a most inconvenient softness and adhesiveness of the product—evils which vulcanising completely corrects. Magnesia forms an exception to this rule, producing with the pure rubber a very satisfactory substance as regards its physical properties. But then we found that, in the case of a sensitive skin, this magnesia caoutchouc produced intolerable itching and redness, for a reason which I do not quite understand. At length it occurred to me that perhaps shell-lac, which seems quite un-irritating, might be mixed with the caoutchouc; and that this might answer the purpose. For though shell-lac, when once mixed with carbolic acid, holds it very tenaciously, as is seen in the lac plaster with which some of you are familiar, yet the acid does not readily penetrate into unmixed lac. When I suggested this to the managers of the India-rubber works,*

they told me that they had previously ascertained that shell-lac could be perfectly blended with caoutchouc; the product being the beautiful article you now see, sufficiently tough, yet pliant, transparent, and with no unpleasant odour, and, as I ascertained by experiment, practically impermeable to carbolic acid. Here, then, I thought I had attained the object at which I had been aiming for years; and already we were getting results of a kind we had never got before: we had reached more nearly than ever before the conditions which we know must occur subcutaneously. I had never witnessed the healing of ulcers proceed so rapidly as I have seen it under this protective, covered with overlapping gauze; but, to my extreme chagrin, I have learnt within the last few days that, in two patients with very sensitive skins, even this material produces a trifling irritation. Still I cannot but believe that we are on the verge of getting what we want in a protective—viz., a tissue perfectly bland and unstimulating in its own substance, and also quite impermeable to the antiseptic.

So much, then, gentlemen, as to our means; and now, if you will allow me a little time longer, I will tell you what I expect will be the most interesting to you all—the history of some cases illustrative of the effects of this treatment.

The simplest of all cases for antiseptic management is that of abscess; and the most beautiful, as it seems to me, in the results. It is the simplest, because here we do not apply the antiseptic to the part concerned at all; we only open the abscess in an antiseptic atmosphere by free incision, pressing out the pus—ensuring, in short, free exit for the contents, without the possibility of the entrance of putrefaction. The antiseptic never enters the abscess-cavity at all; and I would beg of those who still hold the view that carbolic acid exerts its beneficial influence by acting upon the tissues of the part, to consider carefully the case of abscess—say a psoas abscess connected with diseased vertebræ. Under the carbolic acid spray, a free incision is made into the cavity; and I may remark that the spray is of peculiar value for this purpose, because, if an artery happen to be divided during the dissection, it can be secured without any difficulty, or it can be tied after the abscess has been opened. As we used to proceed, plunging in a knife, and effecting the opening at one stroke, if a deep vessel were divided, it was a matter of very great inconvenience. Suppose now a large psoas abscess has been opened under the antiseptic spray by free incision, we press out the pus—letting out, it may be, a quart or more; and on the following day we find, if we have emptied the abscess thoroughly, that there is not a drop of pus to be pressed out, and no pus is formed from that abscess for the future. This is a thing that must be seen to be believed. It seems so contrary to one's experience, and yet it is exactly in accordance with pathological theory. Now suppose a few more days have passed, probably nothing whatever can be squeezed from the abscess-cavity; but, if you can squeeze out a drop of anything, it is a drop of clear serum—clear, transparent serum. Hence, Mr. President, I say it is transparently clear that the carbolic acid does not enter into the abscess-cavity at all. Still less, if possible, can it penetrate to the diseased bone of the vertebræ; because, if the carbolic acid did enter in even a slight degree into the abscess-cavity, it would produce opacity of the serum, from coagulating its albumen. Therefore the clear drop which you press out is certain proof that the carbolic acid does not act on the affected part at all.

I have here a piece of bone which came out along with the pus from a large psoas abscess which I opened in April last—a portion of cancellated bone. I must not hand it round, because it is precious, and one similar piece has already been lost through injudicious exhibition. But you, Mr. President, can see that this is cancellated bone, proving that the abscess really did communicate with the diseased vertebræ. The patient was an adult, with an acute curvature of the dorsal region of the spine, and other symptoms of spinal disease. He had a sense of painful constriction round the waist, pain shooting down into the haunches and lower limbs; and he was in a state of very great general prostration. Still, if we had not

* I cannot but publicly express my thanks to the managers of the North British India-rubber Works, for the great kindness and liberality with which they have carried out these experiments for me.

seen these bits of bone, it might have been said by anybody, and perhaps fairly said, "I do not choose to believe that this abscess was connected with diseased bone; it may have been concomitant with acute spinal symptoms, without being in connexion with the vertebræ." But the discharge of the bone with the pus makes us sure on this point. Well, in that case the patient experienced immediate relief from his distressing symptoms, without the occurrence of the slightest febrile disturbance; and there has been no discharge of pus since the evacuation of the original contents, though up to the present time there has been still an oozing of serous fluid into the gauze, which is changed once every four or five days. Four months, you may say, is a long time for the treatment to have continued. No doubt it is so; but what is the alternative? The alternative, as we all know, either if the abscess be opened by free incision or allowed to open itself, is almost invariably death, either after an acute course of irritative fever, which we should all wish to prevent, or after a long period of protracted hectic, perhaps even more distressing. Meanwhile, the serous discharge in this case has been steadily diminishing; and I have reason to believe, from previous experience, that we shall ultimately obtain a cure.

Among other cases of this kind, I may mention one as peculiarly instructive. On January 20th, 1870, I opened a psoas abscess in a man twenty-seven years old, who from the age of eleven had had antero-posterior curvature in the upper dorsal region of the spine. At length a psoas abscess made its appearance, and, increasing slowly, extended far down into the thigh. I evacuated between fifty and sixty ounces of thick pus, with lumps of curdy material, and several small pieces of cancellated bone and numerous other osseous particles came out in subsequent dressings. My friend Dr. Hector Cameron (the case being a Glasgow one) undertook the after-management, continuing the antiseptic dressing, and changing it, when the serous discharge became slight, every four or five days—the lac plaster being used; and at length, on the 5th of February last, it was perfectly healed. Then, after giving the spine a few weeks' more rest (for I believe, after such an abscess has completely healed, you ought still to give the spine repose for a while, just as you would in a case of spinal disease without abscess), that patient perfectly recovered, and is now walking about, a healthy man. Here patience and perseverance, continued for more than a year, were at length rewarded by success.

In connexion with these cases of abscess, there is a curious circumstance with respect to which I must put you on your guard; that is, that sometimes the discharge, serous though it is, soaking into the gauze, comes to stink in the dressing, in the same sort of way as pus stinks when acted upon by the vulcanised India-rubber, though with a different quality in the smell. Why this is, I do not know. It seems that it is not the carbolic acid only that occasions the chemical change, for we never had such an occurrence when we used the lac plaster. Whether it may be the resin in the gauze, I do not know; but certain it is that you often have some smell; and sometimes, instead of being merely a faint odour of rotten hay or bad soap, it is exceedingly foetid. A few days before I left Edinburgh, I opened, in a little sickly, dwindled child, a conjoined psoas and lumbar abscess, associated with spinal disease. I emptied the extensive cavity by free incision in the lumbar part, and dressed with the gauze. Two or three days afterwards, on approaching the bed, I perceived a strong smell; and, on taking off the dressings, the stench was very great. As this was the first case in which I had ever opened a psoas abscess with the 1 to 100 spray, and as I had seen regurgitation of the spray take place during the operation, I confess I was alarmed at this foul smell; but it so happened that I could squeeze out a very little fluid from the interior; and, taking it away under the spray, and diffusing it upon a plate, so as to be able to estimate accurately any odour it might have, I found that it was perfectly free from smell. Just as in the pus under the vulcanised caoutchouc protective, there was decomposition occasioned by the chemical action of the dressing, but no putrefactive fer-

mentation; for that would necessarily have spread into the interior. We took the course of dispensing with the mackintosh among the gauze, because my house-surgeon, Mr. Bishop, has noticed that, if the mackintosh be removed so as to allow free escape for the gaseous products of decomposition, you do not get nearly so much smell; but, if the mackintosh be dispensed with, you must use a greater thickness of the gauze, and dress daily. This was done; and, within a week of the opening of the abscess, the discharge was only a few minims of serum *per diem*, and the boy had already picked up wonderfully in general health.

Ligature of arteries in their continuity presents one of the most striking illustrations of the advantages of antiseptic treatment. I have only had two opportunities, since I published on the subject, for applying the catgut in this way; both of them were cases of popliteal aneurism, and both were formidable from having become diffuse. One of them was in a man aged 47, who had only noticed the aneurism for five weeks, during which time it had been rapidly on the increase, so that the patient observed a change in its dimensions every day. On his admission into hospital, August 31st, 1869, it reached from the upper part of the ham to the top of the lower third of the femur. At the same time it caused extreme pain, with numbness in the limb, and the knee was bent at a right angle. I tied the femoral artery at once with a stout piece of prepared catgut, cutting the ends close to the knot, and the result was that within ten days the wound was a superficial sore bridged over with cicatrix, which afterwards healed like an ordinary narrow ulcer. There was a remarkable contrast in one particular in the treatment of this case compared with ordinary cases. Instead of leaving the patient to lie with his limb constantly in one position on a pillow until the time should have elapsed for the ligature to separate by suppuration—there being no separation to take place, and, as I believed, no source of irritation present—I from the first began free movement of the limb, and at a very early period got the knee extended, to the very great advantage of the patient. I remember a precisely similar case in which I tied the vessel with silk in the ordinary way some years ago, where the patient was not able to straighten the knee for weeks after leaving the hospital; and in fact I do not know that he is able to do so now.

The other case was much more remarkable. The patient, also aged 47, but looking more like 67, presented himself at the hospital last summer with a diffuse popliteal aneurism which had run an acute course, but already extended some way up the thigh. I urged him to come at once into the hospital. He said he had important business to attend to, and could not do so. He came back a fortnight later with the aneurism grown to enormous dimensions laterally, and extending up to the junction of the middle and upper thirds of the thigh. At the same time, partly from hæmorrhage into its own body, and partly from being worn out with the pain he endured, he was reduced to an extreme degree, so that one of the surgeons of our hospital remarked, "He is a dying man at any rate". In his case, also, the knee was flexed; there was much numbness and œdema in the foot, and no pulsation in either tibial artery. Under such circumstances what was to be done? To open into this enormous mass by the old operation would be most unpromising. To amputate would, I felt sure, be to kill the man outright. The only alternative was to tie the artery. Considering the extent to which the huge mass had already interfered with the circulation, it seemed extremely probable that such a procedure would be followed by gangrene. Still it seemed to afford the only chance. Then the next question was, Where should it be tied? The lower down, the further from the heart, the better, if it could be safely done. But was there any choice? Was not the external iliac the only practicable site? The only part remaining in the thigh was what I believe is rightly regarded as a forbidden region, from the vicinity of the profunda or other considerable branches. Yet having ascertained, by experiment, that an antiseptic catgut-ligature does not weaken the artery at all, and does not make secondary hæmorrhage likely to occur under such circumstances, I felt justified in putting on the liga-

ture in this forbidden region. It is an extremely striking fact, if we think of it, that after a large arterial trunk has been tied, we never have hæmorrhage on the second or third or fourth day—never practically during the first week we may say. The external coat, pinched in by the ligature, is always strong enough to resist the impetus of the blood, however near the ligature may be to a branch, till the tissue has undergone alteration, till it has become softened by the granulating process through the irritating influence of the septic ligature. But if the ligature be not septic, nor in any other respect irritating, there is nothing to weaken the external coat. Why should it be weakened? On the contrary, as experiment has shown in one instance, the catgut itself, becoming replaced by living tissue, acts as a strengthening ring instead of making the vessel weaker. Hence I felt justified in applying it as near as possible to the aneurismal tumour, though this was just about the most frequent place of origin of the profunda. Catgut a good deal thicker than that which I have shown was used, the ends being of course cut short, and all went well. There was no appearance of suppuration from the vicinity of the ligature, and the enormous mass gradually became absorbed. Being much emaciated, the man put on fat so fast that we were deceived at first with respect to the diminution of the coagulated blood, which was actually going on much more rapidly than we inferred from our measurements. Ultimately all that great mass disappeared, and the patient, first hobbling with crutches, then walking with a stick, is now a hale man, using no stick at all. I should add that in the performance of the operation, though I cut down higher up than the apparent upward limit of the aneurism, when I divided the deep fascia I found that the extravasated blood extended further than the swelling, so that I cut into the coagula of the aneurism. What would, in all probability, have been the result of such a procedure without antiseptic treatment?

Mr. President, I have hitherto felt some hesitation in publishing cases of this kind, lest I should lead my professional brethren to do that which would only end in disaster. An eminent London surgeon wrote to me some time ago asking for catgut, as he wished to use it for tying the external iliac. I wrote back to him saying that if he did not feel sure he could avoid putrefaction in the wound, I would not advise him to use catgut, because, if the wound should putrefy, the catgut lying there, without any means of withdrawing it, would perhaps lead to unhealthy ulceration and so occasion secondary hæmorrhage, as happened in a case of Sir Philip Crampton's; which was of course not treated antiseptically. But with the spray I feel that, in operations of this sort, safety is a matter of certainty. Any one of you who chooses may, I believe, tie the femoral artery with no more danger than in making a cut in the skin on the hand; and with much less danger than making a cut in the skin on the hand without antiseptic treatment in an ordinary hospital.

The catgut ligature has other applications of such interest, that I must beg you to listen to some cases in illustration of them. Those to which I wish to refer are two of irreducible hernia, which failed to yield to the treatment which Mr. Syme long advocated, that of keeping the patient lying on his back, giving a spare diet, with frequent doses of castor-oil, and daily application of the taxis. One was a ventral hernia in a young woman, originating apparently in deep seated abscess of the abdominal wall. It was of large size, causing extreme inconvenience, and the treatment to which I have referred having failed, I laid the sac freely open so as to expose the adherent intestines and omentum which it contained, and separated the adhesions under the comparatively inconvenient antiseptic means which we then used, freely sponging with 1 to 40 watery solution of carbolic acid, and protecting such portions of the viscera as were not being immediately operated on by a cloth dipped in the lotion. When the adhesions had been all detached, by tearing or by the knife, I reduced the viscera under the antiseptic cloth as under a substitute integument, and then pared the edges of the orifice by which the sac communicated with the abdominal cavity [an oval aperture about three inches long], cutting off the peritoneum from the muscular and fibrous structures, and then stitched those edges securely with closely applied

interrupted sutures of prepared catgut, the ends being cut off near the reef-knots. The external wound was then stitched and treated antiseptically like an ordinary one. During the introduction of the deep stitches, the patient vomited violently, so that it was only by exerting very firm pressure that I prevented further visceral protrusion, and after going back to bed she vomited again—a tremendous test for our catgut stitches; but they stood the test. The young woman left the hospital without any hernia; and though a very small protrusion did afterwards appear below one part of the cicatrix, it was readily reducible and amenable to ordinary treatment by means of a truss.

The other case was a large umbilical hernia in a cook. It interfered with her duties very much, and at last she could hardly walk about at all. This case was treated like the last; but, in the absence of the spray, if I had known what I was about to encounter, I should not have entered upon it. It was a most laborious and protracted business, dividing very complicated intestinal adhesions by cutting and tearing, and at the same time maintaining constant vigilance in protecting the exposed intestines with the antiseptic cloths. The thing, however, was at length accomplished, and the entire mass was returned into the abdomen. The edges of the deep opening were pared and sewn together closely with catgut sutures with their ends cut short, and the external wound was closed with carbolised silk stitches, leaving an opening for a "drain." A large quantity of blood happened to become effused into the sac during the first twenty-four hours, so as to reproduce the appearance of tumour, though not in sufficient amount to cause tension, and this made the absence of putrefaction and suppuration all the more striking. And now occurred a most unhappy circumstance, though at the same time instructive. The patient, who, as I afterwards learnt, had before been liable to temporary attacks of mental alienation, became, I fear, permanently mad, and a week after the operation she was up and walking about the ward, certainly testing the catgut stitches most severely, yet without any bad result. When the wound had healed, she was taken to a lunatic-asylum; and I have not been able to hear of her later than six weeks afterwards, when she left for another institution of the same kind; but up to that period there had been no return of hernia. Thus, you see, the catgut-stitch becomes a new engine in surgery, enabling us to attach deeply seated parts to each other, leaving the connecting medium to be removed by absorption.

As another striking illustration of antiseptic treatment, hitherto unpublished, I may mention a case of ununited fracture of the neck of the thigh-bone. The patient was a fine powerful man, 45 years of age, who had fallen down from a cart, and broken the neck of the femur. He had been treated in hospital elsewhere; but, strange to say, according to his own statement, he was turned out of that institution in five weeks on crutches, whereas he ought surely to have had at least six weeks with the long splint; and eighteen months afterwards he applied to me. There were all the ordinary symptoms of an ununited fracture of the neck of the femur. There was shortening to the extent of an inch and an eighth, while the trochanter was correspondingly nearer to the iliac crest than on the other side, and, instead of moving in the arc of a circle on rotation of the limb, turned on its own axis with a crunching sensation. The man could not raise his leg beyond a trifling degree, or turn round, as he lay, without supporting the trochanteric region with his hand; and he could rest no weight whatever upon the limb. Under ordinary treatment, this man would have been condemned to a life of hopeless uselessness. But, considering his time of life, there could be little doubt that the fracture was extracapsular, and that, if the ends of the fragments could be brought into the condition of a recent fracture, there would be union under proper treatment, if the man survived. But to effect this would involve making a free external wound, and, for aught I could tell, opening into the capsule of the hip-joint. And would that be a justifiable procedure? Thinking the matter over, although our antiseptic means were then comparatively imperfect, I believed I could operate so as to avoid putrefaction; and I felt sure that if putrefaction did

not occur, the procedure would be free from danger. Well, if I believed that I could do it with safety, and that it would probably have the effect of restoring the man to usefulness, it became my duty to do it; and I resolved to make the attempt. Accordingly, on December 2nd, 1868, the patient having been put under chloroform, I first moved the extended limb in all directions with the utmost freedom, so as to break down adhesions, which gave way with a report that could be heard all over the operating theatre. Then I applied the pulleys, and practised extension to the utmost degree that appeared justifiable, in order to draw down the lower fragments; and, the patient being placed on the sound side, with the pulleys still in operation, I cut down above the trochanter with a free longitudinal incision, the knife being smeared with a solution of carbolic acid, in four parts of olive oil, which was also continually poured into the wound—a very inconvenient mode when compared with the spray. At length, having cut down to a sufficient depth, I found, to my joy, that the tip of my finger, dipped, of course, in the oil, could be passed between the fragments, the ends of which, though irregular, felt smooth, as if covered with cartilage. I now took a gouge dipped in the oil, and roughened the edge of each fragment, producing abundance of bone-chips. I did not think it worth while to take out the chips; because, supposing putrefaction avoided, I expected the chips to be absorbed. A large piece of lac-plaster was then applied as an external dressing; and, while the pulleys were still acting, a long splint was put on very firmly, with iron bars substituted for the wood opposite to the seat of operation, to permit access for dressing. A few hours later, my house-surgeon came to tell me that there was serious bleeding. I went at once, and found that such was, indeed, the case, the blood having gone through the patient's bed, and made a pool on the floor. Without disturbing the splint, I carefully removed the dressings, and proceeded to plug the wound with long strips of lint dipped in the solution of carbolic acid in oil, feeling sure that, as there had been no material bleeding at the operation, plugging would be sufficient; and, as I pushed these plugs home, with my fingers dipped in the oil, and felt the mass of clotted blood, with the multitude of osseous fragments among it, I almost wondered at my own hardihood in making voluntarily a compound comminuted fracture of the neck of the femur. For it is one thing to do as Mr. Cresswell, whom I see before me, did with such striking success three years ago, to treat antiseptically an existing compound comminuted fracture of the neck of the femur—and that remarkable case, resulting from gunshot wound, ought, I think, to have attracted more attention than it did (see *Lancet*, Aug. 29, 1868)—but it is quite another thing to produce such an injury voluntarily. However, the wound was stuffed, thoroughly filled, about a dozen strips of lint, an inch broad and fifteen inches long, being employed; and the hæmorrhage being thus arrested, lac-plaster was re-applied. Next day I extracted the lint, in an antiseptic atmosphere produced by the best means then at our disposal, viz., under a large cloth steeped in the strong oily solution, beneath which dressing-forceps was insinuated, and with perfectly satisfactory result. No bleeding occurred afterwards; the coagula in the wound gradually became organised; nothing more was seen of the chips of bone, except two minute, partially absorbed, spicula, which appeared at long periods; and, not to enter into needless details, that man, when last I heard of him, was walking about with an useful limb, with only three-eighths of an inch of shortening.

The freedom with which joints may be opened in an antiseptic atmosphere, followed up with antiseptic dressing, is among the most striking and valuable circumstances of this treatment. One of my earliest cases of this kind was a large loose cartilage in the knee-joint, about an inch and a half long by three-quarters of an inch broad—not a favourable subject for the ingenious and excellent method of treatment of Mr. Square of this town. I cut down freely on the loose cartilage, having carbolic acid and oil dropped on the wound. I then fixed a sharp hook in its substance; and, producing an antiseptic atmosphere, as in the last case, by covering the part

with a cloth dipped in the oil, so as to prevent mischief from resulting from the regurgitation of air into the joint, hooked it out. I have since had another somewhat similar case. In both instances, I left the wound communicating with the knee-joint open, to allow free exit of the discharges; and no disturbance of the articulation took place. With the spray, the direct operation would be perfectly simple, as well as safe. As we can thus open joints without any mischief, we have the opportunity, in case of disease, of making free incisions before suppuration has occurred; and this treatment I have found to be extremely valuable in preventing suppuration and avoiding amputation or excision. Among several such cases may be mentioned one of disease of the wrist in a middle-aged woman who was admitted into the Edinburgh Infirmary in July of last year, suffering extreme pain night and day. Suppuration appearing imminent, and the case having resisted ordinary treatment, I made a free incision antiseptically down upon the carpal bones and the wrist-joint, cutting in the angle between the tendons of the indicator and extensor secundi internodii pollicis. During the following night, the pain was altogether absent; and, antiseptic dressing along with perfect rest being continued, the wound soon became superficial, without any suppuration of the joint; and she left the hospital retaining her hand in perfect soundness.

Partial excision of a joint, so unsatisfactory when practised for caries with sinuses,* may sometimes be performed with great advantage when suppuration has not occurred, or when the pus has been evacuated antiseptically. An instance of this occurred in my practice last spring, in a man fifty-seven years of age, with an obstinate and painful disease of the wrist affecting the whole articulation, but especially the end of the ulna, which was extremely thickened. I cut down under the spray and nipped off the end of the ulna with bone pliers, and found the cartilage rough and eroded, though without suppuration. The wound was left open at its central part, with a drain of lint soaked with an oily solution maintaining a free communication with the joint, yet healing took place without the formation of a drop of pus. The man was discharged with a strong useful hand, but came back a few weeks afterwards, not on account of recurrence of the disease, but because he had fallen from a haystack when he was at work and broken the radius of the same arm.

Senile gangrene is, I suspect, a disease, the treatment of which must undergo a complete change through the antiseptic system. Amputation in such cases is now generally prohibited on account of the great probability of sloughing of the stump. But what is the reason of this risk of sloughing? The cause of the original gangrene is generally interference with the arterial circulation. But that interference is only sufficient to produce actual death at one spot where the disease begins, and it generally spreads by inflammation. Now dead tissues do not cause inflammation of themselves, any more than a bit of catgut does. Inflammation occurs because the dead part putrefies, and the parts in the vicinity, being weak, die from inflammatory mortification. If that be true, supposing we were to amputate and avoid putrefaction in the stump, who is to say but that sloughing, instead of being the rule, might prove the exception? while even such sloughs as might occur, if kept from putrefying, should be limited to the extent to which the operation might interfere with the vascular supply. Having long entertained these views, I was prepared to put them in practice in the following case.

A year ago, a woman above sixty years of age came into the hospital with her little toe affected with black discoloration, which had commenced at its tip and gradually extended to its base, and she was suffering constant acute agony. After carefully washing the surrounding skin with an antiseptic lotion—for that is absolutely essential in such a case—I amputated the

* When an operation is performed in a part affected with sinuses, the presence of putrefaction in such tracks renders the case unsuitable, of course, for antiseptic management, as described in the text. For a special mode of dealing with such cases, the reader is referred to the article "Amputation", in Holmes's *System of Surgery*, second edition, vol. v.

toe within an eighth of an inch of the black part and dressed antiseptically. The result was that the wound healed without the slightest inflammatory disturbance; but the weakness of the tissues was indicated by the circumstance that a little bit of skin, about the twentieth of an inch in breadth, sloughed at the margin of one of the flaps, and a small piece of subcutaneous tissue also came away. Further, after a year's respite, her proclivity to the disease has been shown within the last few days by its reappearance in the tips of all the remaining toes of that foot, though the scar of the operation remains sound.

Though I regret to find that I have already greatly exceeded my allotted time, I must ask you to allow me to say a word or two regarding the treatment of ulcers under the gauze and protective. When shielded alike from the irritation of putrefaction and that of the antiseptic, ulcers heal which would otherwise refuse to do so. Last winter I had under my care in the Infirmary a young man who had burnt his foot very severely four years previously by treading in molten metal, some of which ran down into his boot. The large sore that resulted had been prevented from healing completely in consequence of the shrinking of the scar, which reached from some distance up the leg along the outer part of the dorsum of the foot to the toes, of which the outermost had been so much retracted that it pointed backwards, the end of the metatarsal bone being the most prominent part. A surgeon of considerable eminence had advised amputation of the foot, and he was afterwards under my care for five months in the Glasgow Infirmary, though without any good result; and at length, not wishing to submit to amputation, he came to me for a certificate of incompetency for any active occupation. I admitted him for the purpose of trying skin-grafting; but this failed, fortunately, as it turned out, for the illustration of this branch of the subject; for, having got the putrefaction present on admission completely arrested by strong antiseptic lotions, directly applied, and afterwards using nothing stronger than one of carbolic acid to four hundred of water as a lotion, and so making the dressing as little irritating as possible, healing went on in the most steady and beautiful manner under the gauze and protective, changed once in four or five days, and the man has now a thoroughly useful foot. I do not know that any result we have obtained has given me more pleasure than this.

When I first applied antiseptic treatment to ulcers, I did not aim at better results as regards rapidity of healing than those obtained by water-dressing. The object which I first had in view was merely to keep the atmosphere of our wards clear from the contamination occasioned even by healthy sores, if their discharges be allowed to putrefy. And the effects of this rigid antiseptic management upon the hospital atmosphere forms one of the most important features of the treatment. Last evening I learnt from one of the surgeons of a large Liverpool hospital the gratifying news that pyæmia has almost, if not entirely, left wards that were very subject to it before; and this, as far as can be ascertained by the surgeons, from no other cause than the careful carrying out of antiseptic treatment. The results of my own experience in this matter in Glasgow were published nearly two years ago; and I may repeat now what I then said, that wards once among the most unhealthy in the kingdom were converted into models of healthiness, simply as the result of antiseptic treatment. A year ago I published equally satisfactory evidence regarding my practice in the Edinburgh Infirmary for nearly a year. Another year has since elapsed, and during the whole of my Edinburgh period—now almost two years—in wards containing nearly sixty beds, we have not had a solitary case of pyæmia, whilst we are also entirely free from hospital gangrene and from erysipelas. Yet in those wards the beds are placed much closer than is in accordance with modern notions. At first I had them thinned; but learning that patients were placed on "shake-downs" for the night, and finding that, in spite of this arrangement, which of course was the same in effect as if all had beds, the wards remained perfectly healthy, I had the number restored to its original figure. Now I was myself at one time house-surgeon in those same wards for a year and a quarter, and I need hardly say that the surgeon under

whose care they used to be was a man under whom things were managed as well as they could be with the means then at a surgeon's disposal—I allude to Mr. Syme; yet I may safely say that such complete immunity from hospital-diseases never existed in those wards before the antiseptic system was introduced.

Nor has such testimony been borne by myself alone. Professor Saxtorph of Copenhagen, in a letter which I communicated to the *Lancet* a year since, published most striking information as to a very large hospital previously extremely liable to pyæmia, so that the smallest wounds often gave rise to it, yet remaining for a year absolutely free from the disease, and, so far as he could judge, from no other circumstance than the rigorous adoption of the antiseptic system. Equally satisfactory evidence regarding the healthiness of hospital wards brought about by this means has been given in one of the Blue Books of the navy by Dr. Bernard of the Naval Hospital here.

After statements of this conclusive character have been published regarding what is generally admitted to be the most urgent medical question of the day, when I consider the apathy with which they have been received in many quarters, I cannot avoid being reminded of the language of Macbeth—

"Can such things be,
And overcome us like a summer's cloud,
Without our special wonder?"

Mr. President, before I sit down, I must make an apology for the large share which my own performances have had in this address. For this defect I crave your kind indulgence, and only beg you to believe that I am actuated by other than selfish motives. For sure I am that, however much the means of carrying out the antiseptic principle may come to vary from those which we now use, the principle itself will certainly be ultimately recognised as the most important of all those that shall guide the practice of surgery; and the sooner our profession is aware of this, the better will it be for suffering humanity.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

*At the Annual Meeting of the British Medical Association,
in Plymouth, August 1871.*

By A. P. STEWART, M.D., F.R.C.P.,

President of the Section.

GENTLEMEN,—The objects and aims of preventive medicine are now beginning to occupy a fair share of the public attention. The second chapter of *Ginx's Baby*—whose gifted author I am proud to call my friend, and once had for my fellow-worker—is an illustration of this statement, and is in itself a most instructive and admirable summary of the sanitary question. That second chapter—which is full of useful and suggestive thought mingled with much pleasant wit, and gives evidence of minute personal acquaintance with the homes and habits of the poor—leads us to infer that when an author like Edward Jenkins takes this matter up, and places it in the forefront of a work which counts its readers by tens of thousands, it is now at length beginning to assume its proper place and proportions in the public eye. Let me now offer a few remarks on some of the most noteworthy events that have taken place since we met at Newcastle, in connection both with the proceedings of the Public Medicine Section there, and with the contents of the programme now before us. And for clearness' sake, let me arrange my thoughts under these four heads:—

1. The results of individual effort;
2. The results of Associational effort;
3. The proceedings of the Legislature; and
4. A few concluding words on the moral and religious aspects of our subject.

1. Preventive medicine furnishes no exception to the general rule, that much—very much—of what is most important both in scientific and social progress is the work of single individuals. Such is the case

with regard to the treatment of habitual drunkards. We were indebted last year to Dr. Eastwood for a paper on Intemperance in its Medical and Social Aspects—one of the most interesting and suggestive papers brought before the Section; and I am happy to say we are this year promised another from the same pen, on Alcohol in Health and Disease. Dr. Eastwood and Dr. Elliot of Carlisle are doing much towards the practical solution of this social problem; but it is our excellent and valued friend Mr. Dalrymple who may be fairly said to have made this question his own. And with such energy and zeal has he taken it up, that I believe this most difficult and delicate question will in his hands be brought before long to a satisfactory settlement. I had hoped he would have been here, and himself have taken part in our discussions; but I understand he has gone to America, with the view of gathering materials for his own use in the next session of Parliament, in connexion with his Habitual Drunkards' Bill. How impressive the lesson conveyed to us of the strength and sadness of this master-passion, by the difficulty we experience in framing any measure whereby we may help its victims to struggle upwards from that deep into which the descent is so easy, but from which the return to light and freedom and a "right mind" is so rare. You may set almost any amount of machinery at work to deliver those who have become the slaves of intemperance, yet in the great majority of cases you will be checkmated in all your efforts. Still I believe that, in a certain proportion of cases of habitual intemperance, legislative interference—some provision for the enforced seclusion of those who are possessed with a madness *for* drink as well as *from* it—may prove effectual for their reformation. As, therefore, we are none of us blind to the great difficulties that surround legislation on this painful social problem, let us not withhold our countenance and counsel from those who are earnestly seeking its solution.

Another subject of great importance—the transmission of infection by means of fluids—was brought before us last year by Dr. Michael Taylor of Penrith, who, in an able paper to which I listened with deep interest, opened up to us a new chapter in sanitary science—a new and hitherto unsuspected source of infection. If any doubt lingered in the minds of any as to the entire conclusiveness of the proof then adduced, that scarlatina could be conveyed from a dairyman's house by the milk with which he supplied his customers, it was soon dispelled by the appearance of a masterly paper in which my old friend and colleague, Dr. Edward Ballard, traced an outbreak of typhoid fever in Islington during the months of July and August 1870, to the same cause—the use of impure milk, whereby a large number of persons were infected. These two monographs are of the highest possible importance, and will, I expect, now that public attention is directed to the subject, be followed up by many confirmatory contributions.

The distribution of disease throughout the kingdom is another subject of great moment, for the elucidation of which we are mainly indebted to one very zealous labourer, who has undertaken this truly national work—Mr. Alfred Haviland, an abstract of whose lectures at St. Thomas's Hospital has been presented to you in our JOURNAL. The first part of his great work has appeared since our last meeting, when Mr. Topley read a most interesting paper on the Distribution of Disease in the Northern Counties. And when, as I believe will be the case next year, Parliament shall have authorised a national registration of sickness as well as of deaths, we shall be put in possession of materials by the analysis of which Mr. Haviland, and others like him, will be enabled to render services a hundredfold greater than now to the common weal. We shall then be enabled not only to distinguish death from disease, but to map out the seasons when, and the districts where, diseases prevail extensively which are not followed by death, and of which as yet the Registrar-General's returns give no sign, though they so seriously disable large sections of the population from productive industry.

There is another subject in this year's programme which I may with great propriety place among those which owe their present development to the enlightened zeal of a few individuals—I mean sewage irrigation. There is no man in England who has done more for the solution of this difficult and long vexed problem than my friend Mr. W. Hope, who is coming to tell us the results of his experience: first in the Lodge Farm near Barking, which he irrigated most successfully for several years with London sewage; and now in another farm, to which he is applying it, with the like result, that of Romford. This subject, considered in relation to the public health, is of vast importance; and I know of no one so thoroughly competent to deal with it as Mr. Hope, who, having won his spurs, and that decoration which every true soldier covets, on the bloody battlefield of the Crimea, is now reaping more lasting honours in the field of agriculture, and earning for himself the blessing which a grateful country will not fail to invoke on the man who makes, not two, but four or five blades of grass to grow where one grew before.

2. Let me now say a few words on the results of Associational effort. As regards medical reform, I more than ever heartily concur in the demand which this Association makes for the representation of the medical profession in the Medical Council. I feel that this Association—which I may say led the way on this question of medical reform, which fought the battle long ago, and was mainly instrumental, along with Mr. Headlam, in bringing about the settlement of 1858—has a right to speak, and will make itself heard, on this subject; and that in the next session of Parliament it will have power with the Government to give a right direction to any measure that may be brought in.

In the presence of Dr. Nankivell, who many years ago founded the Coventry Provident Dispensary, the great success of which has led to the formation of many others throughout the country, I scarcely feel warranted in speaking of these admirable institutions in connexion with Associational effort. But during the past year this question has entered, I venture to think, on a new phase, in consequence of a very able and comprehensive paper read by Mr. Fairlie Clarke last February, before the Metropolitan Counties Branch of this Association. Sir Charles Trevelyan, Mr. W. H. Smith, Mr. Corrance, Mr. Shaw Stewart, and Mr. Alsager Hill, were present and took part in the discussion, the direct result of which was the formation of a Medical Committee in connection with the Society for Organising Charitable Relief in the Metropolis, to consider the regulations of existing provident dispensaries, and to draw up a code of rules, applicable both to town and country, for distribution throughout the kingdom. That task has been substantially accomplished, though the rules have not yet been issued. The interest which distinguished public men and members of the Legislature have of late manifested in this question, and the steps taken in reference to it by the Charity Organisation Society, show that the public mind is being at length directed to one important factor in our social economics—I mean the *free* dispensaries, with the mischievous tendency and results of which the medical profession have long been familiar. Many who have been thoughtlessly supporting these institutions are now beginning to see them in their true light, as exercising an unquestionably injurious influence in pauperising the working population.

As regards the preservation of infant life, some active members of our Association—Mr. Ernest Hart, Dr. Wiltshire, Mr. Curgenvin, and Mr. Benson Baker—have been earnestly engaged in promoting what is really the work of the Imperial Parliament, and should long ago have been taken up by Her Majesty's Government. For it should not be forgotten that it was the labours of members of our own profession, as recorded in the BRITISH MEDICAL JOURNAL—and not the investigations of the police, who ought to have been on the alert, but were not—that first compelled the attention, both of Parliament and of the police, to this most important question. I am happy to think that the Report of the Parliamentary Committee on this subject, lately issued, gives us at length the prospect of legislative interference; and it is to be hoped that in the next Session we shall see a stringent measure enacted for the prevention of that wholesale sacrifice of infant life, which has for so long been going on under the very eyes of the police, without any attempt on their part to check it.

3. As regards the proceedings of Parliament, I shall not enter upon the vexed question of the Contagious Diseases Acts. We had some very keen discussion upon it in the section of Public Medicine last year, but are not this year, so far as I know, threatened with a renewal of it. The subject has been pretty thoroughly ventilated, so far as Parliament and the country are concerned, by the labours of the Royal Commission, a copy of whose Report I have recently received. I see no reason to modify the opinion I last year expressed of the great danger of invoking the action of the Legislature to avert, even indirectly, the consequences of vicious actions committed by persons of sound mind, and of their own free will. That principle seems to me full of peril. Of the other aspects of the question I say nothing.

On another subject of the very first importance—I refer to sanitary organization and administration, to the right understanding of which our Association, in connection with the Social Science Association, has largely contributed,—the Report of the Joint Committee, for which we are indebted to my distinguished predecessor in this chair, Dr. Rumsey, is prepared, and will be considered at to-morrow's forenoon meeting. Let me now merely express the great regret we feel, in common with the members of the Royal Commission (vol. iii, p. 360), that the scope of the Government inquiry was so limited. We earnestly remonstrated against its being restricted to England and Wales, knowing that in Scotland and Ireland, as now stated by the Commission, "sanitary administration is in some respects in advance of us". We urged upon the Government the propriety of doing what the former Government considered right, and what, it now turns out, the Commissioners themselves wished, to be done,—though it does not appear that they said so, when such expression of opinion might have been useful,—namely, to extend the in-

quity, though not necessarily the subsequent legislation, to the whole kingdom and the metropolis, so that the whole facts should be before them and the country, ere entering upon a course of legislation, which, I apprehend, is intended sooner or later to embrace every part of the kingdom alike. However, that remonstrance was unheeded, and we are now seemingly about to legislate for the whole future local government of England and Wales, on a confessedly imperfect inquiry—declared with “much regret” to be such by the Commissioners themselves—and without full and trustworthy materials, derived from careful inquiry on the spot, for rightly determining the very grave and complicated questions involved in the settlement of the areas of administration. We feel also that we have a right to—and we do—complain that, while they were not only empowered by the terms of their appointment, but expected, to investigate with special care, and to report upon, the number of officers and the local expenditure, required under the present disjointed, chaotic, and fragmentary plan of operations, as compared with the coherent, orderly, and comprehensive system, suggested in our Memorial to the Government, the Commissioners have adopted the existing chaos as the *summum bonum*, have quietly ignored the existence of any other plan, and have furnished us with no data for determining the cost, either absolute or comparative, of that propounded by themselves. These and many other topics are discussed at length in the Report of the Joint Committee, and I trust that their labours will not be without effect in assisting Parliament during the next session to arrive at the solution of this great national problem. The proposal to constitute the Poor-law medical officers throughout England and Wales, —and ultimately, I suppose, throughout the United Kingdom,—officers of health, is most objectionable. A more fatal gift to the Poor-law officers, in their own interest as well as in that of the public, could not be made. We maintain, and we always have maintained, that there is an antagonism between the public service in these matters of preventive medicine, and the private interests of practitioners, which can only be solved by making each chief officer of health independent of private practice—by having a class of men who shall be free to do their duty as preventive officers without fear or favour. I believe that a large number of the Poor-law medical officers may be employed as deputies or assistants; but that they should bear the sole and individual responsibility, *as well as odium*, of the office which the Commission, with what appears to me cruel kindness, would provide for them, is what neither they nor the public desire or deserve. Upon this question, likewise, I hope that the whole force of both Associations will be directed upon the Government and Parliament during the next session; otherwise, we need expect nothing satisfactory in the way of sanitary organization. Mr. Davies of Bristol, and Mr. Dyke of Merthyr, have, at my request, prepared valuable papers on subjects having an important bearing on the execution of the laws relating to the public health.

4. But when, by dint of legislation, we have succeeded in making our sewers sweet; in preventing the evolution of noxious gases; in stamping out pestilence and every kind of infectious disorder; in making our sewage, which now blackens and pollutes our rivers, spread over our fields a mantle of luxuriant vegetation; in aiding our drunkards—some of them at least—to reform themselves; and in making our public women healthy, if not chaste and pure; have we done all that we can or ought to do, to make our sanitary and social state a wholesome one? A voice seems continually to be whispering in our ear the familiar saying, “You cannot make people virtuous by Act of Parliament”. And there does seem to me a real danger, while we keep our eye fixed on the external helps, of losing sight of the regeneration of the inner man—of forgetting that that which *alone* can make matters radically right is a moral change in the population. Let us not, while insisting on cleanliness, forget that godliness, according to the old saying, is its next of kin. There is no antagonism between them; they are, on the contrary, the closest friends. We have borne our part, as medical men, and as a profession, from the time of John Peter Frank until now, in the origination and working out of preventive medicine. From beginning to end it has been mainly the work of our profession; and if now at length much interest is beginning to be felt in these questions by outsiders, it is because the medical profession, getting little thanks for all their labours, had for more than half a century led the way. I well remember that somewhere about nineteen years ago the leading journal, not merely of this country but of Europe, said, “You cannot expect men who live by disease to exert themselves for the prevention of disease”. A statement more false in theory, more unkind in feeling, and more incorrect in fact, was never penned. Medical men live not by disease, but by the alleviation and cure of disease, against which they make war in every shape and form; and to the honour of medicine be it said, that in the present day they are living and working more and more for the prevention of disease. They are

making it more and more their business to hold out to the public the great and glorious boon, which the public is so slow to grasp, of many thousands of valuable lives rescued yearly from the great Destroyer, but a large proportion of which the public in its blindness as yet willingly lets die. I feel bound, therefore, to vindicate the claims of the medical profession to the public gratitude, and to testify my own appreciation of the value of their labours in preventive medicine.

But when all has been done that sanitary science can do, let us never forget that it is in the forces that act upon the mind and heart of man that the real secret of reformation dwells. And unless a “light from heaven” illumine the understanding and cleanse the heart, use what external means you may, you cannot put things thoroughly to rights. Those who have been much in the habit of working among the poor, as dispensary or Poor-law medical officers, well know that their dwellings are commonly a reflection of their minds and tastes. And until you can change these minds and tastes, you can have no satisfactory guarantee that what you do to-day will not be undone to-morrow. For, as our great poet has said,

“The mind is its own place, and in itself
Can make a heaven of hell, a hell of heaven.”

But if we can combine the two great forces; if, by God’s blessing, we shall be instrumental in making the inward spiritual keep pace with the outward sanitary movement; then will ours be indeed a great moral mission, elevating while it purifies the masses of our population, making their hearts better, while it ennobles and refines their aims and aspirations; so that in the improved religious, moral, and bodily health of this great people, we may expect ere long to see exhibited, in its highest sense, that “*mens sana in corpore sano*”, which would fill the heart of every Christian philanthropist with joy.

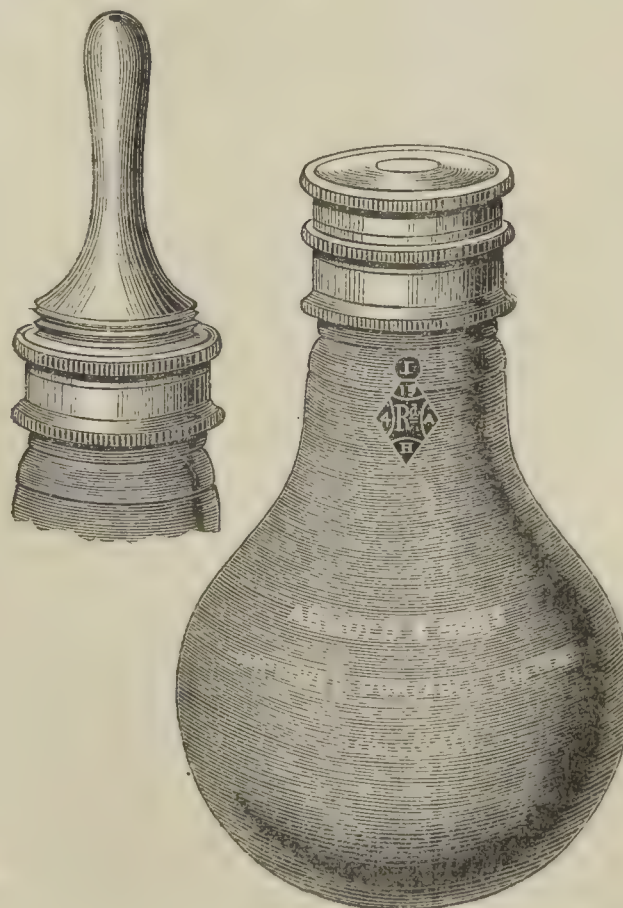
REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ARNOLD AND SONS’ IMPROVED PORTABLE ENEMA.

MESSRS. ARNOLD AND SONS, of 35 and 36, West Smithfield, London, have brought out an excellent enema-syringe, which consists of an India-rubber bottle, fitted with a reversible pipe and mount, to which a cap is arranged, so that the enema can be carried about full of fluid



ready for use. The mounts are made of brass and carefully tinned on the inner side to prevent corrosion. The instrument is well fitted up

in various ways as a vaginal, urethral, rectal syringe, or otherwise, and will be found of great service, especially that for urethral injections, which may be thus carried about in the pocket ready for use at any time.

BRITISH MEDICAL JOURNAL.

SATURDAY, AUGUST 26TH, 1871.

THE BUSINESS AND CONSTITUTION OF THE ASSOCIATION.

WE have thought it right to maintain a considerable reserve in regard to the changes projected and in course in the organisation of our Association, and to avoid taking any part in the discussions thereon. In the presence of the proceedings actually taken at the annual meeting, it is perhaps desirable now to define in some measure their precise character and importance; and this course is especially called for by some of the accidental errors of statement and interpretation into which the passing chroniclers of the meeting have pardonably fallen, which would falsify the history of the Association if left uncorrected.

The proposed changes in the laws, proposed by the Committee of Council, have been advertised in our columns for several weeks, and in such a form as would make their meaning and object most clearly intelligible—in parallel columns by the side of the existing laws. When they were read to the meeting, it was at first proposed to take votes on them *seriatim*; and a commencement was made. The meeting, however, which had for weeks ample opportunity for considering them, was impatient of the delay; and an independent member of the Association rose and proposed, amid general expressions of assent that they should be considered as a whole—a proposition which was carried by acclamation. The President of Council, to whom the duty of proposing them was entrusted, yielded to the evident and loudly expressed wish of the meeting, and submitted them for consideration *en masse*. They were subjected to some purely verbal criticisms by Mr. Liddle, which met with difficulty on the point of order—that notice had not been given of the proposed changes of phraseology, as the laws require. But these criticisms, which were of a purely literary and friendly character, will of course be considered. Beyond these criticisms, the new laws passed unchallenged. The great point of novelty is, that they declare that the General Secretary, responsible for the business conduct and organisation of the Association, that he shall in the future do that for which he is responsible, and that, in order to do it, he shall reside near his work. There could be no doubt whatever in the minds of any who examined the facts of the case, of the urgent necessity of the change; and the only wonder was, that no one had before found the courage to propose what many had long felt to be necessary. Every one was aware that the Committee of Council met at Birmingham about four times annually, and during not more than a total of twenty-four to forty-eight hours in the year; that the annual meetings occupied three days; and that, during the rest of the year, the chief business of the Association—apart from its great autonomous Branches—no matter by whom transacted, lay in London. It was there that the lists had to be kept and weekly rectified, in order

to keep members supplied with their JOURNALS; there, were the clerks of the Association; there, was its permanent chief expenditure; there, was collected the two thousand a year with which the JOURNAL advertisements now furnish the Association; there, also were transacted, of necessity, the business of the State Medicine Committee, of the Medical Reform Committee, of the Parliamentary Bills Committee, of the Poor-law Committee, the deputations to Ministers, and the communications with members and departments, which together constitute a large part of the vitality of the Association as an unit during the year, and form a large part of its claim to a character for usefulness and influence. That the executive officer of the Association should reside a hundred miles away from the daily and continuous business of the Association, in order that he might be saved a journey to be present at its quarterly Council meetings, was an anomaly which could not exist after it was openly stated and seriously considered. But the circumstances of origin, and mode of growth of the Association had to be considered; and so great was the reluctance to give to unquiet spirits the chance of raising from their tombs the phantoms of old provincial and metropolitan jealousies, that the reality of mismanagement was endured, rather than submit to the imputation of a desire to centralise. As a matter of fact, the fear has proved to have been as excessive as the pretence is flimsy. That the necessity of the change was so quickly and immediately realised, when stated, was no doubt in great measure due to the startling state of affairs disclosed by investigation, and described recently by the Honorary Secretary of the South-Eastern Branch, Mr. G. F. Hodgson, who has earned the thanks of the Association by his fearless energy and immovable public spirit in examining, and stating with irresistible logic and irrefutable accuracy, the facts of the case. The literal accuracy of that candid and clear statement being found to be beyond dispute, and considerably within the facts, the personal matter was already adjudged. Such things may be condoned. Under no circumstances could they be perpetuated. With a business man at the place of business, we may hope that the Association will no longer have to encounter the obstacles to prosperity and material progress with which in this respect it has had secretly to battle during late years. The change will bring no millennium; but, with a regular collection of subscriptions, a proper attention to its office-books, lists, and accounts, a fair service to its committees, and just courtesy and attention to its honorary officers and members, it will at least pursue unimpeded its natural growth.

The propositions of Dr. Steele and Dr. Wade were not passed; but in both cases this was rather owing to technical difficulties than to the absence of sympathy with the principles of the motions. It is clearly the opinion of the members at large that the elective element in the Committee of Council should be increased; and, seeing how much other elements of the Council have increased with the growth of Branches, it is logical that this should share the general development. The motion was wrecked on the second clause, which proposed to exclude Secretaries of Branches as *ex officio* members. But it should be remembered that this was based upon the evidence that a surprisingly small proportion of them attend. If their attendance were more regular, the objection would fall. Honorary Secretaries of Branches are so valuable as members of Council, that they must be retained at any cost; and it were to be de-

sired that all Branches should follow the example of a few, and pay the expenses of their Secretaries for attendance at the Committee of Council meetings. The first part of Dr. Wade's motion will no doubt be carried next year. Dr. Steele may profitably occupy himself, as he promises to do, with an endeavour to improve the mode of nomination. That which he proposed was technically impossible.

THE CHOLERA IN 1871.

IT is extremely important at this moment to trace the course of the Asiatic cholera during the last year, and to define its line of march up to this time. It is full of instruction, and not without elements of promise. Dr. Fauvel, one of the most competent authorities, has analysed the official documents, and his conclusions are worth noting. It was in 1870 that the alarm was given at Constantinople of the outbreak of cholera at Taganrog on the Sea of Azof, and at Rostoff on the Don. Soon the principal cities of the Russian coast of the Black Sea were attacked in the course of the month of August—Kertch, Berdianska, Theodosia, Odessa, and even Poti, whence the disease propagated itself into the interior of the Caucasian provinces. As usual, the rapid propagation along the Russian coast coincided with the arrival, by steamship, of travellers starting from the infected points. There was no mistaking that it was an epidemic of Asiatic cholera coming from the interior of Russia, with the movement produced by the transport of grain to the point of embarkation. This epidemic was otherwise remarkable for the slightness of its intensity—that is, for the small number of attacks. At the end of September it was everywhere on the decline, and subsequently died out along the coast.

An important fact to be observed in regard to this epidemic is that, thanks to the measures of quarantine enforced by the Ottoman sanitary authorities, the Turkish coast was completely saved from the disease in spite of the numerous arrivals from the infected ports. Thus, from the 2nd August to the 21st September, not fewer than seven hundred ships, amongst which were several having cholera on board, were submitted to quarantine at the mouth of the Bosphorus.

Whence did this epidemic come? The first idea which occurs is, that this was simply an extension of the malady which reigned at the commencement of the year in the provinces of Central Russia, and was propagated to the South with the commercial movement above mentioned. At Constantinople another opinion is entertained. They have the conviction, based on documents whose value is not yet ascertained by continental authorities, that this epidemic, and even that of the close of 1869, was due to Persian importation. The disease is declared to have broken out at Nijni Novgorod at the time of the fair, and with the arrival of the Persian merchants.

This question is one which, as Dr. Fauvel points out, is of great European importance. If, as the prevalent opinion runs, the actual epidemic be only a sequence of the importation of 1865, a recrudescence such as is often observed in imperfectly extinguished foci of disease, this epidemic is distinguished from those which precede it in its course of invasion, and would tend to prove that cholera has found in Russia conditions favourable to its genesis and acclimatisation. If, on the other hand, the existing epidemic have for its origin a Persian importation, it falls then under the ordinary rule of epidemics of cholera due to a reimportation of the disease. This is a question which it behoves the sanitary administrators to solve.

We give elsewhere the figures of the cholera cases during the present year at St. Petersburg. They have not caused there, nor do they even now cause, much anxiety in the city itself. They are not very numerous and not very fatal. St. Petersburg is but too well accustomed to the presence of cholera. Of all the great cities of Europe, it is the one in which cholera, once imported, maintains itself with the greatest tenacity. But the disease has spread into more menacing quarters—to Moscow, and thence to Tambov. Spreading through the West, it has passed into Russian Poland, notably to Wilna, and is now crossing the Prussian fron-

tier to Königsberg. On the other side it has appeared at Riga, and thus threatens us through our maritime relations. We are on our guard in this direction, and cannot be too earnest and watchful. It is clearly the Asiatic cholera which is invading us; but possibly it is only the tail of the old Russian epidemic of 1865, in a feeble and benign form.

DR. W. H. CORFIELD, Professor of Hygiene in University College, is a candidate for the post of medical officer of health for Islington.

IN the week ending August 12th, only one death, that of an infant under twelve months of age, was registered in the parish of Clifton (Bristol), showing a rate of mortality of 1.9 per thousand per annum.

THE Directors of the British Home for Incurables acknowledge, with grateful thanks, a third donation of £1000 to the funds of the charity from C. D. T.

A FALSE report has been spread of the death of Garibaldi; he appears to have been seriously ill, but to have recovered. He is martyred by a severe form of chronic rheumatism.

THE Governors of St. George's Hospital have just received a second munificent donation of £1000 from an anonymous donor under the initials of "E. G. N."

THE mortality in Paris during the week ending the 18th inst. was 828 against 676 in the previous week. There were 31 deaths from cholera, 55 from diarrhoea, and 1 from cholera.

THE CITY OF SUICIDES.

THIS title no longer belongs to this metropolis, if it ever deserved the sad appellation. The ratio of suicides has been established by M. Decaisne recently, before the French Academy of Sciences. It is in London only one in 175 deaths; in New York, one in 172; in Vienna, one in 160; but in Paris, it has reached one in 72. The number of suicides from drunkenness which in 1848 was 141 for all France, reached 401 in 1866.

SIR RICHARD WALLACE.

EVERY one who knows how nobly Mr. Richard Wallace devoted his time and money to the relief of the sick and wounded in Paris during the two sieges, will be pleased to hear that Her Majesty has recognised his services and granted to him the dignity of a baronet.

CONDURANGO.

THE new alleged remedy for cancer appears to be creating no little excitement in America. A correspondent writes to us stating that it is scarcely to be procured, so great is the demand for the plant. Thousands of dollars are being offered and given for small quantities. He adds that it has been tried in the Government Hospital at Washington, but not with encouraging results. The plant is being in the meantime used in the cancer wards of the Middlesex Hospital.

DISINFECTANTS AND SANITATION.

THE present urgency of sanitary precautions has turned attention to the subject of disinfectants once more. In some interesting observations of M. Dumas, the celebrated French chemist, at the Academy of Sciences, the question is succinctly treated. All chemists agree that the chloride of lime decomposes the foul hydrogen gases diffused in the atmosphere. As to carbolic acid, its action is twofold. It averts the decomposition of organic albuminoid matters, and further possesses the powers of killing the germs, the organic agents, whose development engenders or propagates epidemic diseases. Hence, M. Dumas considers it necessary to reserve chlorinated fumigations for disinfecting the air, but to employ also carbolic acid, the vapours of which in some sort seek out and destroy in a vitiated atmosphere, its miasms and morbid germs. Disinfection and sanitation is a twofold operation; it is desirable to utilise simultaneously chlorine and carbolic acid.

MRS. GLADSTONE'S CONVALESCENT HOME.

It appears from Mrs. Gladstone's appeal in the *Times* for funds to carry on the present work of this Home, that the benefits of the charity have become much extended. The Home has accommodation for between seventy and eighty patients of both sexes, whereas it was originally intended for men only.

SOCIAL SCIENCE ASSOCIATION.

THE annual meeting of the Social Science Association will be held at Leeds from the 4th to the 11th October, under the presidency of the Right Hon. Sir John Pakington, Bart., M.P. In the Department of Health, the officers will be—*President*, George Godwin, F.R.S.; *Vice-Presidents*, Charles Chadwick, M.D., D.C.L.; Edward Filliter, C.E.; J. D. Heaton, M.D.; Frederick J. Mouat, M.D.; F. S. Powell. The following questions will be discussed in the section: 1. What are the best and most Economical Methods of Removing and Utilising the Sewage of large Towns? 2. What are the best Means of Securing the Sanitary Improvement of Human Habitations? 3. What are the best Means of Promoting the Health of Operatives in Factories and Workshops?

HOSPITAL ACCOMMODATION.

THE Medical Department of the Privy Council has just issued a memorandum on the hospital accommodation to be provided by sanitary authorities for the purpose of separating the sick from the healthy in outbreaks of infectious disease. The memorandum rightly insists on the importance of having such accommodation provided beforehand. As to villages, it is recommended that each should have the means of immediately accommodating four cases of disease in at least two rooms without requiring removal to a distance. When circumstances demand, further temporary provision must be made. In towns, more accommodation will be required, in proportion to the size of the town; and there should be a permanent building, with space enough around it for the erection of temporary structures if necessary. These latter may consist of huts in winter, or of tents in summer and autumn; and directions as to the construction, ventilating, and cleansing of them are given. The memorandum is likely to be of service; for, though the Sanitary Act of 1866 makes it a duty of parochial authorities in many localities to provide hospital accommodation, there has been no authoritative document to which reference could be made for guidance.

THE PLYMOUTH GUARDIANS AND THEIR MEDICAL OFFICERS.

CIRCUMSTANCES have lately occurred in connection with the administration of Poor-law medical relief in Plymouth, which at one time wore a threatening aspect, but which happily now give promise of being brought to a satisfactory termination. A short time ago, the guardians determined on reducing the number of district medical officers in the town from four to three, making a new arrangement of the districts. Two of the then existing medical officers—Messrs. Harper and May—thereon resigned their posts; and none of the medical men in Plymouth offered themselves as candidates. The guardians then advertised for medical officers; and nine or ten gentlemen residing in various parts of the kingdom offered themselves. Of these, Mr. Henry Lupton, a gentleman residing in Cheshire, was successful; but, on learning the circumstances in which the election had taken place, he very honourably declined the appointment, stating that he "was of opinion that it would not be acting rightly towards the two gentlemen who had lost their appointments, for him to accept the appointment in question". This withdrawal of Mr. Lupton caused the matter to be again freely discussed at a meeting of the Board on the 16th instant. In the discussion, some of the members who had on the former occasions advocated the reduction, now acknowledged that they had been in error; and ultimately a resolution was carried by a majority of 11 to 6, to refer the whole matter to a committee to report on at the next meeting. There seems to be no doubt that good sense will prevail, and that the old number of four medical officers will be retained. We may reasonably believe that the discussion on Poor-law Medical Relief in the Public Health Sec-

tion of the annual meeting, which took place a few days previously, had a beneficial effect on the minds of the guardians: in any case, it was one by which they could scarcely fail to be enlightened. It is only just, in conclusion, to refer with high approbation to the *esprit de corps* manifested on this occasion by the profession in Plymouth, and to the honourable conduct of Mr. Lupton—examples which we should be glad to see followed in other places.

THE EXAMINATION OF WATER FOR SANITARY PURPOSES.

DR. BISCHOF read a paper at the British Association at Edinburgh on the Examination of Water for Sanitary Purposes. The object was to show that the examination of the residue enables chemists to judge in a measure of the quality of the water. If the water be pure, the crystals are clean; if it be impregnated with organic matters, the crystals are more or less discoloured. Dr. Voelcker suggested that it would be interesting to know how far the crystal forms were modified by different kinds of organic matter. There were organic matters of vegetable origin such as they found in great abundance in St. Mary's Loch, and there was animal matter, and it would be useful if they could tell from the residue which kind of origin the matter had.

THE "ECHO" AND THE HAMPSTEAD SMALL-POX HOSPITAL.

WE think that the Hampstead Small-Pox Hospital authorities have good cause to complain of the imputations made against them by the *Echo*, that a child treated at that hospital for small-pox had been so neglected that it had lost its entire sight; and not less open to criticism are the remarks which were made by Sir Thomas Henry on their appearing to prosecute the proprietor and publisher of the paper. It was not denied that the child had been treated in the hospital, and had partially lost its sight, but this is a frequent and natural consequence of small-pox, and evidence was not forthcoming to prove that the injury to the eyesight was due to neglect. Sir Thomas Henry, indeed, admitted that "no doubt the ladies of the charity and the surgeons were doing all they could," but yet ventured to say that "it was a matter of opinion whether the child had lost its sight from neglect or not, and that the public press were at liberty to comment on the case in this wise." Surely this is peculiar reasoning. It simply amounts to this, that papers may publicly slander hospital authorities as much as they please without the least foundation for their statements, and without the libelled persons obtaining any redress should the statements be false.

WHAT DOES IT MEAN?

A PERSON interested in the female medical movement writes to us as follows:—Of what shall the lady medical students henceforth have to complain? If they have not received their due in Edinburgh, a prophet has arisen in the metropolis of the United Kingdom who promises such a feast as shall afford a princely entertainment not only to the redoubtable seven Amazons in the North, but to legions of female aspirants to Æsculapian art. Some unknown benefactor of the sex has prepared for their reception "The British Medical College for Women", the spacious class-rooms of which appear to be enclosed within the walls of a "Hospital for Diseases of the Heart, No. 85, Newman Street, Oxford Street". Even "the waiting-room, consulting-room, house-surgeon's-room, and *dissecting-room*", forsooth, besides other apartments, are to be placed in the most generous manner by the Committee of the Hospital in the hands of this great and unknown benefactor. But the programme does not end here: a charter is to be obtained and a staff of examiners is to be appointed—not only so, but a Council, and so forth. The matriculation examinations are to be of a stringent character, and due precautions are to be taken that "every member of the College shall limit her practice to the treatment of women and children"; in the case of boys, however, modesty forbidding that they should have seen more than five summers. And again, "members of the College shall not enter into conversation with their patients on subjects of religious controversy, politics, or family matters". Is the circular before me a joke? Emanating from a "Hospital for Diseases of the Heart", and clothed in

such an air of mystery, it looks uncommonly like it. If so, it is a cruel piece of wit.

ST. PANCRAS AGAIN.

THE notorious St. Pancras Guardians have again been several times, during the past ten days, the subject of public scandal. The Board of Guardians last week thought fit to throw dirt at one another and expose themselves to public scorn over an anonymous letter reflecting, in the most serious manner, on the character of Dr. Ellis, the Resident Medical Officer, and the Matron. This letter had been the subject of investigation by a Committee, who had reported that they were unable to find any truth in the statements made. Although some of the guardians during the meeting kindly consented to admit that others of their number, the Chairman included, were "hail fellows, well met," the Chairman repudiated with indignation his possessing any of the social qualities imputed to him. The Poor-law Board had taken cognisance of the reports which had reached them regarding the Resident Medical Officer, and had addressed a letter to the Guardians on the question. The matter, after a very exciting meeting, during which one of the Guardians appears to have allowed himself to be carried away by the strains of a well-known comic song, was referred back to a Committee. Again, on Thursday, Dr. Lankester held inquests on the bodies of two persons who had died in the St. Pancras Workhouse, which brought to light imperfections (at which one can scarcely be surprised) in the nursing arrangements of the workhouse.

SCOTLAND.

CRAIG VERSUS JEX BLAKE.

WE understand that nearly eight hundred pounds have already been subscribed to defray the expenses, amounting to nine hundred pounds, which this trial laid upon Miss Jex Blake.

PRECAUTIONS AGAINST CHOLERA.

CONTINUED precautions are being taken at the Scotch ports to prevent the introduction of cholera. This is rendered necessary from the large number of Scotch vessels trading with the Baltic. At Granton, the coast-guard tender *Squirrel* has been placed under the direction of the Collector of Customs, and all vessels about to enter will be examined. Several fatal cases of cholera had occurred on board a Dundee vessel on her way from Königsberg, but the bodies were buried in Germany. On arriving at Dundee, the vessel was overhauled by the authorities, and all necessary precautions taken to disinfect the ship. The crew was in good health.

ST. KILDA.

THE sad sanitary condition of the island of St. Kilda, one of the Hebrides, which has been brought into prominent notice by Professor Corfield in the *Times*, will, it is hoped, receive official attention. According to the census which has just been supplied—the island having been, strangely enough, altogether forgotten during the late census-taking—the population is 71, 43 females and 28 males. There is only one child, and it is dying. For the last eight years, the children born on, or brought early to, the island have not survived; and there is a decrease in the population since the last census. In looking for the causes of this great and constant mortality, it is stated that the air of the island is good, and the water excellent, but that "the huts of the natives are small, low-roofed, and without windows, and are used during winter as stores for the collection of manure, which is carefully laid out upon the floor and trodden under foot till it accumulates to the depth of several feet." It may well be asked who is the proprietor of the island.

GENERAL INFIRMARY, NORTHAMPTON.—£2,400 has already been subscribed, out of £3,500, the estimated expense of erecting rooms for out-patients and furnishing the new wards.

THE VACCINATION BILL.

OUR Association is greatly indebted to Lord Redesdale and those who voted with him in the House of Lords, for giving effect to the remonstrance against the tenth clause of the Vaccination Amendment Bill, which made immunity from vaccination purchasable by a fine of twenty shillings. This was a concession on the part of the Government to the outcries of the anti-vaccinators, which had the peculiar disadvantage of operating unequally on the rich and the poor, and of introducing a dangerous element into sanitary legislation. It was obviously well intended, and in some respects perhaps prudent. But the objections to it had determined our Parliamentary Bills Committee specially to protest against it in both houses; they were outvoted by the Government and Mr. Chambers in the House of Commons; they are indebted to Lord Redesdale for a victory in the House of Lords, which will benefit the health and satisfy the conscience of the public.

THE CHOLERA.

CHOLERA is steadily marching onwards, it having spread along the banks both of the Tigris and Euphrates. Cases have occurred at Kербella on the latter river; and even in Bagdad one case is reported. As regards the former river, cases are reported as having occurred as high up as Mendeli.

DURING the week from July 19th to 25th, 197 new cases of cholera occurred at St. Petersburg; the number of recoveries was 185, and of deaths 117. From the commencement of the epidemic, the numbers have been: cases 6,971; recoveries 3,692; deaths 2,876. In Cronstadt, from June 24th to August 5th, there were 444 new cases, 198 recoveries, and 218 deaths.

CHOLERA PREPARATIONS IN SWEDEN.

WE believe that active steps have been taken by the authorities in Sweden to deal with any cases of cholera which may happen to be brought within their jurisdiction, and that these steps include the provision of hospital accommodation to a considerable extent.

PRECAUTIONS AGAINST CHOLERA IN THE PORT OF LONDON.

DR. BUCHANAN, the Medical Inspector of the Privy Council, who has been charged with the supervision of the precautions against the importation of cholera into the Thames, has held communication with the Board of Customs, the Trinity House, and the Thames Conservancy, as also with the authorities at Gravesend, and with the health-authorities of all the riverside districts below London Bridge, in order to obtain their harmonious co-operation in carrying out a complete and uniform system. The necessary work will mainly be done at Gravesend, where ships are boarded by the Custom House officers, and where the presence of cholera among the crew would be detected. It would, however, be manifestly unfair to make the expense of removing and providing for such patients, and of supervising disinfecting processes, a local charge upon Gravesend; and one of Dr. Buchanan's main objects has been to bring about a consent that the cost of measures for the protection of all the river-side districts should be equitably divided among them in proportion to the rateable value of each, although the Customs boarding station fixes the place at which the duty must chiefly be discharged. Pending the result of the efforts thus made to insure combined action, Dr. Buchanan has held communication with all the medical officers of health, and with other health-authorities in certain districts, in order to secure that they may be prepared for the duties which may devolve upon them, and fully acquainted with the steps which they will be called upon to take if cholera should appear. The Medical Department of the Privy Council has, therefore, done, in the way of instruction, advice, and warning, everything that the powers committed to it will allow, and the responsibility of acting rightly will devolve upon local officials. The *Times* understands that Dr. Buchanan has everywhere been met in an excellent spirit, but that unavoidable delays have been produced by the absence of some of the persons whose assistance is required. In the meanwhile, Gravesend has been fighting her own

battle, and, although quite ready to enter into the proposed combination, and to bear her proper share of the expense, has sent a deputation to Mr. Stansfeld to protest against being saddled with the whole cost of guarding the river and the metropolis. Mr. Netten Radcliffe has gone to visit the ports from Boston to Southampton, and, whether cholera be brought to our shores or not, the alarm is at least doing good service in many directions. The combined action of neighbouring local authorities has never before been obtained for any sanitary purpose, and it cannot fail to form a precedent which is not likely to be forgotten or neglected in future emergencies.

THE CHOLERA IN GERMANY.

ADVICES from Gumbinnen dated August 19th, state that cholera has made its appearance in districts on this, the German side of the frontier, namely at Pillkallen, Oletzko, Lyck, and Moberburg.

Advises dated August 22nd state that cholera still prevails at Konisberg. On the 18th and 19th inst., 111 cases occurred, of which 56 proved fatal; on the 20th, 87 persons were attacked, and 32 died. At Dantzig and Elbing, a few cases occurred. No case has occurred at Stettin.

Asiatic cholera has been confined in the north to the district of Suwalki.

According to the *North German Gazette* of Wednesday evening, four cases of cholera have occurred in Berlin, two of them proving fatal.

FAMINE AND CHOLERA IN PERSIA.

A TELEGRAM received on August 5th by the Galata Board of Health from Tabreez reports the rapid spread of cholera in that city. In the previous week, the deaths from the epidemic averaged two hundred a day; and when the telegram was despatched, the inhabitants were flying in thousands to the villages towards Oorumiah and Khoi. The intelligence also at Tabreez at the same date was that the famine in the southern provinces, instead of abating, was "worse than ever."

THE CHOLERA IN RUSSIA.

THE sum of the epidemic of cholera in Russia, from its appearance on the 17th (29th) August, 1870, to the 19th (31st) July, 1871, gathered from Russian official documents, is as follows:—Cases: 4,568 men, 2,249 women; total, 6,817. Cures: 2,346 men, 1,196 women; total, 3,542. Deaths: 1,938 men, 859 women; total, 2,797. Thus, although the epidemic has been persistent, it has not been very fatal; its mean daily mortality during the year not exceeding 9. It must be admitted, however, that at some points recently it has shown considerable intensity, especially at Tamboff and Joroslav. But in both it is becoming feebler at this moment. There is considerable reason to believe that the present outbreak is to be regarded as a recrudescence of the epidemic of 1865, not yet extinguished in that country.

Advises from the Russian province of Suwalki state that cholera is on the decrease. From the 20th to the 27th July, there were 238 fresh cases. The whole number of cases that had occurred was 443, and of the persons attacked 83 had died, while 190 had recovered.

CORRESPONDENCE.

THE ADDRESS IN MEDICINE.

SIR,—In the Address in Medicine at Plymouth, Dr. Johnson thought proper to refer to a lately published clinical lecture of mine on Functional Medicine. He had seen therein a passage in which I had stated that disease (though often vulgarly so considered) was in but a *few* cases an actual entity existing within the body, and I referred as an example to one single instance.

From these premises he thought proper to infer that I denied the introduction into the system of any actual poison in such diseases as the exanthemata. Now, in the first place, as I admitted that in some few cases (besides the one cited) there was such an entity, it is obviously not logically justifiable to assume that in my opinion the exanthemata were not amongst those few.

In the next place, Dr. Johnson can scarcely be ignorant that I was the first to advocate the eliminant treatment of diphtheria, on the very ground that the essence of it was a primary poisoning of the system, and not, as had been previously taught, a secondary poisoning. Nor have I given him any ground for stating that I have altered my views on this subject.

And lastly, in the very lecture criticised, and which I presume Dr. Johnson has read through, I refer at some length to syphilis as another

instance of a poison introduced into and existing in the system, which may be more or less effectually cast out.

It is equally difficult for me to conceive that Dr. Johnson could have made such a mistake, through inadvertence, as it is to suppose that he did it knowingly and wantonly.

I am, etc.,
Birmingham, August 1871.

WILLOUGHBY F. WADE.

SIR,—The Address in Medicine lately delivered at Plymouth again revives the question as to the "stopcock" action of the small arteries in cases of blood-poisoning; and, whilst asking a portion of your much coveted space, I will engage not to travel over old ground, but simply to contrast cases of blood-poisoning from disease, with those in which action is the result of experiment, and, in short, to compare theory with hypothesis.

In the Hastings Prize Essay, Dr. Fothergill teaches us that, in cases of poisoning by digitalis, the heart and arteries alike contract to an extent proportioned to the dose given, and we know that this teaching follows upon actual experiment; moreover, we use digitalis daily, and not simply because it is a diuretic.

The theory of the stopcock action of small arteries is, that their contraction is spasmodic, and with a view to shut off poisoned blood, whilst the heart, on its part, and for life itself, hypertrophies in its endeavours to fight against them. We are thus taught, on the one hand, that a vegetable poison acts uniformly upon the circulation, and, on the other, that the poison of disease has an influence restricted to the small arteries—that is, to a very uncertain area, and are as yet undefined.

Can this be so? Has experiment ever determined the latter as clearly as it has the former?

I am, etc.,
Wimpole Street, August 1871.

FRED. SIMMS.

THE ANNUAL MEETING PHOTOGRAPHED.

SIR,—The late meeting of the British Medical Association at Plymouth was undoubtedly a great success. It was as pleasant as brilliant weather, genial hospitality, and a hearty welcome from all classes, could make it. There were, perhaps, one or two breezes just at starting; and the attention given to Sections was scarcely what was due to many laboriously prepared papers. Holiday-making was in the ascendant; but these things, no doubt, can be amended at future meetings. I have, however, one suggestion of a practical character to make, which I think will add to the pleasure as well as the profit of these annual gatherings. We all know how it is when we come to be mixed up with a crowd of gentlemen from all parts of the kingdom, many of whom we would gladly know—at least by sight—and many others whose acquaintance we would gladly make, commissioned perhaps by messages from mutual friends. My suggestion is as follows.

That each gentleman who comes to the annual general meeting should bring, or better still, send, his *carte de visite*.

That each Branch should provide its frame, or frames, for the reception of the *cartes* of its own members.

That to each *carte* should be appended the signature, or (as medical signatures are not always very legible), the calling-card, of the member.

That these frames should be suspended in some suitable position, either in the Museum or reception-room, easily accessible to all.

That to each frame should be fixed a small piece of ribbon, of the colour chosen by the Branch. That each member should also wear, attached to his button-hole, a small piece of ribbon, of the colour selected by the Branch to which he belongs.

At the close of the meeting the *cartes*, but not the frames, should remain the property of the Branch at whose centre the annual general meeting is held.

It is perhaps superfluous to point out the advantages I anticipate from my proposal, as I think they speak for themselves; but I think all will agree that the collections thus annually accumulated at the various Branch centres will become interesting and valuable mementoes in future years.

I have named this proposal to one or two of the gentlemen who were at the Plymouth meeting, and I am happy to say it met with their full approval.

I am, etc.,
Ashton, Torquay, August 21st, 1871.

SPENCER THOMSON, M.D.

DEATH FROM THE STING OF A WASP.—An old man, named Henry Meier, belonging to Cefelfingen, was stung by a wasp on the finger one day last week; but, although it caused him a little pain at the time, he neglected to pay any attention to the wound. Two days afterwards, however, his hand, and ultimately his arm, became inflamed and greatly swollen, and, although every attention was paid to him, he died after a few hours of intense suffering.—*Swiss Times*.

THIRTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in PLYMOUTH, August 8th, 9th, 10th, and 11th, 1871.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of most of the papers presented to the several Sections of the Association at the Annual Meeting, with some notes of the discussions which took place. The papers themselves will, as opportunities occur, be published in full in the JOURNAL.

SECTION A.—MEDICINE.

President's Address. By C. BARHAM, M.D.—The President, after alluding to the absence of Dr. Acland, whose disconnection with the Association had resulted in his occupying that position, said he thought the most interesting form an address could assume would be an inquiry into some topic of medical interest peculiarly local. He had selected that of the health of Cornish miners, which he should treat in connection with that of the miners of Durham, Northumberland, and Staffordshire. The two royal commissions that had been issued had resulted in several reports and a volume of statistics on the subject. He should not enter into these, but should examine into the comparative longevity of the miners in the different counties. The most conspicuous form of disease prevalent among miners could be traced to the ill-effects of mining on youth, and resulting in the terrible sacrifice of life, and was consumption. The deaths from ordinary causes between the ages of 35 and 40 among the miners of Cornwall were not more than those of Northumberland, Durham, or Staffordshire; but the deaths from consumption in Cornwall were immensely in excess of the other districts. The rate of deaths from heart-diseases in Cornwall did not equal that of Northumberland; while for accidents no other district was at all to be compared with Staffordshire, where seven out of 10,000 died by those violent explosions that create such alarm every now and then. With regard to the causes of consumption in miners, it was to be attributed to the want of light and air, to exposure, and to liability to inflammatory affections, the result of too early employment. Some of the mining children worked as early as 13. Referring to the climate of the Scilly Islands, Dr. Barham observed that it was the best that could be found in England, and recommended it for invalids.

Experiences of Cholera in India and its Treatment. By Inspector-General JOHN MURRAY, M.D.

The Pathology and Treatment of Cholera. By GEORGE JOHNSON, M.D. [These papers have been published in the JOURNAL of August 12th and 19th.]

Dr. J. A. BOLTON stated that some years ago in a town where there were 1700 cases of cholera, the medical men, finding the water-supply impure, stopped up all the pumps, and sent for water from a distance. They gave the patients good animal food and clear cold water; after which the disease lessened, and many patients who were in a state of collapse recovered.—Dr. DAVEY said that seventeen years ago he had in the *Lancet* recommended calomel and colocynth in the treatment of diarrhoea and cholera.—Dr. MURRAY said that Dr. Johnson appeared to confound elimination with purgation. The elimination by the natural functions without violent symptoms was Nature's cure, as shown by the course when the disease was confined to the stage of malaise. We should endeavour to assist Nature, by restraining the further advance of the disease, of which the most dangerous symptom is looseness, whether naturally induced by indigestion, by improper food, or by purgative medicines. The case of fatal collapse following the cessation of the evacuations after the use of opiates might be very correctly reported; but that was not the ordinary result of checking early diarrhoea. Of the 505 medical officers in India, whose opinion Dr. Murray collected in 1864, there were only eight who did not consider the administration of purgatives in the early stage as dangerous. In the reports received from America, similar views of the danger of purgatives—even castor-oil—were entertained. He had seen cases where the rice-water evacuations in collapse were instantly arrested by the use of a saline enema; and where reaction gradually came on, and where the bowels were not again opened for twelve hours, and in one case two days, and perfect recovery followed. He urged that all persons who wished to avoid cholera should eat only of digestible food.—Dr. JOHNSON said the main difference between Dr. Murray and himself was with regard to the treatment of the early stage of cholera. Dr. Murray considered evacuations dangerous, and opiates safe; while he (Dr. Johnson) held an opposite opinion with regard to both classes of remedies.

The Treatment of Hyperpyrexia, as illustrated in Acute Rheumatism, by means of Cold Applications Externally. By WILSON FOX, M.D.—The author related two cases, in which entire recovery, under the use of the cold bath, ensued, after the temperature in one had attained the height of 110 deg., in the latter of 107.3 deg. In the former case there was deep coma; in the latter delirium. The nervous symptoms disappeared in both after the first reduction of temperature. In the first case moderate pericarditis was present; in the latter a very large pericardial effusion, and also a double pleuropneumonia, prior to the rise of temperature and the employment of the cold applications. In the first case the pyrexia, prior to the sudden increase of its intensity, had been very moderate, the temperature not exceeding 102 deg.; but on the fourteenth day of illness the temperature rose within nine hours from 102 to 106.4 deg. Two drachms of quinine, given within four hours in divided doses of a scruple, failed to check the rise of temperature, which within twelve hours had amounted to eight degrees. Ice-water poured over the body, and ice applied to the chest, abdomen, and spine, reduced the temperature in the rectum within half-an-hour to 103.6 deg., and a subsequent further fall took place during the succeeding hour, when the patient was in bed wrapped in blankets, to 97.4 deg.—there having thus ensued a total reduction of the temperature in the rectum of 12.4 deg. within an hour and a half, the patient having been only exposed to the cold during half-an-hour. A gradual rise of temperature of 7.6 deg., occupying twelve hours, then ensued, the temperature reaching 105 deg. A bath of twenty minutes' duration (temperature 64 deg.) reduced the temperature in the rectum 1.1 deg.; but the fall continued after the removal from the bath for another hour, with a total reduction of the temperature in the rectum within this time by 5.6 deg. A tendency to a rise of temperature persisted during two days longer; but was kept, by means of an ice-bag more or less continuously applied to the spine, below 103 deg. The treatment by cold was in this case maintained during four days. The fever lasted to the seventh day after the commencement of the treatment, which, however, was not maintained during the last three days. In the latter period the patient had a return of perspiration and of the pains in the joints. She had some bronchitis in the first days of the treatment by cold, which greatly improved while this was persisted in. The pericardial effusion diminished while the cold was being applied, and subsequently entirely disappeared. The patient was discharged thirty days after the intense pyrexia, and forty-four days after the commencement of the disease.—In the second case, the temperature before the hyperpyrexial attack had been higher, sometimes reaching 104 deg. The patient had extensive pericardial effusion and a double pleuropneumonia prior to the attack and before the application of the cold. Delirium set in, with a rise of temperature to 107.3 deg., on the seventeenth day of the disease and the sixth day in hospital. Half a drachm of quinine, given in a single dose, failed to check the rise of temperature. A bath of twenty minutes' duration, at a temperature of 86 deg., reduced the temperature in the rectum by 4.2 deg. A further fall followed removal from the bath, until the total reduction within an hour amounted 9.5 deg. The pyrexia in this case was, however, more obstinate than in the last. Cold applications, consisting of baths, ice to the spine, and packing in wet sheets wrung out of iced water and changed every half-hour or twenty minutes, were continued during seven days. The fever lasted in a continuous form until the twenty-fifth day after the extreme pyrexia and the forty-third of the disease, when it became normal; but occasional exacerbations occurred until the sixty-first day of the disease. The double pleuropneumonia resolved during the seven days, while the patient was being treated by the cold applications. The pericardial effusion, which at one time had reached the clavicle, greatly diminished, and subsequently disappeared, though some enlargement of the heart remained. While the fever was still present, sweating and pain in the joints returned with some severity.—In commenting on these cases, the author remarked that recovery in acute rheumatism rarely if ever took place after the temperature had risen above 106 deg., and that in all the recorded cases death occurred within a few hours after 107 deg. had been attained. No other treatment had been shown to be capable of averting the rapid rise of temperature which had taken place in different cases after bleeding, and the administration of digitalis, veratria, opium, calomel and opium, and large doses of quinine. He considered, therefore, that the present plan was the only one which, as far as was yet known, could be pursued with success. Of the methods employed for the reduction of temperature, total immersion in a bath of from 60 to 80 deg. was the most efficacious; but it required caution, as the fall of temperature persisted long after the patient's removal from it. The wet pack, frequently changed, stood next in order of utility; the ice-bag to the spine had least power, but might be used when the rise of temperature was slow. The author considered that the period when the treatment should be commenced was when the temperature

exceeded 106 deg. This treatment was not to be considered as a cure for acute rheumatism, but only as a means for averting a dangerous complication. The rheumatic joint-affection returned in both these cases after the pyrexia had subsided. He believed, however, that no complications should interfere with its employment under the circumstances indicated; and in both these cases not only were no complications to be attributed to the treatment, but severe visceral inflammation subsided while it was continued. Brandy was given largely in both these cases; but the author did not consider that this would be necessary in all, but each case must be treated according to its individual indications. The author thought that other medicinal interference, unless specially indicated, had better be discontinued during the employment of the cold. It was probable that this treatment would be applicable to the same phenomenon occurring in the whole class of acute febrile disorders, in nearly all of which it might be an occasional complication, as in typhoid and typhus fevers, scarlatina, tubercular meningitis, pyæmia, and in sunstroke—in which latter disease the cold affusion had already been employed with advantage.

On the different Therapeutic Indications of Rheumatism and Neuralgia, and some Remarks on Rheumatism as a Sequela of Diphtheria. By D. DE BERDT HOVELL, F.R.C.S.E.—Rheumatism and neuralgia were stated by Mr. Hovell to be conditions of ill-health attendant on depression or loss of nerve-power, and both highly susceptible of pain. The first object of treatment in rheumatism was to eliminate the poison of lactic acid and other allied acids from the blood, and reduce the excess of fibrine by the alkaline treatment of Dr. Fuller, and the blistering treatment of Dr. Herbert Davies; on the other hand, adopting the opinion of Dr. Bence Jones, that the absence of quinoidine in the blood was the cause of malarious neuralgia in that disease, the indication is to supply the deficiency. Similar treatment held good in the neuralgia of exhausted nerve-power—that of old age and organic disease. Both diseases were liable to aggravation from intestinal irritation, and neuralgia from that of carious teeth and diseased bone. In both diseases the susceptible condition of the nervous system called for relief by narcotics, etc. Acute rheumatism had frequently been observed to follow diphtheria, in which case it was important to ascertain that the urine was free from albumen before adopting blistering treatment. Assuming that there was excess of fibrine in the blood in diphtheria as well as in rheumatism, the cantharides had been found to check elimination and aggravate symptoms, the cardiac complications especially. In this form of rheumatism, iodine and iodide of potassium were specially advocated.

Dr. WADE had seen two or three cases of acute rheumatism following immediately after diphtheria, and apparently dependent upon imperfect urinary elimination. They were speedily relieved by restoring the urinary secretion.—Dr. ALTHAUS, whilst agreeing with Mr. Hovell in many points, could not do so when he said the neuralgia was due to a deficiency in the blood of some element necessary to the perfect nutrition of nerve-structure. He (Dr. Althaus) believed it was frequently due to a local anæmia of the nerve, and a great many other causes. Certainly the extraordinary effects which occasionally followed the application of local remedies could not account for the deficiency of some important element in the blood. At the same time, as neuralgia appeared in persons who were apparently in good general health, there must be something more than a local cause present in the system which determined the neuralgic attacks.

On Paralysis of the Bladder, and its Treatment by the Constant Galvanic Current. By JULIUS ALTHAUS, M.D.—In this paper, the author, after referring to some important researches on the physiology of micturition, lately made by Professor Budge of Greifswald, entered into the pathology of paralysis of the bladder. He eliminated from this affection all cases of mere atony of the viscus from over-distension owing to organic obstructions, such as stricture of the urethra and hypertrophied phosphate and other causes; likewise all cases of incontinence of the urine, which was generally ascribed to paralysis of the sphincter of the bladder. Real paralysis of the bladder was, according to Dr. Althaus, only observed (a) when the conduction of nervous influence from the cerebral peduncle to the viscus was interrupted; (b) when the lumbar portion of the spinal cord was diseased; and (c) when the normal excitability of the motor or sentient nerves of the bladder was pathologically altered, without any central affection being present; most cases of this latter class being of the kind termed reflex or inhibitory paralysis. After reviewing the treatment generally adopted for this condition, the author expressed the opinion that, both in efficacy and quickness of action, the constant galvanic current, properly applied, was superior to all other remedies used for this affection. He then described the best mode of applying the current in such cases, and concluded by relating three cases illustrative of the different varieties of the complaint. One of these was owing to syphilitic disease of the cerebral

peduncle; another occurred in a hysterical patient; and the third arose from disease of the lumbar cord. In all these cases, the paralysed bladder recovered rapidly under the influence of the constant galvanic current.

Dr. FELCE related two cases of paralysis of the bladder successfully treated by faradisation.—Dr. ALTHAUS classified the two cases as being instances of reflex or inhibitory paralysis, which in the absence of central lesions would yield to the induced current.—Dr. RADCLYFFE HALL asked whether locomotor ataxy was not occasionally induced by causes such as were present in the cases mentioned.—Mr. HEARDER inquired whether slow intermittence of the induced current was equally valuable with the use of the constant current; and alluded to cases of spermatorrhœa and enlarged liver treated by the same means.—Dr. ALTHAUS replied at length to the various speakers.

Koumiss, a Dietetic Remedy. By V. JAGIELSKI, M.D.—Koumiss, though not a specific for any disease, was a benign agent in medicine which merited the serious consideration and study of the profession in both private and hospital practice. By its use the digestive organs were roused into activity, the skin became moist and normal in its functions, the flesh became plump, and the complexion assumed freshness and colour. If the circulation had been abnormal it became regulated, and coldness of the extremities gave place to a pleasant warmth, the dull eyes assumed expression, the depression of spirits gave way to animation, and the respiration acquired more depth and regularity, as had been determined by the spirometer. Large doses had the effect of promoting a feeling of laziness, and even sleep; but this sleep was of the most refreshing kind.

The Lesions of Enteric Fever as an occasional Cause of Permanent Injury to Nutrition. By T. CLIFFORD ALLBUTT, M.D.—The author drew attention to the convalescence from enteric fever, which was well known to be often very tedious; and he raised the question whether the specific lesions of that disease, affecting as they did the instruments of absorption, might not sometimes be the cause of permanent marasmus. In enteria, the local mischief not only fell upon the patches of Peyer in the ileum, but spread itself throughout the network of the mesentery. If a rat were fed upon tallow-candles and then killed, the presence of the fat in great quantities in the mesenteric system and glands showed how active was that system in taking up this element of nutrition. Any disease, therefore, which interfered with this system, like enteric fever within it, or chronic peritonitis outside it, would have its visible effect in hindering the absorption of fat, and in preventing the laying on of adipose tissue. These considerations occurred to the author in consequence of his advice being sought in several cases of marasmus, pure and simple, without local disease, without fever, and without adequate loss of appetite. In all of these a severe attack of enteric fever had preceded the marasmus. The patients who were almost denuded of all adipose tissue had, previously to the attack of enteric fever, been in good health. The only explanation which he could give of these cases was, that the fever had acted upon the fat-collecting system in the way already pointed out. The notes of six cases of this kind were then read, but in one of these the marasmus had been preceded, not by enteria, but by a protracted affection of the bowels improperly named dysentery.

Tumour of the Middle Lobe of the Cerebellum. By J. HUGHLINGS JACKSON, M.D.—This case was observed in the London Hospital by the author and by Mr. Stephen Mackenzie. There was found, on *post mortem* examination, a tumour of the middle lobe of the cerebellum, which had pressed on the corpora quadrigemina and on the veins of Galen. There was also a small tumour of the right corpus albicans. Much fluid was found in the cerebral ventricles, and the horns of the lateral ventricles were greatly dilated. The chief symptoms during life were—(1) enlargement of the head, (2) double optic neuritis, and (3) reeling gait, followed by permanent rigidity of the legs and paroxysms of convulsions somewhat like those of tetanus. These seizures, the author supposed, furnish some evidence in support of the view that the changes in tetanus are in the cerebellum. The author referred to cases of a like kind, and particularly to one by Dr. Gull and to one by Mr. Waren Tay, in which a like diagnosis had been made.

On the Nervous Origin of certain Cutaneous Affections. By J. F. PAYNE, M.B.—Certain affections of the skin were more or less generally acknowledged to be governed in their distribution by the distribution of nervous structures, and were therefore presumably due to some abnormal nervous activity. Among these were more especially noticeable herpes, or herpes zoster, and that peculiar local induration of the skin called morphea. In a case of each of these complaints, described in the paper, the cutaneous manifestations were associated with affection of the motor part of the nervous apparatus. In a case of herpes in a child, affecting the right lower extremity, and corresponding to the superficial branches of the anterior crural nerve, the appearance of the

eruption was preceded for three days by temporary hemiplegia of the same side. The other case was that of a child suffering from hemiplegia, with some permanent contraction and occasional spasmodic movements of both the upper and lower limb, and in whom part of the skin of the face of the same side was affected with local scleroderma or morphea. The skin of this part was hard and white, neither raised nor depressed; and the alteration was thought to be confined to those parts of the integument supplied by the superficial branches of part of the fifth cranial nerve. In both these cases the peripheral nervous affection giving rise to the skin-disease appeared to be dependent on some morbid condition—in the one case temporary, in the other chronic, of the nervous centres; and that this explanation might be applicable to other cases.

On Intemperance as a Cause of Chronic Bright's Disease. By WM. ROBERTS, M.D.—The generally received opinion, that the abuse of alcoholic liquors is a frequent cause of Bright's disease, has been called in question by Dr. Dickinson in an elaborate argument in his recent work on *Albuminuria*; and the scope of the paper was to examine the evidence Dr. Dickinson relied on in coming to an opposite conclusion. The writer endeavoured to show that the pathological facts adduced by Dr. Dickinson were either untrustworthy, or that they had been incorrectly interpreted. Dr. Roberts especially pointed out the fallacy of the argument drawn from the Registrar-General's Reports. It was quite true, as Dr. Dickinson had stated, that the districts which yielded the largest returns of deaths from intemperance did not return an excessive proportion of deaths from Bright's disease; but exactly the same result was obtained when the same statistics were applied to the mortality from cirrhosis of the liver—a disease which is notoriously and chiefly the product of intemperance.

The Respiratory Movements in Man. By ARTHUR RANSOME, M.D.—The paper recorded observations made with Dr. Burdon Sanderson's stetho-cardiograph as to the order of movement of the ribs in ordinary and forced breathing in males and females; and also measurements of the movements of different points in the chest-wall, made simultaneously in three planes by means of the author's stetho-metrometer constructed for the purpose. From these measurements conclusions were drawn as to the mode in which the several movements were produced, and variations in the extent of movement in different directions were pointed out in the two sexes at different ages, and in different positions. The influence of various muscular power was shown, and the variety produced by different diseases, especially phthisis, pleurisy, and emphysema.

SECTION B.—SURGERY.

On Excision of the Tongue. By GEORGE SOUTHAM, F.R.C.S.—After making some remarks on cancer of the tongue, Mr. Southam referred to the difficulty which surgeons frequently experienced in excising the entire organ, or even a large portion of it, for this affection. The safest mode of removal was by the aid of the *écraseur*, but this instrument frequently failed to effect the purpose, in consequence of the shape of the tongue and the peculiar arrangement of its muscles, causing the chain of the *écraseur* to slip towards the diseased portion, in which it often became imbedded before the operation was completed. Some cancerous deposit was therefore left, and, though it might not be in sufficient quantity to interfere with the healing of the wound, usually led to an early return of the affection. To remedy this defect in the operation, Mr. Southam had had constructed a pair of forceps with a movable hinge, which completely grasped the tongue at its root, and confined the action of the *écraseur* to the part where it was first applied. A case was described in which, with this instrument and the *écraseur*, and without making an opening in the floor of the mouth to pass the chain through, the tongue, of which the body was affected with cancer, was excised beyond the foramen cæcum and circumvallate papilla, these structures being included in the separated portion.

Mr. CHARLES STEELE remarked on the great advantage which was gained by not being compelled to open the lip, chin, and symphysis menti, thereby lessening greatly the severity of operation and risk of inflammation of the lungs, etc. He asked the results of Mr. Southam's operations.—Mr. LUND said the great value of the instrument was, that it fixed and dragged forward the tongue to a degree which no other would do.—Mr. FURNEAUX JORDAN thought that the instrument would prove of service. He asked if Mr. Southam had used two *écraseurs*, one over the dorsum of the tongue, and the other under the tip. There was a danger of hæmorrhage in using the *écraseur*, for which surgeons must always be prepared.—Mr. MAUNDER said that, to effect the operation without hæmorrhage, the chain should be worked slowly, once in the minute. The pain was less than might be supposed, and

almost ceased when the chain was drawn tight.—Mr. S. GAMGEE spoke of the great value of Mr. Southam's instrument, and of drawing the tongue well forward. He narrated a case in which he drew the tongue well forward with Marshall's polypus forceps, and cut off the organ; and, to stop hæmorrhage, filled the patient's mouth with ice. Mr. Gamgee also remarked that tumours might be freely removed from the neck of the uterus with the knife, ice being immediately applied; and that the great danger of the *écraseur* was its liability to slip.—Mr. SOUTHAM, in reply, said he had used his instrument once for removal of the whole tongue, almost touching the epiglottis; also for removal of small portions of the tongue. The recovery has been rapid. He agreed with the remarks about hæmorrhage and the *écraseur*; and that a surgeon should be prepared to apply ice, or tie any artery. With his instrument, two *écraseurs* could not be needed. Mr. Southam would be happy to receive any suggestions for the improvement of his instrument.

Antisepticity in Surgery. By EDWARD LUND, F.R.C.S.—It was argued by the author that antisepticity might be brought about by any means through which the *excreta* of wounds were protected from putrefactive change, and the surfaces on which they rested preserved from contact with the irritating chemical products thus elaborated. In recent wounds, the strict observance of antisepticity saved much constitutional distress, tended to keep the tissues from loss of substance by sloughing and ulceration, and the patient's strength from being reduced by needless suppuration. But, in healing wounds, it was admitted that greater time would be often required to complete a perfect cicatrix; although this, when formed, would be more pliable and natural than under other modes of treatment. The claims of many antiseptics were considered, but preference was given to carbolic acid in very weak solution, or in that form of composition which Mr. Lister had described as his carbolised muslin, a modification of the antiseptic cere-cloth, first proposed by Mr. Lund at the meeting of the Association at Leeds in 1869.—The PRESIDENT (Mr. May) said that the antiseptic plan of treatment was adopted at the Royal Albert Hospital, Devonport, with satisfactory results.

On the Extension of Inflammation from the Epididymis to the Urethra. By FURNEAUX JORDAN, F.R.C.S.—Mr. Jordan remarked that inflammation of the prostatic urethra from any cause (injuries, foreign bodies, operations, adjacent inflammations, and all urinary obstructions) may extend to the epididymis. It would be an original investigation to discover any kind of prostatic inflammation that did not extend along the submucous connective tissue of the vas deferens. He was not aware that any one had observed the converse of this. He had recently watched a case in which inflammation unmistakably travelled from the epididymis to the urethra. A married man, free from disease and the history of disease, was admitted into the Queen's Hospital suffering from the effects of a severe blow on the scrotum. On the subsidence of scrotal swelling, the left epididymis was found to be enlarged, painful, and tender. The next day, the adjacent portion of vas deferens was swollen to the size of a goose's quill, and tender to near the inguinal ring. The following day, the swelling extended into the ring. A few days later, a slight urethral discharge appeared, and all the symptoms of a mild urethritis. Mr. Jordan believed any new fact to be of value which would help to explain obscure urethral discharges.

Mr. LUND observed that the history was the important point in such cases. He mentioned the case of a young man who, when skating, felt something crack in his groin; orchitis resulted, and was followed by slight urethritis.—Mr. MAY's experience confirmed Mr. Jordan's, that urethritis need not be considered as a necessary result of gonorrhœal infection, but that it did follow stricture.—Inspector-General LONGMORE considered the case most valuable and practical.—Mr. STEELE asked how many days the patient was in hospital before urethritis occurred. This would be of value in diagnosis, by enabling a comparison to be made with the time of incubation of gonorrhœa.—Mr. F. JORDAN, in reply, said that it is not necessary to presume gonorrhœal infection, even in spite of the positive assertion of patients; cases of urethritis might depend upon other causes. The case, having occurred only this year, was not of sufficient duration to show after-results. Mr. Jordan corroborated Mr. May's statement with regard to orchitis or epididymitis occurring after stricture or passing instruments. It was difficult to draw a distinction between gonorrhœa and simple urethritis. In reference to Mr. Steele's question, he answered that the ordinary incubation of gonorrhœa might be five days, whereas the man was in hospital ten days before urethritis occurred.

Case of Excision of the Scapula. By CHARLES STEELE, F.R.C.S.—Charles Bees, aged 8, was admitted on April 14th into the Bristol Royal Infirmary, on account of a large swelling upon the right scapula, which had been forming only six weeks, and had enlarged very

rapidly during the last fortnight. The tumour covered the whole surface of the scapula except the inferior angle, and encroached over the upper border towards the clavicle; it was firmly adherent to the scapula, most prominent over the spine, and had a highly elastic and, in parts, fluctuating feeling. The child had fallen off in flesh slightly, and looked rather delicate. Mr. Steele made an exploratory incision, and removed a minute portion of the substance, which on microscopic examination showed large, almost square, cells filled with secondary cells. Extirpation of the scapula was decided upon; and, on the 18th, after making a free incision down to the bone through the tumour to confirm diagnosis, Mr. Steele made a free elliptical incision from the upper border to the inferior angle, carefully surrounding the first incision, so as to avoid infiltration. He then slipped the inferior angle of the scapula from under the latissimus dorsi, divided the muscles attached to the posterior and anterior borders, freed the subscapularis muscle from its surroundings, divided all connections of the clavicle and humerus close to those bones, and, by very delicate dissection, cleared the projections of the tumour from their close proximity to the subclavian vessels, etc. The suprascapular, posterior scapular, and subscapular arteries, and one muscular branch, were secured. The forearm was supported across the chest, and a compress of wool applied over the excavated cavity. The tumour had evidently sprung from the bone; it covered its dorsum, infiltrated its tissue, formed a large firm projection on the venter, and had stretched the supraspinatus, infraspinatus, and subscapularis muscles as a capsule enclosing it. Recovery steadily progressed till the seventh week; the wound was then nearly healed, the child ate well, had gained in flesh, was able to be up all day and go into the garden, and looked well. Two nodules of encephaloid now recurred, and were removed entire, the intercostal muscles being cleaned in doing so. Ten days afterwards, a fresh nodule formed near the spine; and the granulating surface of the wound became so infiltrated that all hope of further removal had to be abandoned. It was some satisfaction to notice that all recurrence of disease was in the lower part and towards the spine. Mr. Steele remarked that this case showed clearly two points: first, that the operation was well borne by the system, and recovered from; and, secondly, that even before cicatrization was complete, a surprising amount of movement existed in the arm. The hand and forearm could be freely used, and the arm drawn well forwards, also extended from the side, and even drawn backwards by the latissimus dorsi muscle. This showed that, had disease not returned, a very useful limb would have resulted.

Mr. F. JORDAN congratulated Mr. Steele on having performed the operation, but said the only points to question were whether disease should in such a case be removed at all, and, if it were, whether the whole upper limb and clavicle should not be also removed.—Mr. ALFORD said that the case involved the question whether any cancer except epithelioma should be removed, as it was most likely to return in a more intractable form. Scirrhus, for instance, usually, in five or six years was more rapid in progress, more painful, and opened soon.—Mr. MAY remarked that anæsthetics now enabled tumours to be removed which, thirty years ago, must have been left on account of the pain which their removal would have caused.—Mr. STEELE, in reply, said that, as he had stated, the tumour was encapsuled, and was removed entirely surrounded by sound tissue. Had even the whole arm and clavicle been taken away, the parts in which disease returned would have remained. If cases for operation were wisely selected in various cancers, very happy results frequently occurred. With regard to this special case, having seen the boy very recently, he was sure disease now was not so extensive, nor the boy's system not so much reduced, as it would have been had the cancer been left to itself.

The Treatment of Aneurism by Compression. By RAWDON MACNAMARA, M.D.—[Dr. Macnamara's paper was published in last week's JOURNAL.]

Dr. BEATTY explained the use of the instruments for compression invented by the late Dr. Todd.—Deputy Inspector-General LONGMORE, C.B., made some remarks on the partial interruption of the current of blood through the artery, and pointed out that the total arrest of the flow of blood frequently defeated the end in view. He also adverted to the intelligent co-operation of the patient; and related the case of a soldier who, suffering from aneurism, had explained to him the process of cure and how it was to be obtained. The soldier applied compression to the artery by means of a soda-water bottle, and cured himself. He spoke in high terms of the value of Dr. Carte's instrument, and stated that cases of aneurism had been cured by its means which had apparently been incurable. He thought that Dr. Macnamara was rather of opinion that the cure of aneurism by compression was not well known in England. In the army, however, where there were a large number of Irish surgeons, its value was as well understood; and they had a remarkable number of cures by this means. In one ship alone, three

cases were cured by compression.—Mr. C. HEATH asked if the number of hours referred to the continuous treatment by day only, not including the night. He referred to a pamphlet by Mr. O'Ferrall, who advised that a tourniquet should be placed above and below the aneurism, and wished to know if that practice was carried out.—Mr. R. H. MEADE related cases in which compression was used, and the current entirely stopped, and then entirely intermitted, when cures were obtained.—Mr. HECKSTALL SMITH thought he had seen the earliest case in England under the care of Mr. Guthrie in 1827, and was surprised that a record was not made of it. The pressure was kept up intermittently by a large door-key covered with leather, by relays of students. A cure was effected.—Mr. KEMPTHORNE asked if compression by fingers was not preferable to any other contrivance.—The REV. DR. HAUGHTON wished to mention that, some years ago, an inquiry was made in the University of Dublin into Dr. Carte's invention; and the degree of M.D. was conferred upon him for his invention. He thought that the English Universities might imitate the example of the Irish.—Mr. MAUNDER thought that the digital method was preferable to the instrumental. Many years had elapsed since he saw a femoral artery tied for popliteal aneurism. He was in favour of digital compression.—Dr. MACNAMARA, in reply, stated that his great object was to exhibit the instruments used by Irish surgeons. He thought that compression by instruments was the best, as it could be placed directly on the artery, and the force regulated. Constant pressure was obtained by instruments; whereas, if digital compression were relied upon, there must be occasional cessations of pressure by the students. He knew that if the pressure of more than nine pounds were required to stop the pulsation, the patient must be reduced.

Notes on Ambulances. By WILLIAM MAC CORMAC, F.R.C.S.—Mr. Mac Cormac explained that he was called upon to undertake the charge and treatment of upwards of one thousand cases of gun-shot wound within the space of twenty-four hours. The ambulance of which he was in command having by rare good fortune arrived at Sedan a day or two before the great battle, and as there were only the military surgeon and the assistants in the town when he arrived, he and his assistants were warmly received. During the whole of the fight, they were directly under fire; and all the day, and far into the night, he was engaged in performing operations as fast as he could. The wounded were brought on stretchers, which, although requiring many men to carry them, was a preferable mode of conveyance to any other, as far as the wounded themselves were concerned. Ambulance-waggons hitherto used had been imperfect, and often unable to get into the field at all. In the large number of wounded with which he had to deal, he did not find a single case of primary hæmorrhage. Cases where large arteries were injured must have nearly all died on the field. They had also had but few head-injuries. The operations were chiefly excision of the shoulder and elbow, including the hip and shoulder joints; and the result showed the impracticability of following the wholesale lessons of that conservative surgery practised in British hospitals. Ample use of carbolic acid was highly desirable. He endorsed the importance of primary rather than secondary amputations, and was sorry that in Plymouth, where Mr. W. P. Swain had earned a high reputation for his work on *Excision of the Knee-joint*, he could say nothing in favour of this operation. In gun-shot wounds received in action, it was wholly inapplicable. A very distinguished German surgeon performed it thirty-six times; thirty-five of the patients died soon, and the thirty-sixth required amputation of the thigh.

Deputy Inspector-General LONGMORE remarked that to Mr. Mac Cormac, and to his coadjutor, Dr. Frank, was due all the credit for the good conduct of the ambulance under their care. They had done much to save the credit of the International Society. There were great difficulties in connexion with international aid; and it still remained to be seen how far it could be carried out. If a large number of neutrals were engaged in taking care of the wounded of belligerents, it had a tendency, he considered, to increase the wounded; for, if an army were not hampered by wounded, it was free to go on and fight. He thought no transport was so good as the hand-litter, the difficulty in connexion with which was the obtaining a sufficient number of bearers.—Dr. McNALTY stated that primary amputations and excision of joints almost invariably failed. The use of carbolic acid by the Prussians was extensive, and was thought to be of immense service, especially in the large abscesses of the thigh after gun-shot wounds. The solution should be 1 to 200, used as an injection. One fault of its use was, that it healed up wounds too quickly. The formation of bed-sores was very frequent, and in them the use of a stronger solution of carbolic acid was most useful.—Mr. W. P. SWAIN hoped yet that, even in the face of the bad statistics, primary excision of the knee-joint might yet be practised. With the improvements in field-hospitals, giving greater rest to the patient, with carbolic acid, on Watson's anterior suspension splints, he

hoped the practice might yet be adopted.—Deputy Inspector-General LONGMORE remarked that Nussbaum stated that three of his cases of excision had recovered.—Mr. MAUNDER said that the question of primary excision was very important, and he would like to have further information from Mr. Swain on the subject.—Mr. SWAIN states that in civil practice nearly all the cases of primary excision from gun-shot wound had recovered.—Mr. MAC CORMAC, in reply, stated that carbolic acid was of extreme advantage. He was most anxious to try Lister's method; but the length of time required was against it.

The Treatment of Stone in the Female Bladder. By CHRISTOPHER HEATH, F.R.C.S.—The paper was illustrated by three cases which had occurred in the author's practice. The first case was in a patient aged 32, who was subjected to lithotrity, a stone weighing four drachms, composed of phosphates, with a nucleus of oxalate of lime, being removed in five sittings with complete success. The second case was in a married woman aged 49, in whom a large stone was readily felt *per vaginam*. Vaginal lithotomy was performed, and a stone of an ounce and a half and measuring two inches by an inch and a half was readily removed, the wound being closed immediately with six silver sutures passed through the entire thickness of both vaginal and vesical wall. The patient made a rapid and complete recovery without the formation of any fistulous opening. The third case was that of a child aged 11, in whom the urethra was rapidly dilated and a small stone extracted, when there was found to be a much larger mass fixed to the bladder, which was removed with difficulty after being partly broken up, the whole mass weighing nine drachms. The child had incontinence for a few weeks after the operation, but eventually recovered complete control over the bladder. Mr. Heath briefly contrasted the three proceedings, maintaining that rapid dilatation of the urethra within certain limits was a perfectly harmless and most useful practice. He advocated lithotrity for moderate-sized stones in the adult, but for large stones preferred vaginal lithotomy with immediate closure of the wound, a proceeding which experience had proved to be remarkably successful.

Mr. MEADE's experience went to show that, as a rule, calculi formed in the female bladder from matter introduced from without. In a case of his he found the nucleus to consist of a piece of carrot, and in another of a bit of bone.—Dr. EVANSON said that in one case two calculi were removed, each containing a molar tooth.—Mr. SQUARE had operated by incision through the urethra, and in another case by lithotrity.—Mr. STEELE was glad to find Mr. Heath speak well of rapid dilatation. It was the practice at the Bristol Infirmary.

A New Stricture-Dilator. By BERKELEY HILL, F.R.C.S.—The instrument was described as operating on the principle of Perrève's, Holt's, and Richardson's. The two halves of a split sound, equal when in juxtaposition to the calibre of a No. 2 or No. 3 catheter, could be separated by thrusting between them a segment of a cone fixed to a slender stem, until they occupied a space equal to a No. 12 catheter. The dilation might be carried on to No. 14 or No. 16 of Weiss's scale. The advantages said to be possessed by the instrument were, simplicity and cheapness of construction; absence of necessity for a central guide; and diminution of resistance.

Loose Cartilages of the Knee-joint and their safe Removal by Subcutaneous Incision. By W. J. SQUARE, F.R.C.S.—The author stated that, since he published his account of the operation by subcutaneous incision about ten years ago, when he related nine cases, he had performed the operation fifteen times. The twenty-four cases had all been operated on without selection; and all had recovered without drawback. Cases were brought forward illustrative of the dangers incident to the operations by direct and valvular incision; and the operation practised by the author was described. The loose cartilage is conducted to the inner and lower part of the joint and held there by an assistant. A tenotomy-knife having been introduced, the capsule of the joint is freely incised upon the cartilage; the knife is then directed so as to open the cellular tissue over a convenient part of the fascia. The cartilage is now pressed and lifted out of the joint into the cellular bed prepared for it, and slid along for about three inches. It is fixed *in situ* with a firm pad and adhesive plaster, the foot and leg being bandaged up to the edge of the cartilage, and the limb placed in a splint. If no inflammation ensue, the cartilage is excised about a week after the operation. The paper closed with a few remarks on the different varieties of loose cartilage, their structure and origin.

Mr. WM. ADAMS referred to Mr. Square as one of the highest authorities on the subject of the removal by subcutaneous incision of loose cartilages. Very few surgeons would, in the face of the facts brought before them, venture upon direct incision.—Mr. SQUARE, in reply to a question as to whether he fixed the cartilage by passing a needle through

it, and then cut down upon it, said he had done so on two occasions, and found the plan very inconvenient, as there was great difficulty in withdrawing the needle, which stuck firmly.—The discussion partly turned upon the question whether any analogy existed between rheumatism and loose cartilage; and Mr. Square remarked that he did not think so, as townsmen suffered as much as agriculturalists from the former. He was rather inclined to think that loose cartilages were caused by violent use of the knee.—Mr. LONGMORE stated that, during the nine years he had been at Netley, only one case of a soldier suffering from loose cartilage had come before him. This he had treated upon the valvular system; but after hearing Mr. Square's paper, he should not adopt the treatment again.—Mr. W. P. SWAIN thought that rheumatism had something to do with loose cartilages. The agricultural labourers of Devon and Cornwall were very subject to rheumatism, and also to the other affection. He related a case which had come under his own knowledge. A man became afflicted by a loose cartilage in America, where the surgeons wanted to amputate his leg. This he would not have done, and came to England. He was admitted to the Royal Albert Hospital, Devonport; but Mr. Swain being unable to get hold of the cartilage, the man left the hospital, and went to his work. Some time afterwards, the man fell a distance of about sixteen feet, and nearly broke his skull, but he also knocked the cartilage out of the knee-joint, and he (Mr. Swain) was then enabled to extract it.

The Influence of Nerves in the Repair of Fractures. By WILLIAM SQUARE, F.R.C.S.—The paper consisted of observations on the mode of separation of the long bones when under the influence of the cerebro-spinal nerves, and also when deprived of such influence. It was based upon the *post mortem* examination of a man who sustained a fracture of the spine, with paralysis of the bladder and lower extremities, and at the same time received a compound fracture of his left forearm, and also of his right thigh; the fractured arm receiving due nervous influence, while the fractured thigh was deprived of it.

Growths in the Larynx: the Comparative Advantages of Laryngoscopic Treatment, and Direct Incision into the Larynx. By MORELL MACKENZIE, M.D.—The relative advantages of these two methods must be considered in relation (1) to the quickness of cure; (2) completeness of removal and probability of recurrence; (3) danger to life; and (4) restoration of voice. From an experience of one hundred cases treated, a month was estimated to be the average duration of laryngoscopic treatment. External treatment, on the other hand, required only a fortnight. As regards the second question, complete removal was able to be effected in 97 per cent. of the cases which underwent the full course of laryngoscopic treatment, and recurrence took place in about 7 per cent. In 28 cases of direct incision, collected from all sources, 10 died in a short time; and in the remaining 18, the growth was incompletely removed in three cases, and recurrence took place in three cases, or, in other words, in 20 per cent. No death occurred in the laryngoscopic cases; whereas of the 28 treated by external operation, 3 immediately terminated fatally, 6 died at the end of a few months, and 1 from an independent disease. With reference to restoration of function, perfect voice was regained in 77 per cent. of those who underwent laryngoscopic treatment, and a more or less serviceable voice was restored in 16 per cent. Of the 18 cases who survived direct incision more than a few months, only 9* completely recovered their voice, 4 had persistent hoarseness, and 6 permanent aphonia. Consideration of the above statistics established the paramount value of laryngoscopic methods of treatment, and justified one in saying that extra-laryngeal treatment ought never to be adopted unless there were danger to life from suffocation or dysphagia.

On Injuries of the Axillary Artery occurring in Artillery Practice. By WM. R. E. SMART, M.D., C.B., Inspector-General Royal Navy.—Dr. Smart cited three cases of injury of the axillary artery resulting in gangrene, caused by violent throwing back of the upper extremity when explosions take place in the act of loading cannon. He considered that this peculiar injury occurred when the explosive force had not been of the highest degree, as he had never known an injury to occur at the shoulder where the hand had been blown away. These cases showed that the proper treatment at the seat of vascular injury was, by cold or other means, to ensure early coagulation and fibrination of the clot, which happened successfully in two of the cases cited, and not to delay amputation at the middle of the upper arm as soon as gangrene had begun at the fingers.

* These cases are tabulated in the Thyrotomy Table in the author's essay on *Growths in the Larynx*. In this table, however, the result of Case 27 was entered as "not stated"; but since the publication of the volume Dr. Solis Cohen had informed the author that the result was "complete restoration of voice."

The Unity of the Syphilitic Virus. By S. MESSENGER BRADLEY, F.R.C.S.—Mr. Bradley commenced by stating that, in order to demonstrate the unity of the syphilitic virus, it was requisite to produce a soft non-infecting sore by direct inoculation from a hard infecting chancre upon a virgin subject. He had performed many experiments upon monkeys, guinea-pigs, and kittens, with the result of producing a characteristic soft chancre in three instances by direct inoculation from an infecting sore, the virus being taken prior to cicatrisation. In each case, the chancre from which the virus was taken was accompanied by multiple inguinal adenopathy, and other evidences of constitutional infection; in each case, the inoculated sore appeared within a few days after the introduction of the matter; in each case it suppurated freely, was capable of auto-inoculation, and inoculation upon fresh animals; in no case were there constitutional symptoms at the termination of three months. Mr. Bradley alluded to the fact that this conversion of one form of syphilis into another (in many respects a very different one) did not commonly occur, and drew a parallel between the history of syphilis in this respect, and the history of the vegetable parasites, which were all confessedly interchangeable, but which, as a matter of observation, very rarely underwent this mutual change.

SECTION C.—MIDWIFERY.

THE PRESIDENT (Dr. BEATTY), on taking the chair, said this was the second time he had had the pleasure to preside over this section. The first time they did him the honour was in 1867, when the Association held its meetings. He believed that was the first meeting at which the sections were adopted. It was then tried as an experiment, and he was pleased to know it had been found to answer successfully at subsequent meetings.

The Treatment of Hæmorrhage arising from Retention of the Secundines after Abortion. By J. G. SWAYNE, M.D. [This paper was published at page 201 of last week's JOURNAL.]—A discussion followed, in which the President, Dr. Barnes, Dr. Wynn Williams, Dr. H. Bennet, Dr. Aveling, Mr. Greenway, Mr. T. E. Owen, Mr. Goodridge, Dr. Braxton Hicks, and other members took part.—Dr. BARNES advocated the injection of solution of perchloride of iron (one ounce to twelve).—Dr. BENNET recommended plugging the cervix uteri with cotton; and Dr. BEATTY spoke favourably of the introduction of laminaria tents.

Fibro-Cystic Disease of the Uterus. By T. E. BEATTY, M.D.—The author submitted to the section a recent specimen which exhibited the mode of formation and growth of this important complication of fibroid disease. The case was one in which Dr. Beatty had been consulted in Dublin, and which had been tapped three times, and dark-coloured albuminous fluid had been removed by the *aspirateur* at each operation. When Dr. Beatty saw the patient, which was a week before her death, he found the abdomen occupied by an uniform tumour, very much resembling a gravid uterus, at the eighth month of pregnancy, in size and shape. On pressing deeply, distinct fluctuation could be felt, and the walls of the cavity gave the impression of being thicker and more fleshy than those found in ovarian dropsy. The uterus, when examined by the finger and sound, appeared healthy, and of the normal size; but it was fixed in its position, and could not be moved. Dr. Beatty declared his opinion that the case was one of fibro-cystic disease of the uterus. The third tapping was performed after this, and the woman died of peritonitis in a few days. A *post mortem* examination had verified the opinion that had been given; and Dr. Beatty was happy to be able to show the specimen to the members of the British Medical Association, as the means of diagnosis of this disease were still very imperfect, and it was necessary to bear in mind the possibility of its occurrence in all cases of tumour existing in the abdomen.—Dr. Beatty called the attention of the section to the recently published case of removal of a large fibroid from the fundus of the uterus by operation, by Mr. Spencer Wells, in which the woman recovered; and said that a similar operation, if performed upon the subject of the case just detailed, might have been followed by success; but no one could have foretold the smallness of the connexion between the tumour and the uterus during life.

The Treatment of Cancer of the Neck of the Uterus and allied Structures by the injection and application of Bromine. By A. WYNN WILLIAMS, M.D.—The author commenced by making some remarks on the spontaneous removal of malignant tumours, from the study of which he was led on to the injection of bromine into cancerous tumours of the uterus and other parts. The eight cases published in the last volume of the *Obstetrical Transactions* still continued well. He entered into details as to the manner of injecting these deposits, and the care required in the use of bromine both as an injection and application, stating that

before its use the surrounding parts should be well protected by a solution of soda. He exhibited the various instruments made for the injection, etc., of bromine. He gave the history and successful treatment of a selected case of medullary carcinoma of the uterus in the state of disintegration and ulceration by this method; and also the particulars of a case of epithelioma of the lower lip, which had been previously removed by operation. On the return of the disease the patient was sent to Dr. Wynn Williams, who by two injections of bromine caused the entire, and so far permanent, removal of the disease.

On Hysteria and its various Interpretations. By E. J. TILT, M.D.—Dr. Tilt began by remarking that writers on hysteria might be divided into two groups: a comparatively small group of writers who owned they knew nothing of diseases of women, and nevertheless affirmed that uterine affections had nothing to do with hysteria; the adverse opinion being held by the great majority of those who thoroughly understood diseases of women. The author quoted from the lectures of Dr. King Chambers, Dr. Russell Reynolds, Dr. Handfield Jones, and Dr. Hyde Salter, to show what was taught respecting hysteria by those who know little of diseases of women. He proceeded to show how this ignorance of diseases of women by the leaders of the profession and by lecturers in public schools injuriously affected their own interests, the welfare of their patients, and the advance of medicine. Dr. Tilt objected to hysteria being identified with lust, and to the common practice of calling hysterical all inexplicable symptoms occurring in women. Lastly, the author explained hysteria to be the product of an indispensable predisposition to emotion on the part of the nervous system, and some determining cause; this determining cause being sometimes one of those debilitating agencies that intensify all nervous affections; sometimes the cause being a disturbed action of one of the abdominal viscera, the reflex centres of our emotions; diseases of menstruation, in which slight structural diseases of the ovary find expression, and the mildest forms of uterine disease, being given as the most frequent determining causes of hysteria. Dr. Tilt concluded—1. That our hospital men, to be efficient lecturers and leaders of the profession, should be thoroughly acquainted with diseases of women; 2. That, whenever it was a question of hysteria, the state of menstruation should be carefully ascertained, and the sexual organs accurately examined, if they presented signs of disease; 3. That the best way for neurologists to disperse the clouds that still obscured our knowledge of hysteria, catalepsy, and epilepsy, was to study the pathology of the ganglionic nervous system.

Hypertrophied Elongation of the Cervix Uteri.—Dr. BARNES exhibited and explained a drawing made from a preparation recently put up at St. Thomas's Hospital, which showed the anatomical relations of hypertrophy of the cervix uteri. The specimen, he believed, was unique in its completeness and accuracy, as the whole pelvis was included, and the contents were preserved without disturbance. The length of the uterus was seven inches; the two tips of the os uteri were much hypertrophied and everted. The everted vagina covered the protruded mass. The retro-uterine peritoneal pouch was extended externally to the vulva, and the base of the bladder was sacculated.

Oxytocics. By R. BARNES, M.D.—The author pointed out that the notion that iron was an abortifacient was unfounded.

On the Value of the Sulphate of Iron as a Local Application in Phlegmasia Dolens. By R. W. CRIGHTON, M.D.—This method of treatment was first adopted by the author many years ago, from the great success reported by Velpeau from its use locally in erysipelas. It had been employed exclusively in that form of phlegmasia dolens commencing at the calf of the leg and extending upwards to the groin, where the veins are chiefly involved. It had been applied as a lotion (twenty or thirty grains to one ounce of water), as hot as the patient could comfortably bear it, generally by means of spongio-piline. All the cases so treated had made good and rapid recoveries, contrasting favourably with cases formerly treated by leeching and ordinary hot fomentations. Muriated tincture of iron was, at the same time, given in large doses. The same method of treatment was suggested in other cases of phlebitis. The action of these remedies was referred to their power of controlling vascular dilatation, and also to their antiseptic powers.

The Radical Cure of Retroflexion of the Uterus. By T. E. BEATTY, M.D.—The object of the paper was to show that a vaginal pessary might give relief by supporting the entire uterus; but that it could not effect the restoration of the natural shape of the organ by obliterating the vicious bend which it had acquired. That could only be secured by straightening the uterus by means of the sound, and keeping it straight by a stem passed into its cavity, and retained there by some means that would not confine the uterus in a fixed position, but would leave it free to move in

the pelvis according as the rectum and bladder were full or empty, or the woman was in the upright or in the horizontal position. Dr. Beatty proposed in 1862 to employ Sir James Simpson's uterine stem, with a bulb at the bottom, which, being passed into the uterus, he retained in its place by a flat smooth boxwood pessary introduced after it, which permitted free motion of the bulb over its surface, yet prevented the stem from escaping. These were to be worn for six or eight weeks, and required no removal or change during that period; and the woman went about her ordinary occupation as if no instrument were there. When the bend had been removed by this means, at the end of the time specified they were to be removed, and a simple ring of gutta-percha, of the same diameter as the boxwood pessary, was to be introduced into the vagina, which assuming the sloping position that a flat pessary always did in the vagina, supported the fundus of the uterus and prevented any attempt at falling back, while the lower part of the body and the cervix were allowed to hang down through the ring, and thus the natural position of the uterus was preserved. As such a ring did not interfere with any of the functions of the vagina, it might be worn for six months or longer, and then removed, when the uterus would keep its proper shape.

The Treatment of Fibroid Tumours of the Uterus. By ALFRED MEADOWS, M.D.—The author combated the notion that these growths could be in any way diminished in size, still less cured, by any known therapeutical agent. Discussing the question from a histological point of view, he felt convinced that it was impossible to procure the absorption of any part of the solid constituents of these tumours; at the same time, he showed that there was ample scope for the exercise of skill in the medical treatment of such cases, especially in regard to hæmorrhage and pain. The chief object of the paper was to advocate more frequent resort to surgical treatment. The author expressed his belief that much more might be done in many of these cases than had been hitherto. Even in the subperitoneal variety, he thought that, in cases where much distress existed, abdominal section ought to be resorted to more frequently; while in the interstitial and submucous forms, it ought to be the rule in practice always to endeavour to assist Nature in her method of cure—viz., by expulsion. For this purpose, three objects should be kept steadily in view. 1. All obstruction should be removed by freely dividing the cervix in several directions. 2. The tumour should be separated from its attachments, not necessarily all at once, but by successive stages. 3. As far as possible, continuous uterine action should be maintained by the administration of ergot and other oxytocic agents. A case was cited in illustration of the value of this combined method of treatment.

A Rare Form of Post-partum Hæmorrhage. By J. BRAXTON HICKS, M.D., F.R.S.—After quoting the remarks of Dr. Blundell when speaking of the diagnosis of a second foetus relative to the falling down of the membranes in front of the os uteri, and the consequent retention of blood within the uterus and the protrusion of the bag of membranes, Dr. Hicks brought forward three cases in which the membranes, having remained adherent all round the lower portion of the uterus, and a detachment of the edge of the placenta situated on the side having taken place, a quantity of blood was effused, pushed down the inverted membranes through the os into the vagina, and, the uterus meantime filling, a large amount of blood thereby accumulated, sufficient to produce very serious symptoms. The treatment was indicated, and some few remarks made on the expulsion of the placenta.

Reduction of Inversion of the Uterus. By J. BRAXTON HICKS, M.D., F.R.S.—Dr. Hicks described four cases of acute, and two of chronic inversion of the uterus, with remarks upon the causation, prevention, and treatment. He showed some pessaries and apparatus whereby to apply pressure more certainly in the chronic forms, a simple form of which he had found successful.

Supplemental Mechanical Force during Parturition regulated by a Dynamometer. By PROTHEROE SMITH, M.D., Senior Physician to the Hospital for Women, etc.—After some allusion to the physiology of labour and to the agents of force exercised in parturition, viz., that of the voluntary and involuntary muscles, Dr. Protheroe Smith spoke of the injurious consequences when the normal balance of these powers was disturbed, specially marking the distinction between the capabilities of the uterus and of the muscles of the trunk, to obviate which, as well as to subsidise the power at fault, he advocated the judicious employment of an artificial force, according to certain rules, by means of his "obstetric pelvic band", which was described and exhibited. The peculiarity of this instrument was that it formed with the pelvis itself, as it were, a solid basis, which, by virtue of its immobility, allowed the accoucheur easily to employ the required aid to assist and expedite expulsion, and so, by following the natural movements, manifestly to shorten the period of labour, and to lessen its risks. This was regulated by a dynamometer, described and illustrated by a drawing. It was so constructed as to

measure and record accurately the force employed, imitating the normal parturient throes when wanting, especially by interrupted efforts like those constituting the compound character of such pains. In demonstration of this, Dr. Protheroe Smith gave a case of labour in which such means were employed with the result. In this, each pain, as well as the amount and duration of every artificial effort, was recorded, and some valuable calculations and observations were appended from the pen of Professor Haughton of Dublin, from which it appeared that the force used in parturition was much greater than was generally supposed by obstetricians.

A Successful Method of Treating Certain Cases of Dysmenorrhœa and Sterility. By PROTHEROE SMITH, M.D., Senior Physician to the Hospital for Women, London.—After giving the pathology of obstructive dysmenorrhœa with the usual mode of treatment, Dr. Protheroe Smith called attention to that of dilatation by bougies, suggested by Dr. Mackintosh, and the modification of it by Dr. Simpson, and his operation of incision of the cervix by the hysterotome. Dr. Protheroe Smith's experience having suggested a doubt of the advantage of this practice, he was led to adopt the plan he now advocated in certain cases indicated by conditions which he mentions. To overcome the stricture of the os internum, he used *extension-force* by means of his uterine dilator, an instrument described and exhibited, as being peculiarly suitable to this purpose. To restore the os tincæ to its natural form, per speculum, he incised it laterally at the commissures of the labia. Particular instructions were given for this treatment, which, during the last twenty-five years, he had employed with considerable success in remedying both obstructive dysmenorrhœa and sterility. Six cases were cited in illustration.

The Treatment of certain Cases of Placenta Prævia and of Post Partum Hæmorrhage. By THOMAS UNDERHILL, M.D.—The author dissented from the universally expressed opinion that during syncope from "unavoidable" hæmorrhage no operative procedures should be undertaken, but considered that condition rather favourable than otherwise for podalic version. He was also of opinion that, in cases of *post partum* hæmorrhage, should syncope supervene, it was more judicious to allow that condition to continue for a reasonable time than to use rash and hasty attempts to arouse the patient. The arguments were supported by cases.

The Value of Arsenic in Menorrhagia and Leucorrhœa. By J. H. AVELING, M.D.—The author believed that this remedy, although its efficacy in some uterine affections was pointed out by Dr. H. Hunt in 1838, had not received sufficient attention from gynecologists. Dr. Aveling had been administering it for twelve years in cases of menorrhagia with marked success. Besides the improvement which it effected upon nutrition, respiration, and secretion, he believed it to possess a powerful decongestive action upon all mucous membranes. In all disorders of the uterus having a hyperæmic origin, he confidently recommended the use of arsenic. He administered small doses either in solution or granules, increasing them from time to time, and continuing them for weeks or months, as the necessities of the case might require.

SECTION D.—PUBLIC MEDICINE.

THE PRESIDENT (Dr. A. P. STEWART), in taking the chair, delivered an address, which is published at page 233.

Dr. SIBSON and Dr. ROW, on behalf of the Section, thanked Dr. Stewart for his admirable address, and expressed a hope that he would kindly allow it to be published, and that it would receive special prominence in the JOURNAL.

The Climate of Sidmouth, with the results of Meteorological Observations; 1865-70. By J. INGLEBY MACKENZIE, M.B.—The object of this paper was to prove, from meteorological data, the great equability of the climate of Sidmouth—the small quantity of its rainfall in comparison with other Devonshire watering-places. Its *winter* temperature was higher than that of Greenwich by some four degrees, whilst in summer it was much below. There were but few, if any, days in the year on which an invalid could not take out-door exercise, the soil drying very rapidly. Sidmouth was a residence for consumptive invalids at the beginning of the present century, when many of the present fashionable health resorts were fishing villages. Its proximity to London, being the nearest Devonshire watering-place, combined with its equability of temperature and other advantages, rendered it a most desirable winter residence.

The Meteorology of Plymouth for the last Six Years. By J. MERRIFIELD, Ph.D.—This paper contained deductions from observations taken by the writer over a period of seven years. He pointed out the various causes of error in the circumstances of the recording instruments, the circumstances of soil, etc. He made the mean temperature of Plymouth to be 52.31, within a hundredth of the result obtained by

Sir William Snow Harris over ten years. The hottest months in the year were June, July, and August, 61 degrees, 64.5, and 62.8 respectively. The coldest were January and March, the mean of the former being 42.2, and that of the latter 43.4. The highest temperature registered was in June 1866—93 degrees—which he thought must have been caused to some extent by reflected heat. The lowest was 14 degrees, in December 1869. The lowest relative humidity was in June, the highest in November. He was aware that the existence of the Gulf Stream had been questioned by many, but by the kindness of the local secretary (Dr. Littleton), he was enabled to exhibit some articles which it had washed upon the shores of Cornwall. The greatest range of the thermometer was in June and July; the least was in the winter months. In April 1865, he registered a variation of 44 degrees, and often he had had 30. The lowest was in September last—2 degrees only. The prevalent winds had a westerly tendency. The average barometrical pressure was 29.953. The mean annual rainfall of Plymouth was 38.95, the most rainy months being January, September, and December. The heaviest shower he had ever recorded was on Saturday week last, when in half an hour three-quarters of an inch fell. They went many days in the year without a sight of the sun, and there were few free from cloud. Concerning ozone he had made no observations; though no doubt it was plentiful. Plymouth appeared to enjoy an immunity from electrical storms.

Dr. WESTALL hoped that such papers were preserved. A collection referring to the chief towns and districts in the kingdom would be exceedingly valuable.—Mr. LIDDLE was of opinion that the rainfall should always be registered by gauges placed in similar positions. In London they were dependent for rainfall observations upon the Observatory at Greenwich, and he did not know how it was calculated there. Before he came to Plymouth he was told that it rained every day; but he concluded he had been misinformed, as he had not seen any rain for four days.—Dr. WESTALL referred to the fact that Mr. Symons had done all that he could do to secure an uniform system of observation. It was impossible to compare rainfall observations where the gauges were not similarly placed. He hoped it would be possible to adopt the suggestion of Dr. Mackenzie for the formation of a dictionary of climate. Great errors were made upon the subject in popular works. A suggestion had been made two years ago for the publication of a full series of meteorological observations in the BRITISH MEDICAL JOURNAL, but they were dropped after many gentlemen had gone to considerable expense in providing themselves with implements and facilities for observation.—The PRESIDENT (Dr. A. P. STEWART) explained that the omission of the meteorological tables had arisen in great part from the great cost incurred in their composition.—Dr. ROW thought that in making meteorological comparisons, sufficient allowance was seldom made for tidal influence, which was very important. The temperature of the water was much more constant than that of the air; and in a locality like that in which they assembled, it was impossible but that the cooling of large tidal areas twice a day with large sheets of water must have an influence upon the atmosphere. This influence would naturally be most felt in the winter months, when the temperature of the water was considerably higher than that of the air. It was to this influence that he attributed the fact that there were spots in that neighbourhood in which snow would not lie.—Dr. NANKIVELL directed attention to the difference between the night and day temperatures as an important element in the consideration of questions of climate. At Torquay that difference was very considerable.—Dr. MACKENZIE, in reply to Dr. Atkins, said he had known cases of typhoid fever at Sidmouth, but they were of the sporadic, not the epidemic kind. The population of Sidmouth was 3,500, and had slightly increased during the last twenty years. The drainage had been continued to below low water-mark. He attributed the health of the place to the influence of the continual current of air through the valley.—The PRESIDENT inquired whether small-pox was generally prevalent in the district, and would like to have some information as to the present state of Devon in regard to small-pox inoculation. His reason for asking was that eighteen years ago a pupil came up to the Middlesex Hospital from Sidmouth, and was attacked with confluent small-pox, which he then ascertained extensively prevailed in an epidemic form in the neighbourhood. He learnt also that small-pox inoculation was then practised extensively there. He thought that Dr. Mackenzie was rather too sweeping in his structures upon the sending of consumptive patients out of the country. Dr. Hermann Weber had sent many to a very keen air with advantage. He had known the climate of the Engadine in Switzerland to have a very beneficial effect; and patients whom he had sent to the keen bracing air of Northumberland had likewise improved thereby. There were towns with a larger population than Sidmouth in which the death-rate was as low as 14.—Dr. MACKENZIE believed that during the late epidemic of small-pox there had not been a case in Sidmouth; nor

was he aware of the existence of the practice of inoculation. He had heard of its being done, and of an old doctor who, when asked to perform it, would refuse, but, if the applicant persisted, would lend his lancet.

The Difficulties and Trials of a Health Officer. By DAVID DAVIES, Esq.—The difficulties were enumerated as they had arisen in the author's experience at Bristol. The first was the difficulty of getting early information of the occurrence of epidemic disease, which at present could only be obtained by the courtesy of the general medical practitioners; or by a system of espionage, which was not satisfactory, though it worked well at Bristol. The second difficulty was the confused state of the sanitary laws. Local Boards might—not must—build hospitals for infectious diseases; and when they were built it was by no means clear who the occupants should be. Great had been the evils of the permissive clauses of sanitary legislation. The third was the separation between the registration of deaths and the sanitary authorities, the latter being unable to get the information without paying for it. He did not blame the registrars, but the system was wrong. The fourth point was the division of nuisance authorities and the want of a central power. The fifth was the non-adoption by the medical profession of an uniform nosology. Hence the returns of deaths would puzzle wiser heads than his. The nomenclature of fever was most uncertain, and some called everything fever that ended with febrile symptoms and coma. Sixthly, he placed the importance attributed by the public to the mere figures of the Registrar-General, which of themselves meant very little. Thus the death-rate of towns was swelled by people being sent from the country to die. The public would have their say, and newspaper editors wrote articles which, as a rule, were wide of the mark. No one appreciated more highly the intellect brought to bear by the Registrar-General upon the figures in his possession than himself; but, if that official knew all the details, many places reputed healthy would sink to the lowest depth, while others reputed unhealthy would rise. Seventhly, came the death of many infants under one year old, which was one of the saddest points of all. This arose largely from causes not in the control of a health officer, and rather moral than physical. Many parents were such who never ought to be, and neglect was a great cause of the infantile mortality they deplored. Here, *inter alia*, Mr. Davies said that the system of giving advice gratis, or half gratis, was one of the greatest evils of large towns. If members of the profession undertook a case they should undertake it thoroughly, or not at all.

Mr. LIDDLE had been exceedingly pleased with the observations of Mr. Davies, which had been very much to the point. In London, where they registered lodging-houses under the Sanitary Act, they made it compulsory upon their keepers to give immediate information of the occurrence of diseases. If they did not, a penalty was inflicted. But that did not apply to such houses as the members of the section occupied. They might have a member of their families ill with small-pox—and that disease was just as likely to be injurious to the community in their houses as in the houses of the most poor—but in that case there existed no means by which the knowledge of the fact could be definitely ascertained. In fact, as he had stated before the Earl of Ripon, there was one law for the rich and another for the poor. It ought to be compulsory upon the medical attendants of private families to give information of the occurrence of such diseases wherever they might be, not for the purpose of the medical officer interfering with the case, but simply that the medical officer might suggest the means whereby the disease might be prevented from extending. In order to do that without giving umbrage to his medical brethren, the medical officer of health ought not to be a private practitioner. He could not speak too strongly upon that subject. In London these districts were not sufficiently large to occupy an officer of health for the whole of his time. There were forty in the metropolis, whereas, if each gave his whole time to it, ten would be enough. It ought to be made worth the while of persons to do it. There ought also to be an uniform system of action. One district might have an energetic officer who did his duty; but if the adjoining district was neglected the result must be that both would suffer. The permissive system of legislation was really most absurd. If laws were good they should be compulsory. The great object of Local Boards was to save expense; and they would not spend any money whilst they could help it. In this way the suggestions of medical officers, because they would cost money, were not attended to. He did not think the permissive law was likely to be continued. At any rate, the medical officer of health should have it in his power to say that they should be made compulsory. As to hospitals, they had some in London recently erected for the purpose of receiving paupers, but they needed others in which persons, such as servants suffering from infectious diseases, might be received upon payment. He hoped before long to see a proper registration of sickness in force; and with regard to uniformity of nosology, he held that it was a matter which rested with medical men

themselves. The subject of phthisis had not been alluded to. He held it to be of the utmost importance in connection with that disease that full and stringent provisions should be devised for securing the proper ventilation of the lower class of dwellings. This, of course, was a matter that especially affected large towns; where they often found houses built back to back, and otherwise on the score of ventilation structurally unfit for habitation.—Mr. L. ARMSTRONG had declined to be health-officer at South Shields entirely because, if he had done his duty, he should have lost some of his best patients. The recent epidemic of small-pox in that town afforded a forcible proof of the necessity of enlarged sanitary powers. They could trace it to three centres, each originating with a sailor. One sailor was removed to the workhouse, where two women and some children took the disease. However, it was stamped out there. The next case was taken to a low lodging-house, and thence it rapidly spread. A third case was refused admission at the Newcastle Infirmary, and was actually taken through the country by express train to London. There had been 3,500 cases of small-pox and 300 deaths in the town, all of which might have been prevented if the simplest sanitary precautions had been taken.—Mr. G. W. HASTINGS directed attention to the question of the area of health-districts, and to the allied subject of the way in which streams of water and water-sheds should be dealt with. In the recent proposals that had been placed before Parliament, they found Sir C. Adderley suggesting that the union should be taken as the unit area. This was bad enough, but Mr. Goschen's Bill was far worse, for it proposed the parish. His idea was that the county should be the basis of the health-district, and that border streams should be dealt with by joint boards appointed by the sanitary authority of each bordering county.—Dr. NANKIVELL, as Chairman of a Sanitary Board of Health, quite agreed with Mr. Liddle. In ordinary cases common lodging-houses were only inspected as such, and in all other respects were not noticed at all. The dealing with phthisis was likewise a very important matter. There was no doubt that health officers should be independent of private practice, and also to a certain degree of Boards of Health. He did not think things would ever be what they should be until there was some central board to make sanitary work and precautions compulsory. If such an authority were constituted and medical officers of health could not be dismissed without its sanction, they would be placed in a much better position than at present; and the result would be speedily seen.—The PRESIDENT pointed out that some towns, Manchester and Oldham being examples, had made, or were making, good hospital provision.—Mr. BENSON BAKER stated that in Marylebone there were two hospitals, one for the treatment of small-pox patients, and the other for convalescents, provision being made for those persons who were not considered paupers.—Mr. DAVIES, in reply, said that no case of typhus or small-pox could escape him four days in Bristol; but that he obtained that result by espionage. He could extinguish zymotic diseases in the lanes and alleys; but he had no such power in the dwellings of the artisans, and if the contagion reached Clifton it spread like wildfire. He also felt the difficulty arising from the existence in immediate contiguity to the city, of districts in which he had no power where typhoid fever was always to be found. Typhus in Bristol could always be traced to one of three centres—London, Glasgow, or Ireland. He again enforced the opinion that a closer attention to nosology was needed; and endorsed what had been said with regard to ventilation. He was in private practice, and had lost a good many patients since he had become a health-officer—chiefly clergymen and old ladies; but he had gained others, and he liked the work. He had a disinfecting apparatus which could be got up to 300 degrees, and which was used at 250 and found to answer admirably.

Poor-Law Medical Service. By BENSON BAKER, M.R.C.S.—The author stated that the problem how not to prevent pauperism had been too well demonstrated under the present administration. Division of authority and opposed personal influence had contributed in no small degree to the evil. The rapid growth of pauperism was an evidence of unsoundness in the law, and defective administration. The present system—if system it could be called—had resulted in the creation of an army of paupers exceeding a million, and costing £7,673,000 annually, the greater part of which burden fell upon those who were least able to bear it. Sickness was the great factor of pauperism, a fact which had never received the attention that it really demanded. Economy was the order of the day; the question should be therefore regarded from an economical point of view. Economy meant really this—to prevent the curable from becoming incurable, and to restrict the occurrence of preventable disease. Ireland in this respect set an extraordinary example to England and Scotland. The deaths were in England one in 43, in Scotland one in 44, and in Ireland one in 60; whilst the deaths from preventable diseases were in England one in 190, in Scotland one in 194, and in Ireland one in 308. In England the amount of relief per

head was 6s. 11d.; in Scotland, 5s. 7½d.; in Ireland, only 2s. 11½d. The position of the Poor-law medical service might be brought in England to the position which it occupied in Ireland, by the whole profession rising in one mass and insisting upon one central authority. The change had been made in Ireland in consequence of a great national calamity. Were they to wait until England passed under a similar experience? In the metropolis, during one of the most severe epidemics of small-pox, by the Privy Council's orders the Poor-law medical officers were dismissed from their positions of vaccinators, and such parishes as that of St. Pancras, with its 250,000 population, handed over to one man. He had been placed in the position of having to attend a woman suffering from small-pox, and being forbidden by the law to vaccinate her infant child. Pauperism dependent upon sickness could not be eliminated by a starved Poor-law medical system. If they adopted the Irish system they would not at all increase the present rates; but would, on the contrary, obtain a gradual decrease of relief. Nothing could be more fatal to the health of the population, or the pockets of the ratepayers, than the aggregations of large masses of sick or of poor. Poor-law surgeons should be appointed alike and paid entirely out of the Consolidated Fund. They should have superannuations; and there should be promotions in the ranks. Dispensaries and dispensers' drugs should be paid for out of the common fund.

Poor-Law Medical Relief. By D. T. T. MAUNSELL, M.D.—Dr. Maunsell gave an elaborate account of the various laws that had been passed since an early period in English history on the subject of Poor-law medical relief. He showed that Poor-law legislation had ever been forced on by the pressure of disease, and that recurring sickness was one of the principal factors of pauperism. Indoor relief in the various workhouses was necessary for certain classes, as the old, infirm, widows and orphans, etc., and for those temporarily out of employment owing to the stagnation in some of the multifarious occupations existing in this country; but it was in out-door relief that there was such opportunities for extravagance, or at least that it required the greatest caution in its administration. Out-door relief might be divided into Poor-law medical relief as in the Irish dispensary system, and into other out-door relief not connected with sickness: the former could hardly be abused; the latter might readily run into the supplementisation of wages, of which he gave various instances. This division of out-door relief did not exist in England, at least on any large scale, and the consequence was that whilst in England and Wales the expenditure per head was for in-door relief £8:10, for out-door relief £4:5; in Ireland it was for in-door relief but £3:10, for out-door relief £1; and for Poor-law medical relief 2s. 6d. per head of the recipients. The poor-rate in England and Wales was 6s. 11½d., in Scotland 5s. 7½d., and in Ireland 2s. 11½d. per head of the population.

Dr. JOSEPH ROGERS said that, during his short stay at Plymouth, he had collected a few facts which he wished to lay before the members. He had seen in the medical press that the Plymouth guardians had been recasting their medical service. He considered that the way in which the guardians had done this was most improper, and that what had been done would prove most disastrous to the ratepayers. During the last few months, they had removed one of the medical officers, in order to cut down the expenditure. He submitted the following statement, which he had carefully prepared.

| | Population. | Acreage. | Salaries of medical officers. | Gross Relief. |
|-------------------|-------------|----------|-------------------------------|---------------|
| Plymouth. | 62,599 | 1,635 | £500 | £24,246 |
| Plympton St. Mary | 20,502 | 74,321 | £385 | £8,845 |
| Totals | 83,101 | 75,953 | £885 | £33,091 |

The expense of drugs was not defrayed by the guardians. This was under the system of limited Poor-law medical relief; and he would contrast it with the Irish system, which was based upon a thorough medical relief. The figures for two Irish towns were:

| | Population. | Area. | Cost of drugs. | Salaries of medical officers. | Gross relief. |
|-----------|-------------|---------|----------------|-------------------------------|---------------|
| Limerick | 90,756 | 177,951 | £621 12 2 | £1,430 | £20,275 |
| Waterford | 60,000 | 125,719 | £364 17 | £900 | £12,388 |

The total expenditure in Ireland included expenses under Registration Acts, Vaccination, Sanitary Acts, and Burial Grounds. All those charges were excluded from the total relief to the poor of England and Wales. The medical relief in Plymouth bore the relation of 1-48th of the gross expenditure; in Limerick and Waterford, of 1-10th of the gross expenditure. The average for all England was, that medical relief was 1-27th of the gross expenditure; in Ireland, it amounted to 1-7th. The salaries of the medical officers of Plympton St. Mary amounted to a few pounds more than the whole cost of drugs in Waterford. In addition to the £900 for salaries, Waterford had expended over £300 in drugs, which made a total expenditure of £1,200. But,

though they had paid this, the gross expenditure for Poor-law relief in Waterford was only one-half as much as that of Plymouth. It might be said that he had only taken one town; but he would call attention to Plympton St. Mary. If they united the population of these towns, they would find a total of 83,000. The population of the latter was only one-third that of the former, and yet the expenditure was £385. The total amount of relief was over £30,000. Let them compare that with Limerick, which paid £621 for drugs, and the number of inhabitants over 90,000, and expenditure just over £2,000. Waterford paid £364 for drugs, with a population of over 60,000; and the total amount of relief was just one-half that of Plymouth. Thus it must be seen that an efficient medical relief had in a most remarkable manner diminished the burdens of poor-rates generally on the Irish people. He particularly desired to call attention to the appointment of a Committee, because he was going to ask the Association to reappoint the Poor-law Medical Relief Committee which was appointed last year, and that that Committee should sit in judgment against the measure which now governed them. A new measure was to be introduced next session, which would be of great benefit to the community at large. He thought the guardians of Plymouth must have acted as they did through ignorance; and they must see it was a great mistake to cut down the Poor-law medical relief; and he trusted it would go forth, and that the guardians would cease for the future to trifle with the lives of the people. He concluded by moving the reappointment of the Committee to which he referred, and a vote of thanks to Mr. Benson Baker for his paper.—Dr. ATKINS seconded the motion.—Mr. BALKWILL supported the motion, and said he did so most cordially; for, being a druggist in the town, he was aware of the startling fact that the cost of the drugs for the Plymouth Dispensary, with a lesser number of patients than were under the Poor-law of the district, cost far more than the Plymouth guardians paid for their service complete, salaries and drugs included. As a visitor of the sick during the late epidemic of small-pox, he had become aware of the fact that the comforts ordered by the medical officers were not supplied until too late. These comforts were sometimes not supplied until a week after they were ordered, and then not unfrequently they were of no use. He had himself seen much suffering in consequence of this. When small-pox last broke out in this town, he visited the patients. There were three deaths out of eight cases; and in the house of one of these poor people there was not any bread, no coals, and not one inch of candle for the night.—Mr. HECKSTALL SMITH thought that, if the facts just mentioned were properly stated to the authorities, it would be impossible for the Board of Guardians of Plymouth or of any other place to keep the poor from their proper supply of necessities, or to stand up in support of such an administration.—Dr. ROW thought that the question should not be discussed in reference to any one locality; and he was of opinion that legislation was required to alter the present system in England.—Mr. HARPER drew attention to the heavy work entailed upon the medical officers of the towns, and said that, though the work was overwhelming, the guardians had decided to reduce the medical staff attendant on the poor.—Dr. SLEMAN said the contract between a medical man and the guardians should be founded upon commercial principles. For his own part, he considered that every contract should be entered into on the just one of paying.—Mr. GEORGE HASTINGS said the facts which had been elicited in the papers and in these discussions had shown that our Poor-law system in England was nothing but a disgrace to the country. Medical men spent a vast amount of time in educating themselves to attain the ability and power of giving the most important functions to the human race; and to ask them to spend the best years of their lives in the worst drudgery and the worst pay offered to any class was a degradation of the civil service of the nation. He believed that the Irish system was infinitely better than the English; and its institution in this country would, he thought, lead to a great diminution in general poor-relief. He did not agree with the remark in Mr. Benson Baker's paper regarding the employment of Poor-law medical officers as health-officers; and he should not like to see the Poor-law medical officers made primarily responsible for the duties of health-officers.

[To be continued.]

COMMITTEE OF COUNCIL.

THE following ten gentlemen were, at the meeting of the General Council of the Association on August 9th, elected members of the Committee of Council for the ensuing year: M. H. Clayton, Esq., Birmingham; J. Milner Fothergill, M.D., Leeds; Christopher Heath, Esq., London; T. Heckstall Smith, Esq., St. Mary Cray; G. Southam, Esq., Manchester; A. B. Steele, L.K.Q.C.P.I., Liverpool; T. Underhill, M.D., Great Bridge; A. T. H. Waters, M.D., Liverpool; C. G. Wheelhouse, Esq., Leeds; M. A. E. Wilkinson, M.D., Manchester.

PRESIDENT'S SOIRÉE.

ON the evening of Wednesday, August 9th, the President gave a *soirée* at the Royal Hotel. It was largely attended both by members of the Association and by visitors, among whom were many ladies. Upwards of five hundred guests were present. The members of the Plymouth Vocal Association sang a collection of madrigals and songs during the evening in excellent style.

TEMPERANCE BREAKFAST.

A large number of gentlemen connected with the Association accepted the invitation of the executive of the National Temperance League, conveyed through its President, Mr. S. Bowly, and Mr. Rea, its Secretary, to breakfast at the Royal Hotel, Plymouth, on August 10. Mr. Bowly occupied the chair, supported on his right by the President of the Association, Mr. Whipple.

The CHAIRMAN briefly introduced the question of temperance, and invited the expression of opinion on the part of the medical gentlemen present upon the use of spirituous and fermented liquors and their employment in cases of disease. He became a teetotaler thirty-five years ago in spite of the advice of his medical man, and he had never had any occasion to regret it. He felt that the importance of the influence which could be exercised by a body of gentlemen so highly educated, influential, and intelligent as the members of the medical profession was not to be overrated; and in behalf of the National Temperance League, which worked by means of moral suasion, he desired that they would give their fair and candid consideration to the subject, regarding it both in its moral and scientific aspects.

The PRESIDENT of the Association (Mr. WHIPPLE) said he was there to give an opinion upon the abuse of intoxicating liquors. Their use as medicine under proper medical direction and under certain circumstances he regarded as absolutely necessary. When also the powers were much exhausted by overwork and the like, he believed that a moderate use of stimulants was desirable and requisite. When a plant was drooping they stimulated it by water. Water was not a sufficient stimulant for the human body; but small quantities of alcoholic liquor would suffice to produce the effect desired. He was not himself a total abstainer, nor was he an excessive drinker; and whilst he found the benefit himself at times of small quantities of stimulants, he must state that he had derived an equal advantage from the use of tea. That beverage had a wonderfully invigorating effect, and he attributed its advantageous influence upon himself to the fact of his being a moderate drinker. In medical practice it would be impossible to get on without the use of alcoholic drinks. There were particular cases, such as fever, for example, in which they were absolutely necessary. As to what their Chairman said about his giving up such liquors in spite of the advice of his medical man, all he (Mr. Whipple) could say was that one of the two must have been wrong, and, judging from the appearance of Mr. Bowly, he was of opinion that it must have been the medical man. Mr. Whipple went on strongly to denounce the practice of morning drinking, and the drinking habits of many of the class of commercial travellers. They said they could not do business without it. That he did not believe, although he knew that champagne was sometimes furnished to unwilling customers to induce them to buy. Another thing that was very much to be deplored was the extent to which youths and young men were to be seen late at night knocking about public-houses, with pipes in their mouths, and beer in their heads. So far as the higher classes were concerned, he was glad, from his own experience, to be able to say that the custom of excessive drinking was by no means so prevalent among them as it had been. He thought they should use all their energies to cause this improvement to permeate the other classes of society.

Dr. JONES (Ross) said that in his own locality there was much cider made, and the labourers, who had very little else but bread and cheese for dinner, were compelled by the nature of their diet to take some stimulants.

Mr. ANDERSON advocated moderation. He believed those who took the least spirit enjoyed the greatest health.

The CHAIRMAN remarked that some medical men doubted the propriety of the use of spirits in cases of fever, etc., and advocated instead the exhibition of nourishing food. Would some of the gentlemen present favour the meeting with their views upon this point?

Mr. MEADE (Bradford) believed that, whatever might be the decrease of the amount of drinking amongst the males of the higher classes, there had been a very great and sad increase in the amount of drink consumed by the ladies—the young as well as the old. This, he thought, called for the greatest care and consideration upon the part of medical practitioners. He did not believe that they could dispense

with alcoholic drinks altogether in medicine, but still he believed that they were prescribed much more frequently than was necessary.

Mr. HUTCHINSON called attention to the experience gathered in the London hospitals in connection with the administration of stimulants, and stated that from records kept in the hospital with which he was connected, it was found that the practice of those who gave the largest quantities to their patients was not more successful than the practice of those who exhibited it in smaller amounts. He did not see how they were to do without stimulants in such diseases as erysipelas and pyæmia.

Dr. RADCLYFFE HALL (Torquay) said his experience was that the milk treatment in cases of fever failed, but that the milk treatment combined with the administration of very small doses of stimulants produced the best results. He contended that medical men were not to be held responsible for not being always able to square their practice with theory. They often had to deal with patients who were in the habit of taking too much; and the way to deal with such was not to attempt to turn them out of their groove abruptly, which would not act, but to turn them into another—to prescribe, for example, the moderate use of light claret instead of stronger drinks.

Mr. SQUARE utterly repudiated this idea. For persons who were in the habit of taking too much there was no safety but in abstinence. Medical men should set the example of self-denial, and if so, an amount of good would be effected far beyond that which they at present saw. Medical men were moral and religious men, and they should neglect no means whereby they might make their influence for good felt, if only upon one patient.

The proceedings then concluded.

EXCURSION TO THE EDDYSTONE.

About eighty members of the Association had a delightful excursion to the Eddystone on the 10th. The Government steamer *Bann* was placed at the service of the visitors, who much enjoyed the trip. The steamer left Millbay shortly before two o'clock, and returned about half-past five o'clock, having made the journey of thirty miles, after allowing for fully half an hour's detention off the rock, within three hours. As the weather was fine the excursion passed off most delightfully, and was altogether a most charming outing. On arriving off the rock two boats were launched, and about twenty gentlemen availed themselves of the opportunity to visit the lighthouse. They were received most courteously by the three denizens of this illuminated home in the Channel, and conducted over the curious building. With the exception of these gentlemen, only eight visitors had landed upon the rock since May last.

VISITS TO WEMBURY AND ST. GERMAN'S.

At the joint invitation of Mr. V. P. Calmady and Mr. J. D. Lewis, M.P., about seventy or eighty members of the Association visited the Yealm on the 11th, being conveyed from Millbay in the steam tender *Bann*, kindly lent by the Port Admiral, Sir H. J. Codrington, K.C.B. The party landed near Wembury Church at a very convenient landing place, and were conducted by Mr. Calmady to a wooded valley close by, where an excellent luncheon was provided. The healths of Mr. Calmady, who presided, and of Mr. Lewis were heartily drunk. After the luncheon the party divided, one portion visiting Langdon Hall, whilst another proceeded to a hill close by, where extensive views were obtained of the river so far as Kitley, the seat of Mr. B. J. P. Bastard, of Wembury House, of Mr. Lewis's property, etc. Visitors were enthusiastic in praising the delightful scenery of the neighbourhood generally, and its adaptability for a watering place, for which Nature had afforded every facility. The southern aspect, the gently sloping beach, the sheltered situation shut in by woody hills, and the abundance of pure water, were highly praised. One drawback is the comparative difficulty of access, but it is understood that the landowners are ready and willing to do all in their power to remedy this defect.—Another party of excursionists left North Corner about midday and proceeded up the river Lynher as far as St. Germans, where they were most hospitably entertained at luncheon by Mr. Kerswill.

EXCURSION UP THE RIVER TAMAR.

The proceedings in connection with the visit of the Association to Plymouth terminated on Saturday, August 12th, with trips to Torquay, Dartmoor, and up the Tamar. Through the courtesy of the Earl of Mount Edgcumbe, Cothele Hall, the residence of the Dowager Countess, was placed at the disposal of the river excursionists, and a well-spread luncheon was there provided for them by Mr. Coffin, of George Street, Plymouth. The party, which included a large number of ladies, left North Corner at 1 P.M., and, after landing the provisions at Cothele, steamed up to the Morwell Rocks, and then returned to Cothele. Mr. Whipple, who presided at the luncheon, proposed the

healths of the Earl and Countess of Mount Edgcumbe. He observed that the noble earl had worthily followed in the footsteps of his father in hospitality and courtesy.—The toast was drunk with three ringing cheers.—Mr. Heckstall Smith proposed the health of the President of the British Medical Association, which was drunk with similar honours.—Mr. Watkin Williams, the Secretary of the Association, gave the Local Secretaries—Drs. Littleton and Row—observing that without such coadjutors it would have been difficult to carry out the admirable arrangements which had been made. In his experience he had known nothing so remarkable in connection with the Association as this, what he might term the climax of their visit. There had been plenty to admire in Plymouth and its lovely scenery, but they had had shewn them nothing to be compared with the sight he saw before him, and he desired to express his gratitude to the gentlemen who had been kind enough to bring them there.—Drs. Littleton and Row having replied, Dr. Bryan, of Northampton, proposed the ladies, which was responded to by Mr. Nicholson.

EXCURSION INTO CORNWALL.

By the kindness of Mr. Henwood, the President of the Royal Institution of Cornwall, and of Dr. Barham, one of the Vice-Presidents, the members of the British Medical Association were invited to join in the annual excursion of this institution, which took place on August 14th and 15th, and included the principal objects of antiquarian, geological, mining, and picturesque interest in the district west of Penzance. On Monday, August 14th, a large party were splendidly entertained at a champagne breakfast by Mr. Congdon, of Marazion, at St. Michael's Mount, and then assembled at the Penzance railway-station, from which place a start was made immediately after the arrival of the train due at Penzance at 10.44 A.M. The Fougou at Trewoofe was the first spot visited; after which the "Pipers," the "Dawns Myin," "Treryn Dinas," and the "Logan Rock" were inspected. Lunch was provided at the Land's End, after which the party proceeded to Bottallack Mine, returning to Penzance for the night. On Tuesday morning, August 15th, the excursionists assembled at the Causeway-Head, Penzance, from which place they started at 9.30 A.M. Lanyon Cromlêh was the first object of interest visited on the route; here the excursion was divided into two parties; one of which proceeded on foot across the common to Polmear, inspecting on the way the Mên-an-tol, the Mên-Scryfa, the Beehive Huts, and fallen Cromlêh at Bosprennis—the other party in the meanwhile visiting Bossulow Huts or Polmear Cove, with its interesting junction of granite and slate. The whole party then proceeded through the wild scenery of Zennor to St. Ives, where the church and other objects of interest were visited; after which they partook of lunch (for which they were indebted to the hospitality of Mr. Henwood) in the grounds of Tregenna Castle, subsequently arriving at St. Ives Road station in time to proceed eastward by the last train. Some forty members of the Association availed themselves of the opportunity of joining in this most interesting and delightful visit, and they will long remember how greatly they are indebted to their hosts for this rare pleasure.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, August 18th.

VACCINATION ACT (1867) AMENDMENT BILL.—The House went into Committee on this Bill. Lord Redesdale moved the omission of Clause 10, which provided that, after the passing of the Act, no parent, after being fined twice, shall be subject to further fine, in respect of non-compliance with the clauses for compulsory vaccination. The clause had been received with the greatest triumph by the anti-vaccination party, and it destroyed the whole effect of compulsory vaccination.—Viscount Halifax said it would be a great misfortune if this clause were omitted. A Committee of the House of Commons unanimously agreed that it was necessary to insert this clause. The Committee then divided, and the numbers were: for the clause, 7; against, 8; majority against the clause, 1. The Bill then passed through Committee.

HOUSE OF COMMONS.—Thursday, August 17th.

FOREIGN DECORATIONS: DR. GORDON AND SURGEON-MAJOR WYATT.—In answer to Mr. Eykyn, Lord Enfield said,—As the services of Dr. Gordon in Paris last winter were performed with the knowledge of, and under the express direction of, the War Office, he would, I apprehend, be permitted to accept and wear any distinction, not being the decoration of a foreign order, if the French Government had asked it for him, but I cannot ascertain that any such application has been made in his behalf. I should be glad to take this opportunity of as-

sureing that gentleman, as well as Surgeon-Major Wyatt, who performed such good and humane service during the siege of Paris, that my words last Friday evening had only reference to the volunteer ladies and gentlemen who worked so honourably under the Red Cross and not to them. I had to draw the distinction between the official and non-official character of the work done under the Geneva Convention.

THE REGENT'S CANAL.—Mr. Eastwick asked the President of the Board of Works whether he would cause inquiries to be made into the alleged insalubrious state of the Regent's Canal, which at North Gate is covered with green slime, and is even yet worse at Maida Hill, and caused alarm to persons in the neighbourhood in view of the approach of cholera.—Mr. Ayrton replied that, as far as he could ascertain, the condition of the Regent's Canal was not so bad as it had been in previous years. If anything were wrong, the District Officer of Health would be the proper person to take notice of the fact, and should that officer fail in the discharge of his duty, the Home Secretary would be bound to interfere if applied to.

Saturday, August 19th.

VACCINATION ACT (1867) AMENDMENT BILL.—On the consideration of the Lords' amendments to this Bill, Mr. Forster said their lordships had struck out an important clause—clause 10—proposed for the mitigation of penalties, which was passed in that House by a majority of 57 to 12. He should have had no hesitation in asking the House to disagree to that amendment if there were sufficient time; but as that might involve the loss of the Bill, which would effect great administrative improvements, they had no choice but to assent to it. It was an important clause, but not an essential one; and with the disease raging in the country it would not be safe to postpone the Bill. The Lords' amendments were then agreed to.

MEDICAL NEWS.

THE ARMY MEDICAL SERVICE.—The following is a list of the gentlemen who competed successfully for the appointments as Assistant-Surgeons in Her Majesty's British Medical Service at the competitive examination held at the London University, on August 9th, 1871.

| Order of merit. | Names. | No. of marks. | Order of merit. | Names. | No. of marks. |
|-----------------|------------------|---------------|-----------------|------------------|---------------|
| 1. | Cottle, E. W. | 2,060 | 8. | Bridges, W. P. | 1,875 |
| 2. | Connolly, P. S. | 2,055 | 9. | Rogers, J. G. | 1,865 |
| 3. | Dwyer, C. E. | 2,020 | 10. | Ash, R. V. | 1,825 |
| 4. | Blood, R. | 1,970 | 11. | Grant, W. C. | 1,782 |
| 5. | Fasken, W. A. D. | 1,959 | 12. | Connolly, B. B. | 1,720 |
| 6. | Edge, J. D. | 1,890 | 13. | Barrow, H. J. W. | 1,665 |
| 7. | Drury, R. | 1,885 | 14. | Barrow, F. E. | 1,654 |

MEDICAL VACANCIES.

THE following vacancies are announced:—

BISHOP STORTFORD UNION, Herts—Medical Officer for the Sawbridge-worth District.
BOURNEMOUTH GENERAL DISPENSARY—Resident Surgeon.
BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Physician.
BRISTOL—Surgeon to the Police.
BRISTOL ROYAL INFIRMARY—Surgeon; Assistant-Surgeon; Dresser.
BURY UNION, Lancashire—Medical Officer for the Tollington No. 1 District.
CHESTER GENERAL INFIRMARY—Visiting Surgeon.
COVENTRY PROVIDENT DISPENSARY—Surgeon.
GOVAN COLLIERY, Rutherglen—Surgeon.
GOWER UNION—Medical Officer and Public Vaccinator for the Western District.
GREAT EASTERN RAILWAY—Surgeon to the King's Lynn District.
GREAT EASTERN RAILWAY PROVIDENT SOCIETY—Surgeon for the East Anglian District.
GREENWICH UNION—Medical Officer for the Greenwich Central District.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Dental Surgeon.
ISLINGTON—Medical Officer of Health and Analyst.
KING'S LYNN UNION, Norfolk—Medical Officer to the Workhouse and Infirmary.
KING'S LYNN—Admiralty Surgeon and Agent.
LEXDEN and WINSTREE UNION, Essex—Medical Officer for District No. 8.
NORFOLK and NORWICH HOSPITAL—House-Surgeon.
OMAGH UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Eastern Division of the Omagh Dispensary District.
QUEEN'S COLLEGE, Birmingham—Demonstrator of Anatomy.
SLIGO UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Carney No. 2 Dispensary District.
SOUTHAMPTON UNION—Medical Officer for District No. 2.
STAFFORDSHIRE LUNATIC ASYLUM, Burntwood—Assistant Medical Officer.
UNIVERSITY OF DURHAM—Medical Tutor at the Newcastle-upon-Tyne College of Medicine.
UNST, Shetland—Parochial Medical Officer and Public Vaccinator.
WESTMORLAND LOCK HOSPITAL, Dublin—Resident Apothecary and Accoucheur.
YORK UNION—Medical Officer and Public Vaccinator for District No. 4.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.
WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.
FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
SATURDAYSt. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

A LIVERPOOL correspondent forwards us the following cutting from a local paper. "*British Medical Reform Association.*—On the 12th of July, the candidates for the diploma of membership were duly examined in the science and practice of eclectic medicine and surgery, at the Liverpool Museum of Anatomy, No 29, Paradise Street, kindly lent for the occasion by the proprietor, Dr. J. T. Woodhead, to whom the examiners and members of the Association tender their sincere thanks.—*Journal of the British Medical Association*, August 1st." He does not state what paper has been imposed upon; but we will ask him to call the attention of the editor of that paper to our statement that the quotation is a fabrication of an impudent and vile character. We have no knowledge of any such institution or association as the Museum and Reform Association described. There is none such in any way connected with the British Medical Association, nor any authorised to grant any medical titles. We recommend the circumstances and the institution to the notice of the police.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, August 19th; The New York Medical Record, August 11th; The Boston Medical and Surgical Journal, August 11th; The Madras Mail, June 10th; The Shield, August 19th; The Philadelphia Medical Times, July 3rd; The Philadelphia Medical Independent, August 5th; The Birmingham Morning News, August 18th; The Hackney and Kingsland Gazette, August 19th; The North Wales Chronicle; August 19th; The Liverpool Mercury, August 18th; The Civil Service Gazette, August 19th; The Hamilton Advertiser, August 19th; The Western Daily Mercury, August 10th and 13th; The Croydon Chronicle and East Surrey Advertiser, August 19th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. A. P. Stewart, London; Mr. W. D. Husband, York; Dr. Barham, Truro; Mr. Joseph Lister, Edinburgh; Dr. Spencer Thomson, Ashton, Torquay; Mr. E. J. Worth, West Anderton; Mr. J. F. Harding, Southborough; Mr. Thompson, Stapleton; Mr. J. Crocker, Bingley; Dr. J. G. Davey, Northwoods, Bristol; A Member; Mr. G. S. Wall, Scarborough; Mr. W. J. Stuart, London; Messrs. Mayer and Meltzer, London; Dr. Struthers, Aberdeen; Dr. Sturges, London; Mr. W. Stone, Manchester; Mr. Harry Leach, Greenwich; Mr. R. W. Egan, Dublin; Mr. Rea, Belfast; Mrs. Day, Bath; Mr. W. D. Hyde, Hemel Hempstead; Mr. R. M. Mann, Manchester; Mr. David Davies, Bristol; Dr. D. Page, Kirkby Lonsdale; Dr. J. R. Wolfe, Glasgow; Mr. S. M. Bradley, Manchester; Dr. Protheroe Smith, London; Mr. C. Steele, Clifton, Bristol; Dr. Clay, Plymouth; Mr. Christopher Heath, London; M.D. Edin.; Mr. G. Terry, Mells; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Dyce Duckworth, London; Mr. W. P. Swain, Devonport; Dr. Joseph Rogers, London; Mr. Worth, Plymouth; Mr. Goadby, Plymouth; Dr. Aitken, Edinburgh; Staff-Surgeon Wells; Dr. Steele, London; Dr. Wade, Birmingham; Dr. Simms, London; Dr. Spencer Thomson, Torquay; Mr. Stamford Felce, London; Medical Officer; Inquirer; Messrs. Marten and Sons, London; Dr. F. Page, Newcastle-on-Tyne; The Director-General of the Army Medical Department; Mr. R. Harrison, Liverpool; Dr. Parsons, Dover; Mr. Fleischmann, Cheltenham; Dr. Corfield, London; Dr. Grieve, London; Dr. Quain, London; Mr. Grantham, Crayford; Dr. Moriarty, Greenwich; etc.

PRESIDENT'S ADDRESS,

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE,

*At the Annual Meeting of the British Medical Association,
in Plymouth, August 1871.*

By CHARLES BARHAM, M.D. Cantab., Truro.

President of the Section.

THE DISEASES OF CORNISH MINERS.

I OCCUPY this chair, gentlemen, with great reluctance. In any case I should have felt painfully my incompetence to its duties; and I should have declined accepting this, as I have declined other similar offices at this meeting, if proposed to me at the time when such appointments are usually made, on the ground of the uncertainty which hangs over the fulfilment of all distant engagements when one has "fallen into the sere and yellow leaf."

"Vitæ summa brevis spem me vetat inchoare longam."

But my incompetency is brought home to me with double force by my knowledge and your knowledge that this Section was to have been presided over by Professor Acland, than whom no member of our profession is more highly qualified to fill the post with honour to himself and advantage to the purposes of the Section, whether by position, acquirements, or zeal in our common cause. We may imagine, too, that he would have experienced some special satisfaction in heading your advance in this locality—in his native county, where his name is associated with all that is most worthy of honour in the character of the English gentleman. Some of you have seen the noble statue of his father, Sir Thomas Dyke Acland, at Exeter, a tribute of universal respect. His accomplished sons, emulous of his excellence, have distinguished themselves in the Church, the Senate, and the Schools, by the same elevation of public spirit and equal ability. Had Dr. Acland been here, we should have been inclined to exemplify towards himself the line inscribed beneath the statue of his father:—

"Præsentī tibi maturos largimur honores."

That father is gone to his rest within a few days only; and if anything is a source of satisfaction to me in acting, inefficiently as I must act, as the son's substitute here, it is that I may be saving him from public duties which he would willingly avoid. Of the causes of his withdrawal from our Association, I will say nothing, and I know very little; but we shall all deeply regret their effects. One of them is my presidency over this important Section. When the post became vacant, almost at the eleventh hour, I could not, as a member of nearly forty years' standing, give an absolute refusal to the request of the Committee of Council that I would fill it, although I regarded that request as a sort of observance of the fifth commandment—a mark of respect for seniority. I will repay it by due parental consideration for the fastness of the rising generation, and limit my discourse by the twenty-minutes sand-glass, "with a leaning to mercy." Under the circumstances, I am sure you will favour me with an extra measure of the indulgence accorded to those who "have greatness thrust upon them"; and I am further relieved by the reflection that, although I alone am bound to trouble you with an address, the business of the Section will hardly suffer from my defects, as it will be mainly conducted by Vice-Presidents who have your fullest confidence—Dr. Quain and Dr. Smart.

Had he occupied the place destined for him, Dr. Acland would probably have addressed you on the past, or present, or future of medicine, or all together; and he would have done so with his wonted talent, and with the authority with which he is invested as the head of the medical school of our greatest University. Any such attempt would ill befit a remote country doctor. Perhaps I may employ a few minutes of your time less unprofitably by inviting your attention to some topics of medical interest more or less specially belonging to these western parts, and consequently presenting some features of novelty to our distant visitors. It has, indeed, seemed to me that as, when we look into a local museum, we hope to find, not a futile attempt to imitate by shreds and patches a metropolitan collection, but full and characteristic series of specimens representing the peculiarities of the surrounding districts, so this Association, in successively visiting the seats of particular industries or localities marked by distinctive climatic or other physical conditions, may fairly expect that, whatever else may be brought under consideration, the knowledge and experience of the resident members of the profession in regard to matters of special and local character with which they are daily conversant, shall to some extent be utilised

for the benefit or entertainment of those who have left their homes to see or to hear something new. On this principle of the exhibition of "local productions", the Presidents of the Association and of the Sections are annually chosen; and on this principle I will try to present you with a sketch, in very broad outline, of the most marked diseases and causes of death of the Cornish miner; and I will slightly allude to two other local topics; and, in accordance with the dictum of Horace—

*"Segnius irritant animos demissa per aures
Quàm quæ sunt oculis subjecta fidelibus—"*

I will, as far as I can, place the great facts before your eyes at least graphically, if my words fail in descriptive power. Those facts shall be also illustrated from the mining districts of Durham and Northumberland, where our last meeting was held, and where the condition of the miner is probably the least unfavourable in this country; and from those of Staffordshire, where it is in some respects worse, in some better, than in Cornwall. I may premise that the great masses of evidence on these matters are contained in the Reports of two Royal Commissions. The first, on the "Employment of Children in Mines", was obtained by Lord Ashley, now Earl of Shaftesbury, and, when issued in 1842, startled the country by its revelations about the collieries; abominations, in regard to the work done by women and children, at once stamped out by public indignation. In this inquiry, Cornwall and the mining districts of Devon were entrusted to me. The second Commission was presided over by Lord Kinnaird. The Report was only issued in 1864. The medical evidence on this occasion was much enriched, and derived greatly increased precision, through the direct examination of a large number of miners by Dr. Peacock and Mr. Bankart; and the statistics of the subject were elaborated with his accustomed skill by Dr. Farr. Dr. Taylor, Mr. Angus Smith, Dr. Bernays, and other men of authority, also contributed the aid of accurate science to the estimation of the impurities of the air in which the miner works. Besides these sources of information, unfortunately buried in blue-books, much has been done by private investigation; and particularly I feel bound to mention Mr. Blee, of Truro, as one of the first to work out the proportionate longevity of the mining and non-mining population of the same districts, and as having just now brought down his inquiry to the latest possible date, and furnished me with his main results.

You will, I think, get over the ground most rapidly by first seeing what a Cornish mine is—the miner's place of work. The form of this results from the geological conditions of the metalliferous veins. These have a general direction from east to west for those producing tin and copper—by far the most important—and from north to south for lead. They are more or less inclined from the perpendicular. Here is the great source of the difference between these mines and collieries as places of labour; the latter being excavations of beds of generally horizontal direction. The one is a vertical fissure through the earth's crust, filled with metallic wealth; the other, a deposit of the vegetation of eras long bygone, or, if you please, a concentration of the sunbeams of the early ages of the world, ready to be diffused again for the cheering of our winters with light and heat. In both alike, the raising the material to the surface is a process of money-grubbing, and the expenditure in it of human life and health has been too often but lightly regarded. In a double sense,

"Effodiuntur opes, irritamenta malorum."

Governed, then, by the above physical conditions, the Cornish mine consists essentially of horizontal galleries (or levels) run along the course of the vein for its excavation. These levels are opened at intervals, usually of sixty feet, through the depth of the workings, and access is given to them by shafts, either carried down on the course of the veins, or, more commonly, so as to intersect them. A gallery is also usually carried horizontally to the surface, as deep as may be in the mine, for the readier discharge of water. As the mine becomes deeper, separate shafts are made for the machinery, and shorter ones are also carried from level to level. The miner usually removes the vein from below upwards, and the aid of blasting is constantly called for. The air becomes impure from the breathing of the miners, from the burning of the candles, and from the explosion of gunpowder; and no means hitherto employed are adequate to more than a very partial correction of the evil, in those more advanced parts or ends of the workings especially, where the miner is often necessarily employed. The above causes also raise the temperature; but its elevation is still more due to that of the earth itself, which increases with the depth about two degrees in every hundred feet, so that it often reaches to ninety degrees, and in one instance has even reached a hundred and twenty-three degrees. Other mines, or parts of mines, chiefly the shallower, are cold and draughty, and almost all are more or less wet, rendering heat or cold more sensibly felt.

The Cornish miner usually works eight hours in the twenty-four, by day and night in a regular rotation, besides going to and from his place of work in the mine—a heavy addition to his labour, where he has to ascend a thousand feet or more by ladders, the universal mode thirty years ago, but now superseded by machinery in about a dozen of the most important mines.

This is a very imperfect sketch; but it is sufficient to show you that the Cornish miner works without sunlight, in a very impure air, in a thick cloud of smoke, and in a very hot place. His posture is also often constrained, and his labour wearisome; the immediate result being commonly a loss of five or six pounds during his work, and great prostration, with weak and irregular cardiac action at the close of it.

Underground labour is usually commenced at an early age, whilst the frame is still plastic, and when nutrition should be well maintained. Of 464 miners examined by Dr. Peacock, 40 (or 8.6 per cent.) began working underground from seven to nine, 185 (39.8 per cent.) from ten to thirteen, and 115 (24.7 per cent.) from fourteen to fifteen. These ratios for the respective ages are quite as high as those returned to me for a much larger number thirty years ago.

The ill effects of the conditions under which this underground labour is carried on are marked by the general sallowness of the class, especially as contrasted with the healthy ruddiness of the women and children belonging to it; by spareness of frame, as compared with the other workmen around; and by a certain worn and weary look, often giving the appearance of more than the real age. A pretty correct notion of the deteriorated condition of the miner, short of his being quite unequal to underground work, may be derived from the following table, given by Dr. Peacock, which shows the state of 464 boys and men found at work.

TABLE I.—Table showing the State of the Miners found at Work.

| Ages. | Number examined. | Healthy. | Pale. | Worn. | Decidedly delicate looking. | Complaining of various symptoms of indisposition* |
|---------------|------------------|-------------|----------------|-------|-----------------------------|---|
| Under 21 .. | 117 | 42 | 36 | 2 | 32 | 5 |
| | | 35.8 p. c. | 80=68.3 p. c. | | 37=31.6 p. c. | |
| 21 to 40 | 233 | 112 | 45 | 14 | 45 | 17 |
| | | 48.06 p. c. | 171=73.3 p. c. | | 62=26.6 p. c. | |
| 41 to 63 | 114 | 43 | 8 | 1 | 33 | 29 |
| | | 37.7 p. c. | 52=45.6 p. c. | | 62=54.3 p. c. | |
| | 464 | 197 | 89 | 17 | 110 | 51 |
| | | 42.4 p. c. | 303=65.3 p. c. | | 161=34.6 p. c. | |

It will be seen that one-third at least of the whole number were distinctly unhealthy.

If I had time for it, there would be no particular advantage in treating on this occasion of the ordinary disorders caused by exposure to wet and cold, or its alternation with excessive heat, which miners are always subject to from time to time. Rheumatic, catarrhal, and inflammatory affections are, of course, frequent; but they can hardly be called peculiar to the class. Dyspepsia is more so; it is often suffered from early in the miner's working life, and doubtless contributes largely to the deterioration of constitutional vigour, from which those diseases to which his death is attributed in the register derive their force, if not their origin. Another disorder, which he calls "slow fever", is distinctly traceable to his occupation, and is interesting in itself; but it is not so extensively prevalent, or so fatal, as to justify my dwelling on it here. The following statement of the results of Dr. Peacock's examination of eighty-three miners disabled by sickness will furnish a fair average of the proportionate prevalence of various forms of disorder in the class.

TABLE II.—Cases of Disease among the Miners examined in July and August, 1862.

| | Cases. |
|--|--------|
| Dyspepsia, or organic disease of stomach .. | .. |
| Rheumatism .. | .. |
| Slow fever .. | .. |
| Convalescence from fever or inflammation of the lungs .. | .. |
| Diseases of respiratory organs— | |
| Miner's asthma .. | .. |
| Abscess in the pleura opening through the lungs .. | .. |
| Consumption .. | .. |
| Mesenteric disease .. | .. |
| | 41 |
| | 1 |
| | 12 |
| | 54 |
| | 1 |

Affections of the heart, etc.—

| | | | | | |
|--|----|----|----|----|----|
| Palpitation .. | .. | .. | .. | .. | 4 |
| Diseases of heart .. | .. | .. | .. | .. | 5 |
| Diseases of nervous system; paralysis— | | | | | |
| Hemiplegia and paraplegia (1 from injury) .. | .. | .. | .. | .. | 1 |
| Kidney-disease and dropsy .. | .. | .. | .. | .. | 2 |
| Disease of skin .. | .. | .. | .. | .. | 2 |
| Effects of injury (not otherwise classed) .. | .. | .. | .. | .. | 2 |
| Total .. | .. | .. | .. | .. | 83 |

I will proceed to point out the great facts which stand in high relief on the face of the tables of mortality—the terrible sacrifice of life entailed by underground labour in the Cornish mines; and the one paramount disease, designated "consumption" in those tables, by which that sacrifice is caused. The former sad tale could not be more strikingly told than in the subjoined numerical comparison of the death-rate among miners and non-miners.

TABLE III.—Annual Death-Rate per Cent. (1) of Miners; (2) of Males, exclusive of Miners, in Seven Cornish Districts.

| Ages. | In the Five Years 1849-53. | | | In the Three Years 1860-62. | | |
|-----------------|----------------------------|------------------------------|--|-----------------------------|------------------------------|--|
| | Miners. | Males (exclusive of miners). | Difference in the death-rate of miners and non-miners. | Miners | Males (exclusive of miners). | Difference in the death-rate of miners and non-miners. |
| 15 and upwards. | 1.797 | 1.854 | .057 | 1.938 | 1.785 | .153 |
| 15 | .890 | .712 | .178 | .944 | .750 | .194 |
| 25 | .896 | .884 | .012 | .957 | .832 | .125 |
| 35 | 1.430 | .999 | .431 | 1.512 | 1.008 | .504 |
| 45 | 3.531 | 1.476 | 1.875 | 2.974 | 1.250 | 1.724 |
| 55 | 6.317 | 2.412 | 3.905 | 6.321 | 1.996 | 4.325 |
| 65 to 75 | 11.123 | 5.861 | 5.262 | 11.051 | 5.331 | 5.720 |

It will be seen that while, up to the age of thirty-five, the difference is not very great, it increases very rapidly afterwards, till, from forty-five to sixty-five, the proportion of deaths among the mining class is nearly threefold that in the other. The following table shows the second great fact—the class of diseases by which the excessive death-rate of the Cornish miners is chiefly produced.

Out of 10,000 deaths (from all causes) of males above fifteen, there were registered as deaths from consumption—

TABLE IV.

| | In England. | Of Cornish miners. | Difference. |
|----------|-------------|--------------------|-------------|
| 15 | 312 | 247 | 65 less. |
| 25 | 354 | 331 | 23 " |
| 35 | 309 | 549 | 240 more. |
| 45 | 263 | 1,206 | 943 " |
| 55 | 186 | 1,394 | 1,208 " |
| 65 to 75 | 85 | 652 | 567 " |
| Total | 1,509 | 4,379 | 2,970 more. |

The disease here designated consumption is not usually connected with tubercle at the ages when the mortality assigned to it is so great. It comprises the chronic forms of pleurisy, bronchitis, pneumonia, asthma, emphysema, and other chest-affections, and is characterised by slow decline, with progressive loss of breathing-power. The various structural changes have not been ascertained so precisely as might be wished, *post mortem* examinations having been rare. The miner will never die of chronic disease in hospital; and the process is abhorrent to the feelings of survivors at home, as well as very inconvenient in the cottage. The following notes of an autopsy performed by Dr. Peacock and Mr. Bankart constitute the only record of the kind presenting any fulness and accuracy of detail with which I am acquainted; and it may be regarded as a fair specimen of the complication of diseased conditions evidenced in a great many cases by symptoms and physical examination, although some of its features are exceptional.

The affection seemed to have originated in bronchitis and pneumonia, leading to collapse or consolidation of the lung; and no tubercle was found in any part of the body. The patient was a man fifty-five years of age, who had been a miner since he was thirteen or fourteen years old. He had been laid by ill for three years, though ailing for a greater length of time. The left lung was found slightly attached to the parietes by old cellular adhesions; it was voluminous, somewhat emphysematous at the edges, of a deep blue or black colour, and sparingly crepitant. The bronchial tubes contained much secretion, of a dark brown colour. The right lung was universally attached to the

* Dyspeptic and rheumatic symptoms, cough, expectoration, difficulty of breathing, palpitation, etc., with more or less marked general appearance of debility or indisposition.

parietes by strong fibro-cartilaginous adhesions. One of the ribs was carious; and an abscess had formed in the situation, containing thick yellow pus, which involved the pleura, but not the lung itself. The substance of the lung was of the same colour as the left, and entirely solid, except towards the upper part, where there were several irregularly shaped cavities, which, together with the bronchial tubes, contained a similar brown material to that found in the tubes of the left lung. The bronchial glands were also very large, hard, and of a black colour. In the bronchus of the right lung, the terminal portion of that of the left, and the commencement of the trachea, the mucous membrane was deeply reddened, and studded with small yellowish coloured deposits of lymph. The trachea and larynx were large; but the mucous membrane on the epiglottis and cordæ vocales, though thickened, was free from ulceration.

To obviate all sources of fallacy, we will throw together the deaths attributed to "consumption" and those registered under "other diseases of the lungs", and compare the mortality of the Cornish miner from these causes with that of the other great mining districts and that of all occupations in all England.

Out of 10,000 males who attained the age of fifteen, there were registered as dying of all lung-diseases—

TABLE V.

| In England : All occupations. | MINERS IN | | | |
|----------------------------------|-----------|-----------|---------|--------------|
| | Cornwall. | Stafford. | Durham. | South Wales. |
| 2,866 | 5,596 | 2,655 | 1,958 | 3,037 |

Hence it is clear that underground work does not entail *per se* any excess of mortality from this class of diseases; and that its lamentable excess among the Cornish miners is owing to the special conditions of their labour, of which a summary view has been given. Heart-disease is a less frequent cause of death here than in England generally—much less so than in Durham. There is sufficient evidence that the mining districts of Cornwall are in themselves as healthy as almost any part of England; but the inference drawn in the Report of Lord Kinnaird's Commission, from the small number of deaths, except from lung-disease, that the miners would be peculiarly exempt from other fatal maladies, is hardly safe; a large mortality from any one cause necessarily lessening the number of those subject to perish by other causes.

Although not strictly within my subject, a cursory glance at the comparative frequency of death by accident among Cornish miners will be interesting. It is furnished by the following table.

TABLE VI.—*Death-Rate by Violence, per Cent. of Males aged 15 Years and upwards in five Years, 1849-53.*

| Ages. | All England. | MINERS. | | |
|----------|--------------|----------|-----------|---------|
| | | Cornish. | Stafford. | Durham. |
| 15 | .089 | .200 | .754 | .243 |
| 25 | .098 | .211 | .768 | .223 |
| 35 | .115 | .188 | .823 | .333 |
| 45 | .144 | .237 | .882 | .370 |
| 55 | .160 | .148 | .680 | .375 |
| 65 to 75 | .183 | .209 | .684 | .290 |

I can only point to the much larger proportion of these fatal accidents at an early age—the age of carelessness—compared with the total deaths. The loss of life thus caused in Cornish mines, although considerably greater than in the community generally, appears insignificant by the side of that in the Staffordshire collieries, with which those of South Wales nearly correspond.*

It is satisfactory to me to be able to state, from the data furnished by Lord Kinnaird's Commission, and from the more recent inquiries of Mr. Blee, that there has been some progressive lessening of mortality, both from disease and from accident, in the thirty years since the date of my own report. The former amendment, which is coincident with a like change for the better among the surrounding population, may arise in great measure from freer command of the necessities of life; the latter is a good deal owing to the introduction of substitutes for ladders into many of the larger mines.

I have no time for comment on the great facts I have stated; and my audience can need none. Their application to civic life, where

* The plans and sections of Cornish mines, and the comparative ratios of mortality from various causes at different ages in the several districts, were very clearly shown by coloured diagrams, which we cannot reproduce.

similar agents of disease and death are at work in mitigated intensity, is transparent.

It was my wish and intention to say something about the prevalent diseases of Plymouth from 1727 to 1752, as they are described by that excellent example of the old physician, Dr. Huxham, who has placed them on record, month by month, together with a minute meteorological register, during the whole of that period. But I must content myself with remarking that the prevalence of intermittent fevers at that time—they have been nearly extinct here during the present century—may be attributed in great part to the former marshiness of a very large tract, now in the centre of the town; an evil influence probably intensified by an unprecedented term of thirteen years in succession, with rainfall much below the average.

I cannot conclude without endeavouring, in the fewest possible words, to point out to you a new weapon against disease and delicacy of the chest, in the climate of the Isles of Scilly. Placed in the midst of a warm sea, frost of any severity is quite unknown, and the summer-heat is never intense.* The extreme range of the thermometer is from 75 deg. to 28 deg. In short, the climate is by far the most equable in the British Isles. The rainfall is much less than on the mainland. The vegetation is almost tropical; the aloe, said to flower in England once in a century, may be seen blooming every summer, and the mesembryanthemum dazzles everywhere. To reside there is to have the benefit of a sea voyage, in a genial air, without the chance of being drowned.

CLINICAL MEMORANDA.

WASP-STINGS.

A FEW days ago, I had a hasty summons to see a lady who was said to be nearly suffocated, having been stung by a wasp in her mouth. I arrived within an hour of the occurrence. Her whole face was very much swollen, and the eyes nearly closed; the neck and the upper part of the chest and the arms were swollen, and dotted over with a red rash. Her breathing was very short and hurried; but she could swallow without much difficulty. The tongue and inside of the mouth were also swollen, so that I could not examine the throat; but I could see the mark of the sting in the centre of the inside of the upper lip. The accident occurred in drinking wine at luncheon; and I was told that the symptoms commenced almost immediately afterwards, and were at their height within half an hour, when she was cold and faint, and the breathing worse than on my arrival. Ammonia and oil had been applied to the sting, and had taken away all the pain; and the treatment now was to constantly foment the face with hot water, the vapour being also inhaled through a sponge over the mouth. This had a marked effect in reducing the swelling of the face; and on leaving it off for a few minutes, it evidently began to increase. I saw my patient again in the evening; all the urgent symptoms had subsided, but there still remained considerable swelling of the face, much of which had not subsided even on the following day. By a strange coincidence, the next day, I was shown a leg very much swollen from the foot to the knee, and quite hard and very hot, from a wasp-sting in the calf of the leg. As such accidents must be common at this season, they must affect some persons more severely than others, or such cases, as I have mentioned, would be more frequently met with.

Mells, Frome, August 19th, 1871.

GEORGE TERRY.

IRON IN SCARLATINA.

I NOTE in the JOURNAL of August 12th some remarks by Dr. Russell Aldridge on the use of iron in scarlatina; and as I happen to have had not a little experience in that ailment, am glad to be able to confirm his views relative to its treatment. Having repeatedly seen the best results from the use of iron in small-pox, I determined to see its effects in scarlatina; and during the past few years have had reason to place it as a well-proved remedy, particularly in those cases in which the throat-affection was a prominent symptom. I usually employ the perchloride with chlorate of potash and the solution of the acetate of ammonia, to help, with warm baths, in promoting diaphoresis. If deglutition be difficult, and the little patients very averse to being dosed, I generally use a stronger solution of the medicine as an application to the fauces, believing that it does good not only locally, but generally. The too frequent accompaniments of this disease—glandular, ophthalmic, renal, and other mischiefs, have been most certainly modified, or altogether prevented, by a somewhat early administration of quinine.

Bingley, August 17th, 1871.

JAMES CROCKER, M.R.C.S.E.

* The rainfall at Plymouth from 1727 to 1752, and the climate of Scilly, were shown by coloured diagrams.

FASHIONS IN MEDICINE.

The President's Address, delivered at the Annual Meeting of the Metropolitan Counties Branch, July 17th, 1871.

By J. RUSSELL REYNOLDS, M.D., F.R.S.,

Professor of Medicine in University College, and Physician to University College Hospital.

THERE are "fashions" in medical science as well as in medical practice; and, like fashions in other quarters, they have their uses and abuses,—they effect some good, and they do some harm. The use of fashion in scientific matters is this, that great attention is bestowed upon the object that may be said to be "fashionable," whether that be a method of work, a direction of work, or the employment of some agent which is believed to be capable of effecting certain results; and that this great attention resolves itself, as times goes on, into a sifting process, which enables those who fall in with the popular method, direction, or agency, to separate the useful from the useless, and to "throw away the worser half." The evil of fashion in matters medical is this, that, by the individual, the sifting process is ignored; there is often easy acquiescence in, and unquestioning adoption of, the principle or agent which is felt to be in vogue; and thus either or both may be employed to the exclusion or neglect of means and agencies which we can ill afford to lose. All multitudes, masses, or sets of men have a tendency to run into extremes, and individuals who make up such masses are not free from the influences to which classes are exposed. It is hard work for any one to set himself against, and make way against, the current by which he finds himself surrounded; he too often finds it easy and convenient, and thinks it wise, to fall into the wake of others, and thus add force to the stream by which he and they are carried onwards. The result may be happy or disastrous; but very commonly, without being one or the other in an extreme degree, it is eminently unsatisfactory and disappointing, and the physician or surgeon has to work his way back again almost to the point from which he started, knocking against broken pieces of systems and of thoughts which he might have pressed into his service a few months or years before.

There is, I believe, when any current of thought or work sets in strongly in matters medical, some true reason for its existence; and it would be well if the sifting or critical process were at once adopted, in order to avoid the evils I have sketched; but the leading is sometimes so strong, and the movement that is made by the individual so unconscious, that not until he comes into contact with awkward, unexplained, or unthought of facts, does he recognise the direction in which he is drifting, or appreciate the aids which he has run by in his easier course.

I have been led to make these remarks because I think that, in the present day, we have set undue importance upon certain elements or features of disease, and have disregarded other equally important guides in that which is our real work—the recognition and treatment of the various "ills that flesh is heir to." Is it not true that, for some ten years past, we have practically ignored what our patients can say to us about their feelings, and have based our judgments and therapeutics upon our own direct observation of the phenomena of disease? Is it not the "fashion," I would ask, to direct attention almost exclusively to what has been termed "objective" symptoms, and to pass over as valueless, or nearly valueless, all the statements that patients make, and indeed all that group of symptoms which has been termed "subjective"? To me it appears that such is now and has been the practical tendency of the last ten years, and that our patients and our profession have suffered from that tendency. Permit me, therefore, for a few moments to direct your attention to this question.

The great value of so-called "objective" symptoms is this—first, that there is an *exactness* about them which is both attractive and valuable, and it is possible to weigh some, and to measure others; secondly, that there is a possibility of *recording* them, which is gratifying and useful; and thirdly, that the records we can make of them form the materials for *comparison* between one case and another, and between the different epochs of the same case. No one can set a higher value than I do upon these elements—exactitude, record, and comparison; and I earnestly hope that our profession will never fail in due regard to those essential conditions of its work; but it seems to me that attention to symptoms which can be so measured, weighed, and compared, has often led the mind away from other features of disease which will not submit themselves to our scales, crucibles, or thermometers, but which are among the earliest—often the only—indications of departures from health, and which may truly guide us in our diagnosis, prognosis, and treatment.

The great value of so-called "subjective" symptoms is this, that they tell us of changes, of diseases—in the true sense of the word—in the

suffering man that cannot be either weighed or measured; that they occur often before any other objective phenomenon of disease presents itself; and that they thus, alone and of themselves, constitute for weeks, months, or it may be for years, the whole history of many most important cases.

It may be replied, that the statements of a patient are often valueless; that they show nothing definite, and point to no therapeutic act; that they are often the result of fancy, or of something worse; and that it is wiser to ignore them, and lay hold of the tangible and true. This kind of statement is, I think, open to all the objection which it makes to the reception of such testimony with regard to disease. It is eminently subjective, and so liable to personal misuse. But, further, I would ask are not the phenomena which we can weigh and measure often thoroughly outside the object we have in view—the treatment of a patient? Is not much of the record of cases a mere collation of exact and learned lumber, from which no good has yet come, or is likely to come? And, if we would duly consider the matter, is not a phenomenon of sensation, of thought, or of feeling, of as great importance to the well-being of a man, as is one of secretion, or temperature, or weight? Again, is it not simply because we have not yet been able so to observe, arrange, analyse, and compare these "subjective" symptoms as to give them a definite value, that we have regarded them so lightly? And, lastly, is it not true that such symptoms must have a real pathology—must be but the expression of some morbid changes, for which we may have no name, but which are, in themselves, as definite and important as any others which we have been able to examine more minutely, and express more exactly? In other words, is not the diminished value of subjective symptoms a fault of our profession and of its mode of work, rather than a demerit, or fallaciousness inherent in the facts themselves?

Let me illustrate the value of some subjective symptoms by a few examples from actual practice, and show in what way and to what degree they may be utilised.

Of certain blood-diseases, the earliest indications are often of this neglected class: obscure discomforts of feeling in the region of the epigastrium—a form of dyspepsia, which it is sometimes difficult to place in any category—which baffles treatment directed in accordance with all proper principles, and is sometimes looked upon as "hypochondriacal"—may often be at once relieved by treatment based upon the hypothesis of gout. Sensations referred to the heart, to the chest, to the head, palpitation, vertigo, or the sense of dyspnoea, may be disregarded, although they are urgent enough to hinder work, and make life miserable; and yet, after months or years of fruitless therapeutics, they may yield at once to a well-directed treatment based upon the diagnosis of the particular blood-change. Is it not possible that a careful consideration of subjective symptoms might lead to an early diagnosis, and to a successful application of means for relief, and thus ward off the development of the disease?

Again, some of the earliest indications of such disease as carcinoma of an internal organ are often purely subjective; a sense of weariness, of depression of spirits, of carelessness, or really indisposition, from feeling of inability to attend to affairs, may be the first warnings of a malady which might be postponed, if not averted. Are not patients who have these symptoms sometimes rallied for their fearfulness, and, because nothing can be found, advised to do this or take that which subsequent history proves to have been not only useless, but injurious?

In heart-diseases of the very gravest kind, subjective symptoms have often been the earliest and the only evidence. Some feeling of distress—abrupt, sudden, unexpected, and unprovoked—has given alarm to a patient; but when his physician sees him the distress is past, the sounds are natural, the beats, though feeble, may be regular, and there is nothing to be seen or heard that should not be observed in one who is tired or overdone. "Nothing is the matter" is the common verdict; and the symptoms may go on, disregarded by all but the sufferer himself, until some terrible catastrophe occurs, and the certificate of death is either "angina pectoris," or "fatty disease of the heart." Is it not possible that, in some such cases, an earlier attention to warning symptoms might have done something to arrest the malady? or is it not certain that it might, at least, have prepared the patient or his friends for the solemn issue?

In lung-diseases, it has seemed to me that subjective symptoms are often the earliest indications that something is going wrong. Before there is any definite attack of asthma, there are often feelings—unprovoked and unaccountable—of dyspnoea and distress, which are allowed to be dyspeptic or hysteric, but which might, by careful examination, be separated from one or the other of these categories. So with phthisis, and so with emphysema. Often, before either of these diseases has so far developed itself that physical signs will reveal its presence, there may be symptoms of its existence. In the latter disease, the sense of tightness of chest and shortness of breath, with a little dry hacking,

may exist long before the percussion of the chest reveals undue resonance, or auscultation shows any lengthening of the expiratory murmur. Might we not here do something by early notice of subjective symptoms?

In nervous diseases, the application of the remarks I have made are endless. The early symptoms of ataxy and of general softening of the spinal cord are often such as are subjective only; feelings of weight, or want of equilibrium, or of restlessness, which go for nothing when the patient is under the stimulus of the physician's presence, and can walk firmly, and stand on one leg with his eyes shut; but which, nevertheless, when neglected, creep on until a malady is obviously present which our science may arrest, but can rarely cure.

The early subjective symptoms of brain-disease are too numerous for detail. I will only allude to a few examples, which I am sure you can multiply indefinitely. The "general paralysis of the insane" often passes unnoticed until it is highly marked; and yet at an early period some apparently trifling change in the feelings of the patient, some exaggeration of self-importance, or slight egotism of manner, might have given the alarm, when found in conjunction with certain slight and occasional physical weaknesses which have to be looked for to be found.

The early symptoms of "softening of the brain" are often complained of and disregarded, or set down to dyspepsia or fatigue, simply because they are subjective. A feeling of bewilderment, or of want of mental grasp or grip; an inability to take in new notions; a listlessness or carelessness, with sometimes a sense of well-being, are among the most significant of the signs of cerebral decay. Might we not here often arrest and even postpone indefinitely the progress of disease?

In epilepsy, it often happens that long before the attacks have developed into even the minor seizures of *le petit mal*, the patient has been conscious of some strange and sudden mental condition which he cannot describe, but which is significant enough. Here, and in allied cases, could we not do much by an early recognition of the possible disease? In all these cases I think we could. A scrutinising attention to the minutest departure from health, in mind, or emotion, or sensation, would, I believe, help us greatly in the estimation and prevention of disease; and we must ever remember that in the practice of our noble profession we have to deal with man as a whole, to examine him and to treat him as such; that by neglecting any part of the information which he can give us with regard to his sufferings or his wants, we shut out from ourselves one great source of information which we can ill afford to lose; and that by putting aside that kind of knowledge of his state, which can come to us only through the workings of his own mind, we rob ourselves of those elements for a correct diagnosis, without a due establishment of which all our attempts at treatment must be either empirical or fruitless.

MODERN MEDICAL DOCTRINES.

Extract from the President's Address, delivered at the Conjoint Annual Meeting of the East Anglian and Cambridge and Huntingdon Branches, at Norwich, June 30th, 1871.

By PETER EADE, M.D.Lond., M.R.C.P.,

Physician to the Norfolk and Norwich Hospital, etc.

[AFTER thanking the members of the Branches for the compliment paid to him in his election as President, and offering them a welcome to Norwich, Dr. Eade gave a brief sketch of the history of the city, referring especially to its honourable position in the pursuit of the sciences and arts, and especially in the annals of medicine. He then proceeded to give a review of the progress of medicine during the year.]

With regard to the year that has passed, I would venture to express the opinion that, since our last anniversary, the science of medicine and its allied branches of knowledge have continued to progress. We may not have had such a valuable boon as chloral provided for us, nor such a great theory propounded as that of the safety-giving influence of carbolic acid after operations; but still I think that those who have perused our JOURNAL and the general medical literature of the country, will agree with me that there has been no check to the steady persevering work of our medical inquirers, and also that in this work various members of the British Medical Association have borne their full share. Even if nothing else had been done, the discovery of the inoculability, not only of portions of the integument, but even of the epithelial scales—of the very dust of our skins—upon the raw surface of another individual, would be almost enough to mark a distinct era in our advancing knowledge. Coming as it does upon the heels of Villemin's discovery of the inoculability of tubercle and other organised matter, there is no doubt it is helping to clear the ground for our thorough understanding of the pathology of pyæmia, of all cellular

and many contagious diseases, and—may I not say?—of phthisis itself. For it is very clear that, if we can see that isolated particles or cell-dust from the skin can live on a fresh surface and there grow and increase, there is no difficulty in believing that similar particles shed from the surface of the pulmonary mucous membrane can be inhaled by a second person, become transplanted on to his mucous membrane, and constitute there the starting point of a fresh and similar disease. I am of course aware that this possibility is by no means demonstrated, and that tuberculous particles differ considerably from ordinary nucleated epithelial scales; also, that there is much negative evidence to be adduced against this view. But when we remember that, whatever their microscopic characters, tuberculous matters have been proved to be capable of reproduction, and also call to mind the many instances which are constantly occurring of untainted individuals nursing the consumptive and themselves quickly becoming victims of the disease, there seems reason at least for believing that this is not unlikely to be shown hereafter as a true fact of this disease, and that the opinion long entertained of the occasional contagiousness of pulmonary phthisis is founded in truth. It is not long since the communicability of typhoid fever and cholera was vehemently contested. We now know (thanks, I believe, mainly to the researches of two eminent members of this Association—Dr. W. Budd, and the late Dr. Snow) that both these diseases are communicable by the reception into the system of particles—possibly mere poisoned epithelium—discharged from the mucous surfaces of diseased individuals.

It is really most lamentable that the true clinical history of such a disease as consumption, which destroys one-sixth or one-seventh of the whole population, and which is open to the observation of every one of us, should still be wrapped in such impenetrable darkness. The discovery of its inoculability into lower animals would seem to be the one ray of possible light which has lately been shed upon it—for the distinction of phthisis into several varieties, and the more accurate recognition of its various pathological forms, has as yet done little for its elucidation, and has not even enabled the best observers to agree as to the interpretation of the best known facts. In illustration of this, and of the consequent need for more work in this direction, hear what a reviewer of Niemeyer's recent *Lectures on Phthisis*, writing in the *Edinburgh Medical Journal* for December last, says. "There is no work", he writes, "on the treatment of phthisis in the English language so advanced in its pathology. It leaves the crude theories of Laennec and his followers far in the rear, and, by showing the essential dependence of tubercle on preceding inflammatory processes, it also shows, etc." Now contrast this with the views expressed by one of the most able and experienced physicians of our own country in the special field of consumptive disease. No longer ago than April last, Dr. Cotton wrote in our own JOURNAL to this effect. "Phthisis is, in my opinion, one of the diseases of organic degeneration, consisting essentially in the development or deposition of a certain lowly organised and variously constituted material, which we call tubercle. In the great majority of consumptive cases, I believe that such deposition is *not due to inflammatory action*—any inflammation, whether pulmonary, bronchial, or pleuritic, which may accompany it, being of a secondary kind." Dr. Cotton goes on to say that many cases of phthisis do begin with some form of pulmonary inflammation; but his general opinion on the subject I have quoted above in his own words.

Three or four years ago, at the meeting of our Association at Oxford, I read a paper in which I ventured to propound the opinion that a lowered vitality—nervous and anatomical vitality—of the pulmonary tissues was an essential element of the development of tubercular growths; and that, as tubercle itself was a low form of cell or nuclear growth, so it flourished only at best in lung-tissue, whose vital resistance was lowered by abstraction—either directly or reflexly—of nerve-power, so as to render it an appropriate soil for the development of this lower type of growth. All increase of knowledge since this time seems to have rather strengthened this view; and certainly a capability of previously healthy individuals for receiving and permitting the growth of inhaled tubercle-germs upon their pulmonary mucous membranes, when exhausted by nursing and anxiety, would not militate against it. Whether the result be actually induced in this disease, to quote the words of Mr. Paget, in his recent lecture on Dissection-Wounds, "by mere diminution of a normal power of resisting changes," or (as Dr. Carpenter has shown to be much more probable) by the production in the fatigued organs of some material on which morbid poisons may multiply and flourish, seems uncertain; but the tenor of this passage evidently is to show the belief of both these eminent physiologists and pathologists in the power of implantation and growth of living particles on or in lung-tissues, which they could not invade when these were in possession of their normal vitality. Other examples of this effect of lowered innervation in permitting the springing up of a lowered type

of growth are well seen in the hypertrophy of connective tissue, which accompanies the progress of the disease known as Duchenne's paralysis; in the formation of pus in parts where nerves are compressed or interfered with by tumours or injuries; and in the development of cancer elements in lymph exuded after an injury, and so placed beyond the reach of the necessary nervous control.

The great tendency of medical thought has of late unquestionably been in the direction of nerve-pathology and nerve-therapeutics. The nerve theory has in great measure—and doubtless rightly—superseded the humoral theory; and, as a result of the increased attention directed to the subject, the number of disorders found to be referable to some disease or derangement of nerve or nerve-centre, goes on ever increasing. The more, too, the ganglionic or sympathetic system is studied, the greater is found to be the number of ailments which are referable to a diseased condition of its elements. Take as a single example the great abdominal ganglionic centres, and see what a multitude of disorders can now be referred to their morbid conditions, some of which but a very short while ago were not only without a locality, but even without a name; Addison's disease; other forms of melasma; anæmia idiopathica; and probably hypochondriasis and some forms of jaundice; besides various reflected disorders, such as certain cases of mania, probably some examples of delirium tremens, and other familiar diseases and functional disorders, most of them characterised by epigastric sinking or other uneasiness.

But by far the greatest change of opinion has occurred as to the number and variety of symptoms and disorders which are now looked upon as due to causes acting at a distant part of the system, but producing their effects far from their source, through the medium of connecting nerves and nerve-tissues. Much, very much, has now been done in this direction. The work which was begun by Prochaska, continued and developed by Marshall Hall and Brown-Séquard, has indeed borne great fruit; but I venture to think that no limit can at present be set to the possible results of further investigations and inquiries in this direction. Not only have many hitherto unexplained affections been satisfactorily explained on this principle, but there seems reason to believe that the true *modus operandi* of the causes of many of our most common acute diseases may be—as some of our best thinkers have lately tried to show to be probable—through some agency of a reflex nature.

Take the simplest of all—the case of a *common cold*, with its resultant chill, and sore throat, and catarrh. It may indeed be true, as has long been held, that some resulting inefficiency of cutaneous action may allow of accumulation in the blood of perspiratory matters, and so give rise to some of the phenomena witnessed; but it is very plain that all the facts of this disease are by no means to be so explained, and that some further *rationale* of their action is required. Even if we leave out of the question the strange circumstance that the sore throat, or catarrh, or bronchitis, is frequently produced by merely getting the feet damp, or sitting for a few moments in a small current of air, or by exposure to other very partial cause, this old perspiratory theory—which was taught in our student days, I presume, to very many of us now present—fails to afford an intelligible explanation of the true nature of a simple cold.

But, if we allow a reflex explanation for a common cold, must we not at once agree to the further hypothesis, that all the so-called mucous inflammations of the respiratory tract—laryngitis, bronchitis, pneumonia—are or may be of the same nature and character, though differing in situation and intensity, and that they are in fact but varied results of a reflex paralysis—of a removal of the nerve-power of the vaso-motor nerves governing the vessels of the “inflamed” parts, and allowing the relaxation, congestion, and subsequent exudation of *liquor sanguinis*, in which this process of inflammation consists?

An investigation of the reason why removal of the vital heat, or vital force or nerve-power, from a given distant part, by moisture or current cold, should produce a catarrh, a cynanche, a bronchitis, a pneumonia, a rheumatic fever, would seem to be a subject worthy of the closest attention, and likely largely to increase our knowledge not only of these diseases themselves, but also of the direction in which nerve-force is apt to travel from various parts of the surface to other parts. In other words, it might lay bare the knowledge of the existence of great and definite nervous arcs or channels, of which at present we can only have a bare suspicion.

A common cold is the commonest, apparently the simplest, and certainly the most easily studied, of all these inflammations of the respiratory mucous membranes (these possibly) partial reflex-paralyses. Might not the concentration of our inquiries upon the intrinsic nature of this disease unfold to us the secret history of the more serious chest-diseases, and point out to us not only their essential nature but the means of cure?

We all know and believe in the common adage, that we cannot cure a cold. Are we not fast coming also to the conclusion that we cannot cure a pneumonia, and is there any reasonable doubt that the tumid, red, congested condition, which we see in “inflamed” or catarrhal nostrils or throat, represents the exact condition of the mucous membranes lining the air-tubes in bronchitis or the lung-tissue in pneumonia? In this respect I think that practice is outrunning theory; for, whilst the essential nature of pneumonia is yet undetermined, the almost universal practice now in its treatment, in addition to the warmth of a bed, is the application of external warmth to the inflamed part by means of constantly renewed hot poultices. Possibly we might go further and do better, were we to apply this artificial warmth to the exact part from which vital heat or nerve-force was removed by the cold or wet which caused the illness. It seems reasonable to suppose that the same nervous arc or circuit through which the nerve-force was abstracted might often be the best channel for its restoration.

Assuming also that these internal inflammations are but forms of reflex paralysis, do we not see at once a reason why so-called remedies are often so useless for their check or cure, and why nothing but a certain period of rest and care, a period sufficient for the re-development of the normal nervous power of the diseased part, suffices for restoration to health? and why also rest, and chiefly physiological rest (as has recently been pointed out by Dr. Gull), is often almost the *only thing* that is needed for such restoration?

But, after all, I would ask, what is this doctrine of physiological rest, but stating in other words the need of time for the restoration of inflamed, *i.e.*, exhausted, or semi-paralysed parts? The “six weeks” that are said to be good for rheumatic fever; the four or five days that are known to be essential before a cold or a pneumonia can get “the turn” towards recovery; do but express the fact that this period of time is that in which the nerves of the part are able to recover from the exhausted condition which precedes, and allows the rise of, that particular form of disease. We may possibly neutralise the lactic acid of the blood in the one case, or the bilious or perspiratory poisons in the other, and so help to make the recovery more rapid; but in the absence of such or other complications, the rest and the vital nourishment by properly regulated warmth or temperature would seem to be the essentials of the treatment.

Before I conclude my address, there is yet one other thing worthy, I think, of mention in connection with this subject of nervous disorders, and also of some value in a practical point of view; and that is, that in considering disease and disease-causes, in this light of reflected causation, it may be worth while to remember that, as the bodies of the lower animals are not only divided into small sections, but also into the larger segments or divisions of head, thorax, and abdomen, so it is probable that some similar marked physiological division of *our* bodies also exists in the nervous sense, and that, though no anatomical line of demarcation is perceptible in the spinal cord, yet probably a definite physiological division exists defining the point of separation and of junction of the nerves appropriated to these three great segments of our bodies. Certain it is, at all events, that irritation reflected along the cord produces special symptoms which may in practice be distinctly classified in this sense, and of which we may perhaps get our best illustration if we call to mind the various symptoms produced by a *diseased or disordered uterus*, and observe how readily they may be grouped with reference to these three great segments of the body:—*e.g.*, the frontal headache, the vertigo, the puerperal convulsions or apoplexy, the mania, puerperal or otherwise, referable to the cephalic segment; the globus hystericus, the sighing and yawning, the intercostal neuralgia, the palpitation, the paralysis of upper limbs, referable to the thoracic segment; the nausea and vomiting, the abdominal pains and cramps, the pulsating aorta, and possibly the albuminous urine of pregnancy, referable to the abdominal segment. I add the albuminuria, for I, for one, am by no means satisfied with the explanation usually given of uterine pressure being the cause of this symptom, and would venture to express the opinion, founded on some observation, that not only albuminous urine, but also some of the graver seizures which are met with at the puerperal period, such as the comatose and apoplectic attacks (belonging to the cephalic segment), and the pleuritic and pneumonic attacks (referred to the thoracic segment of the body), are but examples of exhaustion of the nerve-force of the pelvic nerves producing as a result exhaustion by reflexion in these distant parts and organs.

A SON of Mr. Watkin Williams, General Secretary of the British Medical Association, has lately been elected by competition to a valuable foundation scholarship at Winchester College, being placed fourth in a list of twelve successful competitors. There were in all 111 candidates.

ON THE PROGNOSTIC VALUE OF HÆMOPTYSIS.*

By J. B. BRADBURY, M.D., M.R.C.P.,

Physician to Addenbrooke's Hospital, Cambridge; Medical Lecturer in Downing College; etc.

HÆMOPTYSIS is usually regarded by medical men as a symptom of such grave import, that when a patient informs us he has been spitting blood we regard it as tantamount to telling us that he is suffering from organic disease either of the lungs or heart.

The chief object which I have in view in this paper is to endeavour to show that pulmonary hæmorrhage is not a symptom of such unfavourable augury as we are apt to consider it, but that it not unfrequently occurs in persons in whom neither phthisis nor serious cardiac disease can be detected.

It will be well at the outset to enumerate the chief conditions under which hæmoptysis usually takes place, and then to consider the value to be attached to its occurrence in the several diseases of which it is but one form of expression. Expectoration of blood (exclusive of those cases in which it arises from a blow on the thorax, or from the mouth and fauces, or from ulceration of the larynx and trachea) may occur as follows: In vicarious menstruation; in hysterical women, though the catamenia are regular; in pregnant and suckling women; in the hæmorrhagic diathesis, purpura, scurvy, etc.; in bronchitis; in emphysema and asthma; in pneumonia; in pulmonary consumption; in pulmonary apoplexy; in disease of the heart and great vessels; etc.

The hæmoptysis which is vicarious of menstruation is probably the most favourable form of blood-spitting. A short time ago a young woman came to me stating that she was spitting blood. Upon inquiry, I found that she had no symptoms indicative of pulmonary disease beyond the raising of blood and a slight cough; she had not, however, menstruated *per vaginam* for a considerable time. Physical examination of her chest revealed nothing abnormal. I ascertained that the hæmoptysis occurred periodically about once a month. I accordingly concluded that the case was one of menstruation by the lungs; and the result of the treatment adopted served to confirm this view of the nature of the case.

I am aware that it has been stated, on very high authority, that these cases ultimately turn out to be phthisical, and I do not wish it to be understood that I am of opinion that all such cases terminate so favourably as the one I have just recorded; indeed, I have at present an out-patient at the hospital who every month suffers from epistaxis and hæmoptysis—in all probability vicarious of the menstrual discharge—and in whose lungs there are unmistakable signs of pulmonary mischief; still this is probably a mere coincidence, and is not necessarily connected with the diverted course of the catamenia. Dr. Pollock of the Brompton Hospital, in his work on the *Elements of Prognosis in Consumption*, writes as follows: "When menstruation is suddenly checked, a hæmoptysis is a frequent event, and may be regarded as vicarious, and with less import of pulmonary mischief than under other circumstances" (pp. 297-298).

Hæmoptysis also occurs in nervous and hysterical women, without there being any irregularity of the catamenia or any pulmonary or cardiac disease. This form usually ceases when the climacteric period is passed, and never returns.

The hæmoptysis which sometimes occurs in pregnant and suckling women is a form which is not sufficiently recognised by medical men in this country—little, if any, notice being taken of it in the English textbooks on medicine. Trousseau thus speaks of it: "There are some women who, during pregnancy, and others who, during the whole time they are nursing, spit blood; the hæmorrhage ceases spontaneously after delivery, or at the end of lactation, as the case may be, and is not symptomatic of pulmonary tubercle nor of cardiac disease." (*Clinical Medicine*, vol. iii, p. 140; New Syd. Soc.)

It is not my business to explain the cause of the hæmorrhage in the above cases, as I am only concerned with the prognosis, which, from what I have said, you will have concluded to be favourable.

Persons who suffer from what, for want of a better term, is called the hæmorrhagic diathesis, are liable to attacks of profuse hæmoptysis. A case of this kind is recorded by Dr. George Johnson, in the *BRITISH MEDICAL JOURNAL* for Feb. 12th, 1870. Dr. Johnson's patient was a blacksmith, who had frequent attacks of pulmonary hæmorrhage extending over a period of twelve years, and who, at the time of Dr. Johnson's writing, pretty certainly had no organic disease of the lung either as a cause or a consequence.

Closely allied to these cases of hæmoptysis, are those occurring in habitual drunkards, and in scurvy, purpura, and the hæmorrhagic ex-

anthemata, e.g., typhus, small-pox, etc. In all these instances we probably have a morbid tenderness of the walls of the blood-vessels, occurring without any assignable cause in the hæmorrhagic diathesis; but in chronic alcoholism, purpura, scurvy, etc., it is probably owing to a deterioration of the blood "so modifying the nutritive state of the walls of the blood-vessels as to impair their resisting power"—(Niemeyer).

If the habitual toper can be induced to indulge less in his favourite drink, the prognosis is not unfavourable. I have in my recollection the case of a young man whom I occasionally saw when I was a pupil some thirteen or fourteen years ago, who suffered from repeated attacks of this form of hæmorrhage, and who seemed completely to recover from several of them. He could not, however, be induced to forego the pleasures of the bottle, and he ultimately fell a victim to pulmonary consumption, probably induced by one of these attacks of hæmoptysis in a way which I shall presently explain. I have also a case of this kind under my care at the present time, which I am watching with considerable interest. The patient has had three severe attacks of hæmoptysis since last August, and is at the present time progressing rapidly towards convalescence from the last attack; the lung-mischief not having as yet, however, entirely disappeared.

There is one form of bronchitis with which spitting of blood is generally associated—I allude to the plastic form. In some of these cases the bronchorrhagia is the first symptom. The hæmoptysis may recur at intervals until the fibrinous casts of the bronchial tubes are expelled. Of thirty-four cases of this disease recorded by Dr. Peacock in the fifth volume of the *Pathological Transactions*, there was entire recovery in twenty cases, four became chronic, and ten died, so that nearly sixty per cent. recovered.

Ordinary acute bronchitis is also sometimes attended with the expectoration of bloody sputa, and even with copious hæmoptysis; and these are the cases in which the prognostic powers of the physician become sorely taxed. For instance, a patient has an attack of bronchitis supervening upon a severe catarrh, and during the attack the expectoration is streaked with blood. There may be no evidence of pulmonary mischief beyond the bronchitis; i.e., no diminished respiratory murmur nor prolonged expiration, nor dulness on percussion under either clavicle, nor any bronchial breathing, nor, in a word, any physical signs indicative of consolidation of the lung. Now, what is our prognosis in such a case as this? If there be no strong hereditary tendency to phthisis in the family, and if the bronchial mischief disappear under the administration of appropriate remedies, we may augur favourably of the case; if, on the other hand, the predisposition to phthisis be great, and the catarrhal symptoms in either apex be persistent, the prognosis is grave. I have at present under my care a young man of the age of 18, whose case is of the latter type, and I confess I am afraid he will become consumptive. In these cases especially, however, our prognosis must be rather a balance of probabilities than one of absolute certainty.

Blood-spitting is a more frequent symptom of pulmonary emphysema than is generally supposed. Dr. Walshe says: "Emphysema of the lung, as its anatomy would prepare us to expect, antagonises pulmonary hæmorrhage of all kinds" (*Diseases of the Lungs*, 3rd ed., p. 416.) This is a statement which I cannot endorse, for I had lately under my care two patients suffering from emphysema, accompanied with hæmoptysis, in whom the most careful physical examination failed to detect any evidence of phthisis, or of considerable hypertrophy of the right side of the heart. Cases of the same kind have been observed by other physicians, amongst whom I may mention Dr. George Johnson, who writes as follows: "In several cases of hæmoptysis that have come under my observation, emphysema of the lung has been the only structural change that I could discover." (*BRIT. MED. JOUR.*, Feb. 12th, 1870.)

Persons with emphysema of the lung frequently live to a great age; hence in these cases a favourable prognosis may generally be given. Hæmoptysis occasionally occurs in cases of severe asthma, and sometimes continues for so long a period as one month. The quantity of blood expectorated varies from a few streaks to as much as a pint. Dr. Hyde Salter says, "where it has once occurred it is very apt to occur again. . . . In one case that came under my observation, this hæmorrhage occurred for years at almost every attack. It evidently depended here on an unusual completeness of apnoea and its resulting blood-stasis; and yet no permanent injury was sustained by the lungs, and the ultimate recovery of the patient was complete". (*On Asthma*, 2nd edition, pp. 88-89.)

Acute inflammation of the lungs is occasionally attended with copious hæmoptysis, in addition to the sputa being tinged with blood. I have not met with an instance of this kind, and writers seemed divided in opinion as to what the prognosis should be—one (Johnson) regarding the hæmorrhage as unconnected with tubercle, another (Walshe) stating that such cases are "almost positively connected with tubercular disease" (*Diseases of the Lung*, 3rd edition, p. 421).

* Read before the Cambridge and Huntingdon Branch.

All who have carefully watched the revolution which medical opinions occasionally undergo must have been struck with the recent change in our ideas as to the nature and causes of pulmonary consumption. Since the time of Laennec, phthisis has been regarded by most physicians as due to tubercular deposit in the lungs, the result of a constitutional vice, which we call the tubercular diathesis. Recently, however, the views of Dr. Addison, which had not met with the attention they deserved in our own country, and which seem to have been altogether unknown on the continent, have been revived by Niemeyer and others, who regard pulmonary consumption as by no means always the result of tubercular deposit in the lung, but as being frequently the result of pneumonia, without any deposition of tubercle, although this new formation may in some cases co-exist with the products of inflammation of the lung; but the tubercles have in the majority of those cases only developed themselves at a later stage of the disease—their development only in very few cases preceding the pneumonic processes.

The products of any of the three forms of pneumonia—viz., common acute pneumonia, acute catarrhal pneumonia, and chronic catarrhal pneumonia, may undergo cheesy metamorphosis; but the products of the latter form most frequently undergo this change, and lead to the formation of cavities in the lungs.

We may, then, have three forms of phthisis—viz., the pneumonic, the tuberculo-pneumonic, and the tubercular. The first two of these forms chiefly concern us as being connected with hæmoptysis, spitting of blood being a rare symptom in acute tuberculosis.

Phthisis caused by chronic pneumonia was not considered by Niemeyer to be a particularly dangerous disease. He says: "I do not hesitate to assert that the chronic inflammatory processes which lead to consolidation of the lung and to the formation of cavities, usually show a decided tendency to heal; and that, under appropriate treatment, persons with extensive consolidation and great cavities may often for a long time be kept in a tolerable state—nay, comparatively even in a state of good health. *The greatest danger to most phthisical patients is the development of tubercles*" (*Lectures on Phthisis*, p. II.)

Niemeyer had also arrived at the conclusion, and rightly so, I think, that pulmonary hæmorrhage is sometimes a cause of consumption—a view which was entertained by Hippocrates, Cullen, and other old writers, who mention a "phthisis ab hæmoptoe". Cases have been recorded by Drs. Baümler, Weber, and George Johnson, which tend to confirm Professor Niemeyer's view; and there can now be little doubt of the fact that an attack of hæmoptysis may cause blood to be aspirated into the smaller bronchi and air-cells of the lungs, where it may act as an irritant and set up inflammatory changes, the products of which may either undergo complete resolution or lead to the formation of cheesy products, which may ultimately soften and thereby shorten life. Such an accident may also happen during the progress of phthisis, but I am of opinion that it is not so common as Niemeyer would have us suppose; and my experience certainly coincides with that of Walshe and others, who do not regard attacks of hæmoptysis, unless the hæmorrhage be very profuse, as materially accelerating the fatal issue.

It occasionally happens that hæmoptysis is the immediate cause of death in phthisis; and in these cases a rupture of a branch of the pulmonary artery in a vomica has preceded the fatal termination. Such cases are, however, not of frequent occurrence.

Unless, therefore, the hæmoptysis of phthisis be followed by an increased temperature, and by a persistent frequency and irritability of the pulse, our prognosis, *quoad* the hæmorrhage affecting the prolongation of life, need not in the majority of cases be unfavourable.

Pulmonary apoplexy, when attended with hæmoptysis, so frequently depends upon disease of the left side of the heart, especially of the mitral valve, that the prognosis in pulmonary infarction must necessarily be the same as that of the cardiac disease, of which it is a consequence, and which will presently come under our consideration. Before leaving the subject of pulmonary apoplexy I wish, however, to mention that it occasionally—very rarely, I acknowledge—proves rapidly fatal, owing to the copious hæmoptysis which attends it. I have recorded in the BRITISH MEDICAL JOURNAL for Jan. 14th, 1871, such a case in which the patient died within twenty minutes from the time of the supervention of the hæmorrhage, and in whose heart and lungs no organic mischief could be detected either before or after death, with the exception of a large patch of uncircumscribed pulmonary apoplexy at the base of the left lung, which was found only on *post mortem* examination.

In disease of the heart and great vessels, I must acknowledge that spitting of blood is a grave symptom, and that it by no means unfrequently warns us that the time has come when the physician, and the patient, too, alas! must capitulate to the disease against which the batteries of steel, digitalis, iodide of potassium, etc., can no longer hold out.

I have already trespassed too long on your patience, and will, in con-

clusion, only remark that one of the objects which I have had in view in reading this paper has been to elicit discussion on this important subject, and to ascertain from those of greater experience than myself whether their opinions are in harmony or in discord with my own.

NOTES OF A VISIT TO THE MILITARY HOSPITALS AT BONN, WITH REMARKS UPON THE PHYSIQUE OF THE TROOPS RECENTLY RETURNED FROM FRANCE.

By DYCE DUCKWORTH, M.D.,
Assistant-Physician to St. Bartholomew's Hospital.

IN the course of a holiday tour, and while at Bonn, I paid a visit to the military hospitals to see the last of the wounded in the recent war, and was very kindly conducted over them by Dr. Kalt, who, although a civil practitioner, had charge for some months of a number of the cases. There are now from two to three hundred wounded men in Bonn, and they lie in huts which were hurriedly built at the beginning of the war for the reception of French prisoners. As none of the latter were sent to Bonn, many of the huts were pulled down, and the remainder converted into small hospitals. They are built of wooden framework, into which concrete has been introduced, and are placed in rows upon the Exercier Platz. A large and airy hospital has also been made in the military riding school.

The former buildings very much resemble the Camp at Aldershot in their general aspect.

I learned that the wounded came from before Metz and Paris, a few from the engagements at Wörth and Gravelotte, and many had confronted the army of General Faidherbe about Amiens and in the north of France. Only one Frenchman lay amongst them, the last of a considerable number. The cases were mostly the result of Chassepôt-bullet wounds, and some were from shells. There were many injuries to knee and wrist joints, and in not a few instances the balls were both known, and also believed to be, in the limbs. I saw no examples of conservative surgery.

On the whole, the hospitals proved very healthy, and the deaths reached a small percentage. An outbreak of hospital gangrene occurred early this year which threatened to prove formidable. Dr. Kalt employed, with the best results, the following treatment—actual cautery freely to the wounds, or pure carbolic acid in less severe cases, also wine and quinine plentifully. Every comfort appeared to be supplied to the men, and the air of the huts was quite satisfactory.

Many of the cases were quite convalescent, and while some were learning to use their crutches others were trying on wooden arms and legs. Dr. Kalt informed me that much venereal disease had befallen their troops while in France, and some severe cases of sloughing bubo, which had threatened to cause grievous loss of integument, were lying in one of the huts. Owing to great care, the ulcerations had been limited considerably. It is feared that syphilis may be found to spread in Germany, and to be introduced amongst the peasantry when the troops return to their homes, and this Dr. Kalt naturally regarded as a sad trophy of the war. He also believed the invasion of France would have a disastrous effect upon the morals of their younger soldiers, which was much to be deprecated.

Bonn seems likely to become a more important university than it has hitherto been, not but that it has always been one of the leading schools in Germany. In a few years the professors will possess almost unrivalled means of teaching technology and other applied sciences, and Bonn will only be second to the largest schools for clinical purposes by reason of the smallness of the town. At Poppelsdorf, one of the suburbs, large anatomical laboratories are being built, in addition to the splendid chemical and agricultural institutions already existing in that place, and there is at present a new obstetrical *clinique* being erected, with a river frontage, at the northern extremity of the town. Both medical and surgical *cliniques* are to be built adjoining the obstetrical one, so that remarkable changes in the appliances of the medical faculty are approaching. Bonn, like most other German medical schools, was bereft of her students last winter, as they volunteered for service in France as dressers.

While I was in Bonn the 8th regiment of the King's (Rhenish) Hussars made a triumphal entry into the town, and were received with intense enthusiasm and rejoicings. The men were in the finest possible condition, and no more active or worklike troops could possibly be seen. They were bronzed and travel-stained, and gave infinitely more

satisfaction to my eye than the smartest of our light cavalry regiments on their too well-bred horses.

At Coblenz and at Ems, also, several infantry regiments entered the town in triumph. All the men were apparently in the most robust health, and were well grown and seasoned. It may be hoped that they will keep their vigour in garrison in Coblenz. New wooden barracks are being erected for many of them near one of the now deserted French camps, but the accommodation in the fortress of Ehrenbreitstein, now, as on previous occasions when I have visited the barracks there, is simply too foul and abominable to describe. Large numbers of the Landwehr were being dismissed to their homes after their one year of hard service.

I was pleased again to observe how excellently well the men were shod. The soldier's boot, *par excellence*, is that of the German infantry—the large, easy, broad-toed Wellington boot—into which the trousers can be tucked when marching over muddy or dusty ground; and never will the British infantry soldier be fairly dealt with till he has the same supplied to him instead of an ugly ill-fitting Blucher boot with untidy gaiters. I would fain hope that we may soon see a change in this respect in our army; as also in the fashion of carrying the knapsack which, excellent as it is in the German and French armies, the weight being supported by the waist, is as bad as can be in the British service, since the weight of the pack together with the cloak is thrown cruelly upon the axillary blood-vessels and nerves.

The individual German soldier is certainly a marvellous fighting machine. His education, his intelligence, his practical professional training, and, not least, his powers of endurance and digestion, render him indeed a formidable enemy, while his devotion to his country and Kaiser is fired by the closest personal interest, which, if I may judge by what I saw at Ems, the latter takes in his troops.

Mayence, July 12, 1871.

CASE OF CHRONIC ILEUS.*

By R. H. MEADE, F.R.C.S.,

Consulting Surgeon to the Bradford Infirmary.

ON November 7th, 1870, I saw a married woman, about 40 years of age (with Mr. Sugden of Bradford), the mother of a large family, and then between seven and eight months advanced in pregnancy, who was suffering from vomiting in a most troublesome and intractable form. It had commenced gradually several months before I was consulted, and was thought at first to be dependent upon the pregnant state; it became slowly worse, however, and resisted all remedies. When I saw her, she was very weak and feeble, but not much emaciated; she could take food in small quantities for two or three days in succession, without much feeling of sickness, until it began to accumulate in the stomach, or, rather, in the upper part of the intestinal canal; but when this became filled, she would vomit a large quantity of yellow pultaceous matter, in appearance like pea-soup, having a fæcal odour. The bowels were very sluggish, but a small natural stool passed occasionally by the aid of enemata. The patient complained of no pain, but only of weakness and prostration; and, after a free attack of vomiting, she generally felt better for a day or two. The complaint was evidently of the nature of chronic ileus, but no history could be obtained at the time of any cause leading to it. No trace of hernia could be discovered, and the enlargement of the uterus prevented any tumour or thickening of the bowels from being felt through the abdominal walls.

The urine showed no traces of disease of the kidneys, and no ulceration or other disease of the cervix uteri could be found. The patient had a slightly jaundiced cachectic look; and from the gradual way in which the complaint had arisen, and progressed from bad to worse, Mr. Sugden suspected that there might be malignant disease of the intestine.

After suggesting one of two plans of treatment which had not been already tried, and carrying them out without success, I thought it right to recommend the induction of premature labour, thinking it possible that the pressure of the pregnant uterus upon some portion of the bowels might interfere with their action. On November 16th, this recommendation was carried out. The child lived a few hours, and the mother soon recovered from the effect of the operation, which was a little hazardous in her exhausted state.

For a short time after the uterus was emptied, the patient appeared to improve, and the stomach retained more food; but all the former symptoms of ileus gradually returned, and she slowly sank and died on the 7th of February, 1871, exactly three months after I first saw her.

* Read before the Northern Branch.

She never suffered much pain, and there were no symptoms of peritoneal inflammation; she became very anæmic, and for some weeks before death almost pulseless; but she never became much emaciated, though for some time she had taken hardly any food. The stercoraceous vomiting continued to the last.

This case was so obscure throughout, that I felt anxious to examine the body; and, consent being obtained, I assisted Mr. Sugden in opening the abdominal cavity on the day after death. We soon found the cause of the mischief; for the extremity of the vermiform appendix of the cæcum was fixed by adhesions of old standing to the small intestine, or, rather, to the mesentery close to the bowel, on the right side of the abdomen. There were no signs of recent peritonitis, but the portion of small intestine which was in a measure bound down, though not crossed, by the band formed by the appendix, was externally of a darker colour, from vascular congestion, than the neighbouring parts. The part of the bowel thus affected would be a portion of the ileum at about one-third from its commencement. The mucous membrane appeared quite healthy, and the canal was quite pervious, though it appeared somewhat contracted opposite the point to which the end of the appendix was fixed. The large intestines were quite empty, but healthy, and so were all the other abdominal organs (the only parts of the body examined).

After making the examination, the husband of the patient was particularly questioned as to whether his wife had ever had any severe attack of pain or inflammation of the bowels; and he then remembered that, during the very early period of her pregnancy, while staying at the sea-side, he found her (on going to see her) suffering from a very severe attack of abdominal pain or spasms; but as it soon passed off, he thought no more about it. The sickness began soon afterwards, and was put down to the pregnant state, and the real cause forgotten.

REMARKS.—This case is interesting in several respects. Firstly, it was rendered very obscure by being complicated with pregnancy, and it was difficult to say what influence that state had in producing the symptoms, until after the failure of the induction of premature labour to relieve them. In the second place, it shows that it is not necessary that the canal of the intestine should be obstructed or much constricted for the production of symptoms of ileus. It appears that, if the natural peristaltic and other free movements of the bowels are interfered with, their functions cannot properly be carried on, though symptoms of acute strangulation are not produced, as where the intestine is tightly constricted.

Cases of ileus from perforation of the extremity of the appendix cæci by some foreign body, and its consequent inflammation and adhesion to the bowel or mesentery, are not very uncommon; but the appendix in these cases generally acts as a band of constriction fixed across some portion of the intestine. An interesting case of this kind which I saw, was under the care of one of my colleagues (Mr. Parkinson) in the Bradford Infirmary in January 1868. The patient, a young man, had had symptoms of enteritis ten years before; and at the time of his admission, suffered from very severe pain in the right iliac region, with incessant vomiting and obstinate constipation. No remedies giving any relief, and the seat of strangulation being apparently indicated by the pain, the operation of gastrotomy was performed by Mr. Parkinson, with the consent and co-operation of his colleagues; and when the abdominal cavity was opened, the constricting band formed by the appendix was found and removed, and the patient was very much relieved, though he sank twenty-eight hours afterwards from exhaustion. In this case, a portion of the ileum was crossed and tightly pressed by the vermiform process of the cæcum, which was attached at its extremity by old adhesions to the mesentery. No doubt the strangulated portion of bowel had here been forced under the adherent appendix during some movement of the intestines, immediately before the symptoms of obstruction came on, though the extremity of the appendix had probably been fixed in the position in which it was found during a period of ten years, during the greater part of which time it had not interfered with the natural movements of the intestines.

THE USE OF IRON IN SCARLATINA.

WITH pleasure I observe the letter of Dr. Russell Aldridge in the JOURNAL of the 12th instant. For more than six years I have adopted a treatment similar to that which he urges in cases of scarlatina, and with much success. I have preferred to use the tincture of the sesquichloride of iron, rather than the pernitrate. So far as the scarlatina anginosa is concerned, my treatment and Dr. Aldridge's are strictly uniform. I shall certainly be extremely glad if the profession generally will follow our example.

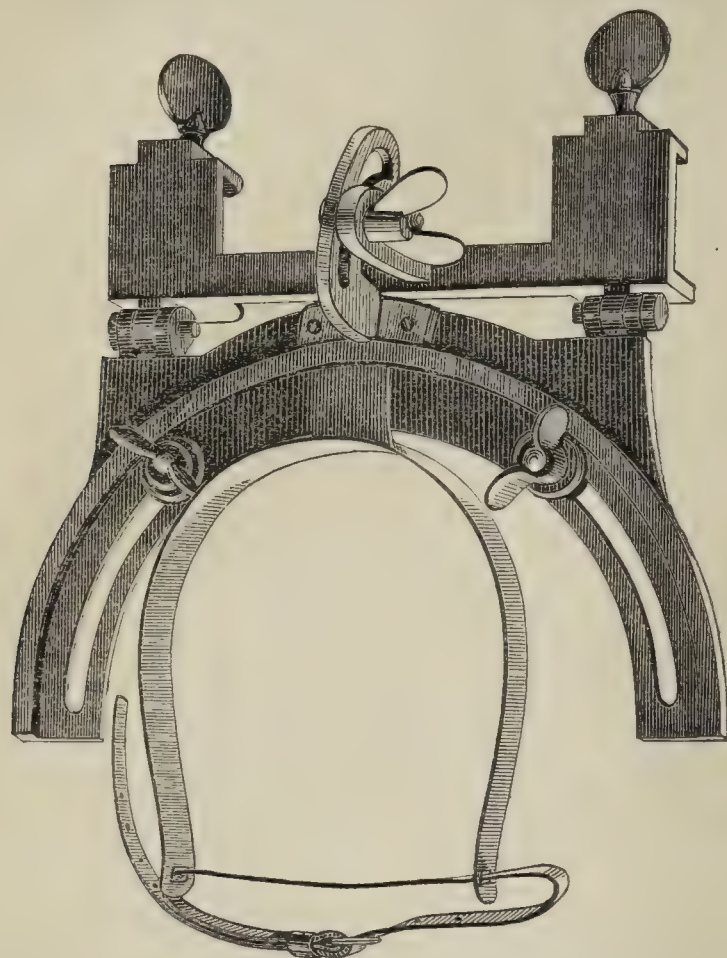
ROBERT MCL. FRASER.

Darlington, August 16th, 1871.

PATHOLOGICAL MEMORANDA.

POST MORTEM INSPECTION OF THE HEAD.

THE accompanying photograph represents an instrument which I have devised for facilitating the *post mortem* examination of the head. A real necessity existed for such an instrument; and this, after a year's trial at the Leeds Infirmary, has been found to answer its purpose well.



The instrument consists of a solid base of brass, with two thumb-screws, by means of which it can be firmly fastened to the *post mortem* table or coffin-board. Attached to the base by two strong hinges is a radial slide, also of brass, in which is fitted a steel spring or clip for holding the head, capable of being moved to either extremity of the slide, and of being held fast at any point by means of two thumb-screws. The blades of the clip are made to secure the head, as in a vice, by means of a leather strap passed through their extremities over the forehead. The backward and forward movements of the radial slide are limited by a quadrant with thumb-screw, and enable it to be set at varying angles with the base. The instrument is also fitted with clips of different sizes, and of lighter make, covered with leather, for use in the operating theatre, in cases where the head is required to be held steadily, and in which chloroform is inadmissible or otherwise unnecessary.

T. R. JESSOP.

Leeds, July 1871.

THERAPEUTIC MEMORANDA.

CHLORAL IN TOOTHACHE.

FOR some time past I have been in the habit of using chloral hydrate, not only as an internal sedative in cases of severe dental neuralgia and of caries where it was at the time inadvisable to permit extraction, but more frequently as a direct local application to the carious tooth. A few grains of the solid hydrate introduced into the cavity of the tooth upon the point of a quill, speedily dissolve there; and in the course of a few minutes, during which a not unpleasant warm sensation is experienced, the pain is either deadened, or more often effectually allayed. A second or third application may be resorted to if necessary. The hours of agony that various circumstances may otherwise entail, are in this way avoided; and in the last instance under my notice, a young lady in a delicate state of health, suffering intensely from a carious tooth, received immediate relief from this application. She lived at a great

distance from a dentist, and was unwilling to have the tooth extracted without some anæsthetic; and the chloral hydrate was the means of obtaining a sound night's rest. I find in my notes her own report that "the toothache was relieved in a few minutes; aching did not return all night; and when it did in the morning, was again stopped by the same means."

DAVID PAGE, M.D. Edinburgh.
Kirkby Lonsdale, Westmorland.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LEEDS GENERAL INFIRMARY.

CASES TREATED BY ELECTRICITY.

(Under the care of Dr. CLIFFORD ALLBUTT.)

II. *Hemiplegia*.—The following cases of hemiplegia, among others, are, or have recently been, under treatment at the Leeds Infirmary.

CASE I.—Mrs. B., a healthy mother of a family, aged about 40, was brought to the hospital, hemiplegic on the right side. She was quite unable to stand, and the right arm was useless. The history pointed pretty certainly to embolism of the left Sylvian artery, which accident had taken place about five months before. Her speech, which had been slightly affected, was now natural, and her limbs, before unmoveable, could now be moved a little in bed. She had been under careful medicinal treatment at home, and her general health was fairly good. The muscles of the affected limbs were somewhat wasted, but only so far as disease would account for; their susceptibility to faradism was diminished, but was still present in considerable degree. Faradism was ordered to be applied to the nerves and muscles of the arm and leg daily. In a week the patient could move the arm and leg more freely; in a fortnight she was out of bed; in a month she was walking with ease; and in five weeks she returned home able to use her arm well, and to walk—with a limp, it is true—but with ease enough for all practical purposes. The muscles of the right limbs had recovered much of their normal tone and volume.

CASE II.—Murdock, a man about 50 years of age, but prematurely senile, and with stiff and tortuous arteries, sallow complexion, and urine of low specific gravity, was seized, about four months before admission, with a fit, attended with unconsciousness and with left hemiplegia. A hæmorrhage into the right encephalic centres seemed a certain diagnosis. On admission as out-patient, he could hobble about with difficulty, but his arm was behind his leg in recovery. He could scarcely grasp any object; he could not hold his stick in the left hand, nor could he make with his arm any movements of pronation, supination, abduction, elevation, etc. By resting the elbow upon the table, he was just able to feed himself with the hand if required to do so. He was ordered to attend three times a week for faradism. His limbs were found somewhat wasted, but still preserving a degree of reaction, and in a few weeks he could perform all movements with the fore and upper arm and with the hands. He could throw the arm quickly above the head, whirl it round, pronate and supinate the hand, clasp and unclasp the fingers, and so forth. There remained, however, a decided deficiency of grasp in the left hand. The leg improved in like manner, but was from the first better than the hand.

CASE III.—Another patient was in the house at the same time, suffering from right hemiplegia and aphasia, of ten months' duration, due probably to a sudden occlusion of a syphilitic artery while he was sitting on a chair in a shop. He presented the following characters. The right leg had advanced a good deal towards recovery, and he could walk freely, but with a limp; the right hand and fore-arm were fairly good in rapid opening and shutting of the fingers, though behind the left; pronation and supination were fair likewise; but in the upper arm there was palsy, which grew worse in the higher muscles. The biceps and triceps muscles were weak, while the deltoid and scapular muscles were almost entirely palsied. The pectoralis major was weak like the biceps. The voice was decidedly affected; but words, though hesitating, were never lost, as they had been before. Faradism was ordered in this case also. The leg remained almost stationary; the muscles of the fore-arm improved a little, but a very striking change was seen in the deltoid, scapular, and humeral muscles. After a very few applications the patient could perform movements with the humerus, and in a fortnight could throw the arm freely up in the air. No other parts but the right limbs were faradised, and the voice remained unaffected, or rather it became a little but decidedly worse.

CASE IV.—In the fourth case there was hemiplegia in the left arm and leg, due probably to syphilitic disease of the encephalic arteries. The palsy was of ten months' standing, and both limbs were wasted and much contracted. Galvanism was ordered to the encephalon directly, and to the nerves and muscles of the limbs; these latter were likewise faradised. There was some reaction to the galvano-contractility, and much deficiency in farado-contractility.* He derived no benefit whatever after a fortnight's treatment, and was discharged incurable.

CASE V.—The fifth and last case which we shall now report was one of a young woman who was attracted by the recovery of Mrs. B. (Case I) to the Infirmary for the purpose of electric treatment. She had great weight, weakness, and numbness, of the right arm and leg. Her age was 22. Her menstrual functions were much disordered, and she had some leucorrhœa. Faradism did her more harm than good; galvanism applied to the limbs did a little, but very little, good; but careful regulation of the menses, suppression of the leucorrhœa, and steel tonics, relieved her.

Dr. Clifford Allbutt said that the foregoing cases were good examples of the kinds of hemiplegia which the medical man was called upon to treat. In the first three, electricity was of great and astonishing benefit; in two, neither form of it was of the least value. The last case was one of those of functional hemiplegia in women which were fully described by Dr. Allbutt in this JOURNAL some months ago (October 1st, 1870). In that communication he stated that in his previous cases neither form of electricity was of much value compared with medicinal regulation of the uterine and intestinal functions, and the administration of tonics. Case IV was too far gone for much relief; there was probably extensive encephalic degeneration, consequent upon syphilitic arterial disease; and, moreover, the nerves and muscles of the limbs themselves had undergone grave trophic degenerations of a secondary character.

Leaving these cases on one side, the relief of the first three may well give rise to much interesting speculation. The methods of electrical treatment of encephalic hemiplegia are three; namely, by direct application of the continuous current to the encephalon itself, by galvanising the sympathetic in the neck, and thus reaching the encephalon indirectly; and, thirdly, by local faradisation, as already described. Dr. Allbutt said that the first two methods really do not deserve the name of method at all. The first process was introduced by Remak, and is much favoured at the present time by Benedikt. It has been proved, no doubt, by Erb that the skull and membranes offer little resistance to the passage of the current, and that the encephalon can undoubtedly be galvanised; but this is the one single fact which lies in the midst of a waste of loose assertions and random applications. No cautious person can allow that process to be dignified by the name of a method which consists only in a casual galvanising of the head, without any rule or any distinct notion of the limits within which the agent is valuable. It is admitted even by Benedikt himself that galvanism of the encephalon may be attended with very grave or even with fatal consequences; and yet he urges its use without offering any indications for or against it in particular cases, and without distinguishing, save in the loosest way, the particular benefits to be attained. It is not, indeed, to be required of any therapist that he must explain the mode of action of his remedy before recommending it; but, if we grant this immunity, we shall look the more rigorously for evidence that he has minutely investigated those facts which belong to his own department. It is absurd to tell us that a certain hemiplegic began to move his limbs after an application of the current to his head; we must have a series of such cases carefully recorded, with their varying phenomena and results marked out. Dr. Allbutt believes that hemiplegia, more than any other palsy due to organic disease, is susceptible of relief under strong mental impressions of any kind. This source of error must, therefore, be especially guarded against. Again, the state of the muscle, before and after the application, must be more adequately recorded, and the precise results not only noted at the time, but also for some subsequent time, in order to ascertain their permanency. Again, it is quite insufficient to say that galvanism was applied to the head; the observer must say exactly how it was applied in each case, and he must distinguish, as far as may be, between the effects of various doses† and between the action of the positive and negative poles, which are endowed with very opposite properties. Dr. Allbutt's own opinion is, that galvanism, applied directly to the encephalon, is very injurious so long as any active change is going on within it, but that, when the disordered parts have recovered their stability, then such applications seem to be of value in restoring the normal molecular activity. This is analogous to its action

in cases of overwrought or depressed brain, when very gentle direct applications of galvanism are useful, together with rest, good nourishment, and other remedies. The use of direct galvanism, with the hope of promoting absorption of effused products and the like, as we so often hear, he believes to be both useless and dangerous. The application of galvanism directly to the sympathetic, in the hope of reaching the encephalon, Dr. Allbutt says is not in any way more deserving of the name of a method. It lacks, indeed, the first basis of the former scheme; for we do not know, in the first place, whether we can influence the cervical sympathetic in any definite and decided way at all; and if we can, the evidence at present is against such influence being translated to the brain proper. The conclusions of Donders and Callenfels, so often quoted in proof of secondary effects seen in the vessels of the pia mater on cutting or irritating the cervical sympathetic, have been denied by every one who has repeated the experiments. Then, again, the central ganglia have a different supply from that of the convolutions; and, finally, how do we know that working upon the vessels will help the brain to mend itself? or whether, if it do, contraction or relaxation is the means required? The careful comparison of the alleged effects of various doses can alone settle such points; and we know of no such series. It is far from unlikely that the effects attributed to a galvanised sympathetic are due to reflex action, and may be called forth by any strong impression upon the cutaneous nerves of the region.* We have much physiological evidence of such modes of action, and we have clinical evidence also in such cases as the effect of cold douches or blistering the nape in dissipating coma. Therefore, the effects of galvanising the tract of skin overlying the sympathetic must be compared with the effects of irritating other tracts in the neck. Dr. Allbutt has done this, and finds the results of galvanism to any part of the neck to be much alike, and to resemble the effects of a blister to the same parts. We are thus brought to localised faradisation as the only method deserving the name of a method.

No one who has read Duchenne's thorough analysis of the clinical results thus obtained can doubt that here we have a method, and one of some value. Its results awake in us many curious speculations. How is it that a hemiplegic patient may be thus strongly affected by a remedy applied to the limbs? It has been made tolerably clear that localised faradisation of the limbs has little influence beyond the limbs, and in particular has little effect, and perhaps none, upon the centres. It may, therefore, be used gently very soon after an attack of hæmorrhage; and Dr. Allbutt, indeed, advises its cautious application from the time that the symptoms of central perturbation have passed away. The great relief often given by one application in a case of some standing like those above quoted make one error very clear to us, and that is the mistaken belief that the degree of the palsy is a measure of the amount of central mischief in apoplexy; and it makes it clear, moreover, that those writers are wrong who urge central applications rather than peripheral on the ground that to electrify the periphery is to be led away from the true seat of the disorder. It is absurd to suppose that a man takes up his bed and walks after a few days of faradism, because the faradism has affected his corpus striatum or its vessels. It is clear that some modification of nerves or muscles in the limbs themselves is produced. It would seem that, after a hæmorrhage, say, there is a tendency in the affected parts to rest in the hemiplegic state long after the centres are, in a measure, restored. There must be some perpetuated habit or state of innutrition which needs dispersion. The results of acupuncture in cases of muscles palsied by disease, lately published by Mr. Teale, are probably of a kindred nature, and often much resemble the effects of faradism in the manner of their appearance. The third case recorded above helps us curiously in this discussion. This man presented, what we so often see, a fore-arm recovered and an upper arm still palsied. How is this to be explained? Probably in this way, that an invalid tries to use his fingers and hand for little immediate wants from an early period of his illness; but he is not called upon so much to arouse his upper arm, which remains helpless accordingly. In this way may, perhaps, be explained the earlier recovery of the leg in some cases, as one of the patient's first hopes and requirements is to test his power of standing and walking. It is not until much later that he tries to move his whole arm in any vigorous or regular way. The same may be said of the voice, which often recovers early, and which is exercised and solicited with anxious hope from the first days of the illness. Of course much must depend upon the precise seat of the central mischief; but if it be, as Dr. Hughlings Jackson suggests, that each part of the limbs is represented in every part of the corpus striatum, we can understand that, on partial destruction of the centre, we should have to expect not complete circumscribed palsies, but a general loss of capacity throughout the limbs. Add to this the tendency of the voluntary organs

* It is often difficult to estimate slight losses of farado-contractility, as the reaction of the two sides often differs in health.

† Dr. Rutherford has done much to add to our experimental knowledge in these particulars.

* Irritation of branches of the fifth nerve upon the face with the dry pole of an induction-coil may set up serious intracranial disturbances.

to sink into habits of inaction, and we have some means of explaining their recovery on application of the faradic stimulus, without the necessity of supposing that the portion of the centre once destroyed is ever rebuilt. Nothing is more unlikely than that faradising the limbs can rebuild it. Finally, the same course of reasoning would lead us to anticipate that a recovery of this kind must always be incomplete: and this is so. These paralytics after faradisation never, or scarcely ever, recover entirely, but they attain a certain point beyond which there is no advance. Dr. Allbutt even thinks that the continued application of faradism when this point has once been attained is not only useless but injurious. In more than one case he has seen ground distinctly lost by pushing the treatment beyond this point of compromise; and he thinks that in the careful use of the interrupted current we have the best test for the amount of central mischief. It is clear from what has gone before that the amount of palsy is of little value as a test of the amount of central mischief, for in some cases, as in the case of Mrs. B., a bad hemiplegia may clear up so far as to show that the amount of central destruction is by no means great, and that the palsy bore an accidental rather than an essential relation to it.

ERRATUM.—In the previous section (Infantile Palsy, June 17, 1871), a confusion between the first and third persons was due to the omission of some marks of quotation.

THE DARLINGTON HOSPITAL.

CASE OF HYDROPHOBIA: DEATH: REMARKS.*

(Under the care of Dr. J. R. FOTHERGILL, Physician to the Hospital.)

J. N., forty years of age, a farm-servant, was bitten on July 13th, 1870, in the little finger of the left hand, by a stray dog, which afterwards proved to be mad. The wounds healed, and he remained in his ordinary health until Thursday, August 11th. Previously to this date, he had always enjoyed excellent health, and he was of industrious and temperate habits.

On the night of August 11th, he became very ill; he had little sleep, was extremely restless, and had severe rigors. He went out in the morning, still feeling ill and unfit for work, and fell asleep in the field on his hands and knees. During the afternoon he felt great thirst; and, on some water being brought, he found himself quite unable to drink it. He again passed a restless and sleepless night; and the next day (Saturday, August 13th) he was seen by Mr. Cockroft of Hurworth. The symptoms noticed on that occasion were loss of sleep and appetite, and change of manner. The patient said there was nothing the matter with him. Mr. Cockroft saw him again on Saturday, the 14th. He found him in bed. He was wild-looking and restless, and complained that he could not drink. When offered fluids, he had violent spasms, and respiration was difficult. Hyperæsthesia was well marked, and he was very irritable. He was then sent to the Darlington Hospital.

On admission, he was in a state of great nervous excitement, talking constantly, but connectedly; and, on being offered a glass of water, he appeared to tremble with fear, started back, and begged it should not be brought near him—complaining at the same time of great thirst. When Dr. Fothergill arrived, the patient was in bed. He was quite sensible, and able to converse, although there was much excitement of manner, and twitching of the facial muscles. He complained of pain in the little finger of the left hand, extending up the arm and over the left side of the chest. He said that he could not swallow fluids; and, when some water was offered to him, he shuddered and drew back, his chest becoming fixed, and his whole body appearing convulsed. When, however, he was induced to shut his eyes, and some water was put into his mouth with a teaspoon, he succeeded in swallowing it, though it produced tremors of his whole frame. In consequence of the distress produced by the sight of liquids, and as at the same time he could swallow them when he did not see them, and considering their ingestion as the first step towards relief, a long flexible tube was procured, and one end placed in a tumbler of water, carefully covered with a cloth. He was easily induced to place the other end of the tube in his mouth, and to swallow, though with some effort, about half a tumbler of water, with which he seemed pleased and refreshed. He was ordered to take water, beef-tea, and milk, through the tube; and to have a dose of chloral at bedtime. His pulse was 63, of good strength. The tongue was covered with a brown fur.

July 15th. He had passed a restless night, having slept about half an hour in snatches. He had taken through the tube about two tum-

blers of water, also a cup of tea and two eggs. He swallowed with less difficulty, but still with an effort; the rigidity of the chest when fluids approached him being well marked. He still complained of the pain in the left finger, up the arm, and over the left side of the chest; and also said (indicating his hyperæsthetic condition) that the ward was too large and lofty, and that the air felt very cold as it went down his throat and into his chest. Pulse 86; tongue moist, but covered with whitish-brown fur. As his bowels had not been moved, he was ordered an ounce and a half of black draught; and, to relieve the spasm, half a drachm of bromide of potassium every four hours.—9 P.M. His bowels were moved at noon. He took two cups of tea and two eggs about 4.30 P.M. He had passed a quiet afternoon, and said he felt better. He had passed ten ounces of urine during the twenty-four hours. Pulse 80; temperature 100.8 deg.

July 16th, 10 A.M. He had had several hours' sleep during the night, but with considerable excitement during the intervals. He had had eggs and beef-tea, and had fed himself with a spoon. At Dr. Fothergill's request, he took a tumbler of water in his hand, and, though slightly agitated at the idea of it, drank it off. He complained of numbness of his hands. Pulse 88, irregular; temperature 101.8 deg.—10 P.M. He had taken plenty of beef-tea and other food to-day. His manner was still excited. Pulse 96, irregular; temperature 101.8 deg. The bromide of potassium was discontinued. Stimulants were ordered.

July 17th, 10 A.M. He had passed a quiet night, having slept four hours. There was much less agitation, although the twitchings of the facial muscles continued. He still took beef-tea and eggs, but asked to be fed, instead of feeding himself. There was decided numbness of both hands, and inability to use them. He could raise them to his neck, but could not unbutton his shirt-collar. Pulse 92; temperature 100 deg.—9.30 P.M. He had passed a quiet day, almost free from excitement. There was no twitching of the facial muscles. He took food freely, but preferred to have it given. He still complained of the numbness of his hands. His memory was decidedly impaired. Pulse 96; temperature 100 deg.

July 18th, 10 A.M. He passed a restless night, having slept about half an hour. The twitching of the facial muscles had reappeared. His mind was confused and wandering, though he could answer questions rationally. The paralysis had extended to the lower extremities to such an extent that he could not stand or make any use of them. Pulse 92. Temperature 100.4 deg.—9.30 P.M. He slept about six hours during the day. The attendant stated that, when he awoke, he "sobbed for about half a minute, as if he would suffocate." There was no twitching. Pulse 88; temperature 101 deg.

July 19th. He slept at intervals, about an hour altogether. There was no excitement. The general paralysis was marked. He could feed himself or get out of bed, although his appetite remained good. There was muco-purulent secretion from both eyes. The tongue appeared morbidly red through a thin white fur. Pulse 84; temperature 99.8 deg.—9.30 P.M. He had slept two hours; there was no sobbing on awaking. He had no twitching of the facial muscles. The paralysis continued. Pulse 92; temperature 101 deg.

July 20th, 10 A.M. He had had many hours of sleep. His mind was wandering. The paralysis was still more apparent. There was increased secretion from eyes, and saliva ran out of the corner of his open mouth. Pulse 100; temperature 102 deg. The breathing was shallow.—9 P.M. He was much the same. He had slept most of the day. He refused both food and drink. Pulse 76; temperature 102 deg.

July 21st, 10 A.M. He passed a quiet night, and was much in the same state as yesterday, but unconscious. Pulse 120; temperature 103.4.—9 P.M. He appeared to be sinking fast. Pulse 116; temperature 103.4 deg.

July 22nd. He died about 10 A.M. A necropsy was made forty-eight hours after death. The head, spinal cord, thorax, and abdomen were examined. All the organs were congested, but were apparently otherwise healthy. The nerves of the bitten finger were examined, and were healthy.

REMARKS BY DR. FOTHERGILL.—The chief points of interest in the case appear to be, firstly, that by the use of a long tube with the fluids concealed, the patient was able to take them with great comfort to himself and with probable prolongation of his life; and, secondly, the length of time that he lived, and the mode of death. He died on the twelfth day. Having escaped death by spasm of the respiratory muscles, or by starvation, he died apparently from paralysis of the respiratory muscles. Should future experience prove that food and medicine can be administered in such cases by means of the tube, one step will have been gained towards the treatment of the disease.

* Read at the annual meeting of the Northern Branch.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 2ND, 1871.

THE NAVAL MEDICAL SERVICE AND THE PLYMOUTH MEETING.

THE medical officers of the fleet and naval hospitals at Plymouth showed a ready and warm courtesy on the occasion of the annual meeting of the Association at Plymouth which deserves our cordial acknowledgments, and will, we trust, cement more strongly the fraternal union which should exist between the Army and Navy Medical Services and the British Medical Association. When the arrangements were in progress for the reception of the Association, they entered into the general desire of the resident profession to meet the occasion with a spirit and liberality, which should adequately welcome the coming congress and reflect permanent credit on the locality. With this view, although not to be classed as permanent residents, they took their part in the guarantee fund and assumed a share in the pecuniary responsibilities incidental to the reception. Immediately before the meeting a special message was received from Sir Alexander Armstrong, the Director-General of the Naval Medical Department, one of the most energetic members of our Association, who was personally and intimately cognisant of those efforts by which the British Medical Association, under the immediate impulse of Dr. Markham and Dr. Stewart, secured for the service the Committee on pay and promotion of naval medical officers, which led to all the recent improvements. Sir A. Armstrong requested that the fullest facilities might be afforded for the members of the Association to visit the naval hospitals. Dr. Davidson, the Inspector-General in charge, Dr. Bernard, and Dr. Irwin, accordingly took measures to secure a reception for all members visiting the wards. The Committee of Council of the Association at its first meeting passed a special resolution inviting all the members of both services to assist at the meetings and receptions, and investing them, without distinction, throughout the meeting with the full privileges of honorary membership. This resolution was immediately printed and posted at the reception-rooms and hotels. In compliment to the two services, moreover, Inspector-General Smart, C.B., R.N., and Deputy Inspector-General Longmore, C.B., had been invited to accept the Vice-Presidency of the Medical and Surgical Sections respectively. Owing, however, apparently to some defect in the communications between the local officers and the representatives of the services, these respective and mutual attentions were by no means so thoroughly known on either side as it was desired they should be. It happened, unfortunately, that both Sir A. Armstrong and Dr. Smart, whose presence was confidently reckoned on, were unavoidably prevented from attending; and the medical officers of the services did not receive the timely intimation of the arrangements of the Association to receive them as honoured guests which would have secured their presence in

the numbers desired. Those of our associates who visited the Naval Hospital saw one of the earliest establishments in which the true principles of hospital construction were first appreciated and applied in this country, whence they have been copied into others, as Mr. Whipple demonstrated by the quotation from Tenon in his address. We have since gone beyond this model in many respects; and something might be done to improve the through ventilation of the pavilions by breaking full-sized window-openings in some of the party-walls, as has been done, for example, to remedy a similar defect in the much more recently constructed medical wards of St. Mary's Hospital, London. The practice in the wards is of the most advanced and scientific character. The admirable results attained by Dr. Bernard, when in charge of the surgical wards, by his intelligent and successful application of Mr. Lister's antiseptic methods, have already been published in the *Naval Medical Report*, and announced in these columns, and were specially mentioned by Professor Lister in his address. Dr. Irwin is carrying on this practice with, we understand, equally successful results. Very few hospitals in civil life can show such excellent results as are achieved in these wards by a strict adherence to antiseptic principles. In the treatment of some common but troublesome affections, the antiseptic method effects a saving of time which is valuable in all cases, but of which the precise value is more easily measurable in the public services than elsewhere. By opening buboes of the groin, for example, with antiseptic precaution, and employing with proper care the prescribed dressings, we understand from Dr. Irwin, it is found that further suppuration is arrested and cure very quickly effected. Dr. Bernard, in the medical wards, is carrying on an extensive series of sphygmographic observations, for which the frequent occurrence of cases of aneurism affords good opportunities. The clinical books of these wards are kept with admirable care and accuracy, and are being rapidly enriched with a fine series of graphic illustrations. The first batch of Netley graduates has arrived, and some are in practice at the Hospital. The Museum contains a few specimens of much interest, many of them recent; but it by no means adequately represents the pathological opportunities which are afforded by an institution such as this, where there occur, we believe, about three deaths in a week. Nor is it at all likely, or even possible, that it should do so, until a special officer is detailed for the post. The office of pathologist to this Hospital is one which would be most properly filled, under the direction of the principal medical officers, by some one of the more distinguished Netley graduates, who had received there an adequate training and had manifested a taste and fitness for pathological investigations. It would be an excellent opportunity for further training and exercise in pathological investigation. The Director-General of the Medical Department of the Navy will not need any argument to satisfy his mind of the advantages to the public service of the complete scientific training of his corps, and the propriety of the full utilisation of the material and resources of the establishments which he directs. At present, the Museum at the Naval Hospital at Plymouth is not worthy of the service or the country, and is only redeemed from insignificance by a few excellent specimens testifying to excellent operative skill and capacity on the part of naval medical officers. Besides placing the pathological department on a satisfactory footing,

there is some useful work to be done in reorganising the nursing. At present the female nurses or sisters of the ward, and the under-nurses or scrubbers, appear to be paid alike. The consequences do not appear to be satisfactory. A somewhat higher class of nurses might be secured, we think, with advantage, and perhaps without extra expenditure, by a better apportioning of the salaries; and by applying to the Nightingale establishment of St. Thomas's Hospital, an improvement in this part of the *personnel* might be effected which could but be advantageous to the patients and just to the medical officers. The general administration of the hospital would thus be on a par with the professional care of the patients, which is excellent.

We cannot conclude these brief notes of a short visit without a word of commendation for the baths, which are of white marble and excellently arranged. They are, we believe, a recent addition.

The medical officers of the fleet, the surgeons of the *Agin-court*, and Staff-Surgeon Wells, were equally courteous and warm in welcoming our associates, with the medical officers of the naval hospitals, and to all our thanks are due. While regretting that more was not made of this opportunity of drawing closer the bonds which unite our brethren in the services to their colleagues in the British Medical Association and in civil life, we may express the hope that some good may come of this brief opportunity for intercourse. The British Medical Association has already found opportunities of rendering the most important services to naval and military medical officers here and elsewhere. It would be desirable on all accounts that by joining the Association in greater numbers the medical officers should enter more intimately into the movement of medical life and science on shore, and avail themselves of the weekly opportunities afforded by the *JOURNAL* of exchanging thoughts, experience, and sympathies, with the great body of their common profession. It is our wish to cultivate the closest relations with our naval and military brethren, and to forward in every way their professional, social, and scientific interests.

THE GEOGRAPHY OF PHTHISIS.

THE investigation of the geographical relations of disease has of course a special importance in indicating places of refuge to which we may direct those suffering from diathetic predisposition to constitutional affections. Localities traditionally free from scrofula or from phthisis presumably enjoy physical advantages which have procured them that immunity, and offer prospective advantages of residence to persons who have reason to fear attack, or in whom already symptoms of constitutional taint or individual susceptibility are already developed. The study of these physical conditions has a yet wider scientific and therapeutic importance. It is possible that by a scrutiny of the climatic conditions, of the soil, elevation, water-supply, diet, or modes of life, characteristic of the favoured regions and of their inhabitants, we may discover facts bearing upon the general causation of these maladies, and leading to a clearer perception of their pathology and the means of arresting their extension in places where they are prevalent. Dr. Charlton of Newcastle, in an interesting paper, of which we have recently received a copy, but of which only a limited number have been printed, has discussed some of the peculiarities of those regions where phthisis is unknown, and has pointed out some curious facts worthy of further study. The following countries are enumerated as being undoubtedly free from phthisis: Iceland and the Faroe Islands; the Kirghis Steppes of Russia; and the elevated plains of the Andes in South America. In Shetland it was rare until the beginning of the present century. Analysing the conditions of life

and climate, he points out that in Iceland it is certainly not the cleanliness of the people, their diet, or the purity of the air in their dwelling-houses, that produces the immunity in question. The Iclander washes as little as the Norwegian peasant, who is said to come into contact with soap and water but twice in his life—viz., at his birth and at his decease. The Icelandic dwellings are models of unwholesomeness; and the food, consisting of stock-fish and rancid butter, is pre-eminently difficult of digestion. In Faroe, the sanitary condition is described as little better. The houses are not quite so nearly subterranean dwellings as those of Iceland; more milk, perhaps, is drunk, and more flesh-meat is eaten, but both fish and flesh are preferred in a putrid state. Few of the Iceland or Faroese houses are situated much above the sea-level. In the Kirghis deserts a nomad population of nearly a million souls lives entirely free from phthisis. These deserts are actually one hundred feet below the sea-level—a most untoward circumstance for those who maintain that phthisis is never to be found at a certain elevation. It has been suggested that it is the diet of the Kirghese which preserves them from phthisis. Their principal drink is the fermented mare's milk or koumiss, an agreeable subacid and slightly intoxicating beverage; and to this the immunity from pulmonary phthisis is ascribed. The advocates of this theory would have been greatly delighted, says Dr. Charlton, had they known that in Iceland and Faroe the favourite drink is a partially fermented liquor, named *blanda*, and that, in proportion as this drink has been left off in Shetland, where we often enjoyed it forty years ago, so has phthisis increased in the latter islands. In accordance with this theory, koumiss establishments were formed near St. Petersburg, and even in Germany; but after some years of trial they were relinquished, and it was decided by the medical profession of Russia that, to profit by the koumiss treatment, it was necessary to go and drink it in the Kirghis desert. There is no doubt, however, in Dr. Charlton's mind, that, like cod-liver oil, koumiss is a most wholesome and fattening and beverage, that, unlike cod-liver oil, it seems to rarely disagree with the weakest digestions.

No climatic question has been recently discussed more vigorously than that of the influence of high elevation on the arrest of phthisis. Dr. Charlton analyses some of the evidence on this subject. Brehmer maintains that, in Northern Germany, phthisis hardly exists at an elevation of 1,700 feet above the sea, but that the line of safety rises to a higher point as we go southwards. He has himself high-level stations for consumptives, at about 1,800 feet above the sea, in North Germany. At St. Moritz and elsewhere in the Engadine, English consumptives are now braving the climatic severities of "an almost arctic winter", at stations upwards of 5,000 feet above the level of the sea. At the Andes, on the high-level plains of Carmarca, 8,000 to 10,000 feet above the sea-level, nearly upon the equator, phthisis is unknown. It is common along the low coast-line of Peru; but the better classes there find safety in flight to those plains when the early symptoms are developed. Should they return to live in Lima, the disease may recur; but on the high-level plains it makes no progress. Brehmer believes that phthisis is mainly ascribable to a want of vigour of the circulation; and he ascribes the beneficial influence of high elevation to its powerfully tonic influence on this function. The equal immunity enjoyed by the residents at the low level of the Kirghis steppes he has not explained. He accounts for the like privilege of the Icelanders by the supposition that they have naturally an accelerated pulse. Unfortunately for his theory, says Dr. Charlton, it was pointed out more than sixty years ago, by a yet living observer, that the pulse of the Icelanders is peculiarly slow.

After all, therefore, our author concludes that we cannot really at present account for the immunity of certain localities under such very opposite conditions. A drink of half-fermented whey, the koumiss, which was specially introduced to the notice of members at the recent meeting at Plymouth, is a leading and peculiar article of diet common to the Icelanders, the Faroese, and the Kirghese; but it is unknown on the high levels of the Andes. We have yet to learn how far the immunity of the high lands of America is borne out by the life-history of the in-

habitants of the newly discovered high lands of Central Africa. Dr. Charlton's conclusions are that, while we admit the probability of the influence of the fermented drink, the blanda and koumiss, among the Icelanders, the Faroese, and the Kirghese tribes of Russia and Tartary, we cannot deny the good that is effected by a residence at the altitude of 2,000 feet and more for consumptives. It is possible, he thinks, that phthisis may be fostered by some vegetable miasm or sporules which may not exist at great elevations, in the dry sandy steppes of Kirghis Tartary, or in the bitter cold of Iceland and Faroe. We can imagine an increase of ozone at great elevations; we can hardly hope to find it so in the steppes of Tartary. Here we begin to turn the leaves of pages yet blank in the book of knowledge, and which await the superscription of some future successful student of our art.

SIR R. MURCHISON has received from Dr. Kirk, British Consul at Zanzibar, a letter, in which he states that Dr. Livingstone is moving slowly but safely towards the sea-coast.

DURING the week from July 30th to August 5th, there were 156 deaths in Florence, of which 24 were from diphtheria (which has been epidemic there), 8 from small-pox, and 7 from typhoid fever.

THE mortality in Paris during the week ending Friday, August 25th, was 823. There were 79 deaths from diarrhoea, 16 from cholera, and 6 from cholera.

THE Library of the Obstetrical Society of London will be closed from Thursday, September 7th, to Wednesday, September 20th, both days inclusive.

IN the *Court Circular* of Sunday we read: "The Queen has been suffering from severe sore-throat, headache, and grave general illness. Although greatly better, Her Majesty was not sufficiently recovered to attend Divine service."

IN his last quarterly report, the Registrar-General stated that, of all the principal English watering-places, Folkestone had the lowest death-rate. It also appears that for ten years past Folkestone has held the same enviable position, the mortality having averaged 16.4 per 1,000.

THE Norwich magistrates have committed for trial for manslaughter a midwife named Sarah Martin, for causing the death of a woman, whom she was attending in her confinement, through being intoxicated.

AT the West Derby Workhouse, Liverpool, in the year, with a population of under a thousand persons, as much as thirteen hundred pounds' worth of excisable liquor has been consumed under medical certificate. A committee has been appointed to inquire into the matter.

THE Austrian Ministry has declined to comply with the request of the College of Professors, supported by the Consistorium of the University, that Professor Karsten should be suspended from taking part in the examination of candidates for the degree in medicine.

A SOCIETY for the relief of persons apparently drowned—for the same purposes, in fact, as the Royal Humane Society of this country—has lately been instituted in Leghorn by a philanthropic physician of that place, Dr. Giacomo Ancona. This is the first institution of the kind which has been formed in Italy.

IN accordance with the will of the late Dr. Lacaze, a prize of 10,000 francs is to be awarded by the Faculty of Medicine of Paris every second year to the best work on phthisis and on typhoid fever alternately. The first prize will be awarded at the end of the academical year 1871-2, for the best work on phthisis. Essays (with a distinguishing motto and the author's name in a sealed envelope) must be sent in before July 1st, 1872. The prize is open to foreigners.

AN additional contribution of £1,000 has been made by "G. R. F." to the funds of the Metropolitan Convalescent Institution, Walton-on-Thames, Mitcham, and Hendon.—Mr. John Stone has made a third donation of £100 to the Worcester Infirmary.

FOOD FOR MARCHING REGIMENTS.

COLONEL SHAKESPEAR, with a great appreciation of the evils of a com-misariat including meat killed in the morning and boiled hard for an hour in the afternoon, suggests that Australian tinned mutton, warmed up with potatoes, makes an unexceptionable hunter's stew, and affords a ready means of providing a rapid camp-meal at half an hour's notice for the Berkshire campaigners. For campaign purposes, the virtues of the Swedish felted cans have never yet been properly utilised. With these, half an hour's fire in the morning keeps the food slowly stewing on the march, and supplies a tender and savoury meal, ready at the halt.

METROPOLITAN PITFALLS.

THE epidemic character of particular kinds of accidents has been a frequent subject of casual comment; and it is sometimes difficult to accept the assurance of statisticians that such accidental accumulations are only apparent, and not real, aberrations in the operation of cyclical laws. Just now we have an epidemic in the metropolis of cesspool-accidents, from the rotting of imperfectly covered and unused cesspools, which have become dangerous pitfalls. One fatal accident of the kind at Woolwich has been the signal for others less serious, but sufficiently disquieting, and for a general probing of suspicious holes in gardens with clothes-props and other similar domestic implements. The result has been, we read, that a large number of communications have been addressed to the parish authorities all over the metropolitan district, from which it is inferred that London is honeycombed with secret wells and cesspools, covered, but left insecurely protected, since the completion of the main drainage, and of which the brickwork and the foundations are rotting and giving way. Here is a piece of work for the Metropolitan Board of Works—when its autumnal holiday is over. Meantime, we hope that insecure well-covers and rotting brickwork will be kind enough not to "give way". Our metropolitan, no less than our imperial legislators, require an autumnal relaxation; and we must trust to the civic and suburban cesspools to show in the interim a proper firmness.

SOMETHING ROTTEN.

THE doctrine *Qui facit per alium, facit per se*, is most properly applied to those offenders on a large scale who vend wholesale poison for the million at a temptingly low price, in the shape of rotten fruit, which costermongers try to retail to the poor. It is no moral excuse that the fruit is openly sold to the costermongers as damaged, and at so low a price as one hundred and five melons for fifteen pence. These said melons, fair to the eye, but utterly putrid and quite unfit for food, were subsequently, in the case which came under notice last week at the Mansion House, vended in the street at a shilling a-piece. The "openness" with which the damaged and putrid fruit was sold by auction was rather an imputation on the sanitary inspector of the City, whose information seems to be sadly at fault on the subject, than an excuse for the sale. One might have thought that the notorious fact that the sale by itinerant venders of damaged fruit in the streets, as a source of danger especially to be guarded against in seasons such as this, would have turned the attention of the inspectors to the sources of supply. They seemed, however, to have been singularly inert; and it is to the public spirit and intelligence of a merchant named Pagnani that we are now indebted. The costermonger, Henry McDowell, who was arrested for selling the putrid melons, was with difficulty restrained from offering himself a sacrifice to his disbelief in septicity. At the last, he still wished to eat some of his own rotten fruit. If the auctioneers would make the same offer, and the inspector were induced to share the choleraic feast, a severe form of justice would be dealt out. But pomological suicide is not within the permitted punishments of the

English law; and, as the costermonger was not allowed to satisfy his sense of honour and carry out his east-end notions of the *hari-kari*, moderate fines or judicious reprimands will probably satisfy the further ends of justice; and we can only wish the inspector a "happy despatch" in preventing the further distribution of rotten fruit, purchased at prime sources at a nominal cost; and to this same end we call the attention of officers of health and their depending inspectors throughout the country.

DEATH OF A DOUBLE-HEADED CHILD.

WE read in the *Boston Herald* that this remarkable phenomenon, which arrived in this city a few days previously and was shortly to have been exhibited to the public, died on July 19th. The child, a girl, had two heads, four arms, and two legs, upon a single body; and the two portions of the body were so intimately connected that the death of one rendered that of the other inevitable. The child had enjoyed excellent health from her birth, nine months ago, until within two weeks, at which time one-half exhibited signs of illness. This, however, was but temporary. It recovered and was bright and playful. Soon after reaching Boston, the other half was taken sick, and died at five o'clock in the afternoon, the other surviving until eight o'clock in the evening. The spectacle is described as "strange and unparalleled. Upon one end of the body reposed the head of the dead infant; upon the other that of the live one with its eyes still bright and curious and its lungs in full breathing order. All that medical aid could accomplish was done, but it was found unavailing. The child died in the presence of its parents. The corpse presented the appearance of two infants asleep. Apparently they escaped the ordinary suffering incident to death, for the countenances had the expression of repose. Several physicians were desirous of having the body examined, but it was doubtful whether the parents would consent. They reside in Monroe county, Ohio, and carry on a farm. They have other children, although none of these have exhibited any unusual development."

SAFETY FOR SEASIDE-BATHERS.

THE terribly frequent and fatal accidents attending sea-bathing this year ought not to pass without a serious effort to arrest so distressing a loss of life in the future. We cannot think that all is done that ought to be done for the security of bathers when a rickety tub on wheels is pushed down to the edge of the surf, and inexperienced bathers are left to the mercy of the undertow and to the accidental exploration of deep pools or dangerous currents. Granting that most of these accidents are due to rashness or inexperience of the bathers, measures ought to be taken by the local authorities to save bathers from the fatal consequences of error in enjoying the healthful exercise which tempts thousands to the seaside towns, and in many instances constitutes the chief sources of prosperity to those towns. We believe that the local authorities of these towns would find it a proper and useful advertisement, if they could announce that one or more boats were stationed off the bathing-places, with proper means of rendering assistance, if required by accident; and in every place full directions should be prominently posted at the bathing-stations, warning bathers, experienced and inexperienced, of the precautions useful to adopt, the course proper to pursue, and the special sources of accident to be avoided. Such a boat and such directions are always to be found on the Serpentine during bathing-hours, and have been the means of saving many lives which would otherwise have been sacrificed.

ENGLISH QUARANTINE.

IT is of very little use stopping ships and disinfecting their holds, if the crews and passengers cannot be prevented from landing and disseminating whatever contagion-germs they may happen to bring with them. At the meeting of the Liverpool Health Committee, it was a subject of complaint that no local authority had such power. The Committee had to consider on Friday a communication from the Government, reminding them that in 1866 cholera was introduced through foreign immigrants into Hull and other eastern ports, and asking them to

guard against such importation under present circumstances. They have replied to the Privy Council by alleging that no power exists in any local authority to restrain immigrants from going about the town, or to detain them in quarantine on suspicion of cholera or choleraic diarrhoea. In the recent evidence given by the Medical Officer of the Privy Council before the Royal Sanitary Commission, it was expressly stated that quarantine was simply a political and commercial expedient, intended to meet the prejudices of other foreign trading ports, and was not so organised as to have any sanitary or preventive value for this country. Under present circumstances, it is not without interest to know whether English quarantine is still a purely commercial expedient, as then described by Mr. Taylor, Mr. Helps, and Mr. Simon; and to ascertain whether it is hygienically a reality on which we can in any degree depend, or a sham by which we must not allow ourselves to be blinded. Our present information as well as past experience points in the latter direction.

PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.

THIS hospital had a narrow escape of being burnt down on Thursday of last week. By the efforts of the troops and borough fireman, the flames were fortunately confined to the laundry of the building.

A SENSIBLE RECOMMENDATION.

AT an inquest at Upper Norwood, touching the death of John Burman Messenger, aged nearly eight years, who died from drinking vitriol out of a ginger-beer bottle, the coroner said he thought some Act of Parliament should be introduced in order to prevent chemists from supplying deadly poisons without labelling the bottles, so that even the attention of the youngest might be called to the fact. He was sorry to say that several cases of neglect in such matters had lately come under his notice, and he trusted that the next session of Parliament would be productive of a Bill specially framed to meet the case. The jury recommended that some steps should be speedily taken to prevent the sale of deadly poisons in unlabelled bottles.

SANITARY REGULATIONS IN THE CITY OF LONDON.

THE City Commissioners of Sewers, with other public bodies, have been asked to assist the Government officials in their endeavours to prevent, if possible, the introduction of cholera into London; and there is reason to believe that some new and stringent regulations, especially with regard to shipping, will shortly be made and publicly notified by the Privy Council. In the meantime, the City Commissioners have, by a widely circulated notice, drawn the attention of inhabitants and owners of houses within the City to the various legal provisions made with a view to prevent nuisances, and consequently disease. It may not be uninteresting to give some of the more important of these provisions, premising that the dustmen in the employment of the Commissioners have been instructed to call at every house at least twice a week to remove dust, rubbish, and refuse of all kinds; and daily to clear out all public dust-bins, and cart away the contents. Any owner or occupier allowing stagnant water to remain, or the water-closet to overflow, is liable to a penalty of £2; and penalties may also be imposed upon persons either neglecting the sanitary orders of the Commission, refusing to discontinue any noisome trade after notice to do so, permitting common nuisances in houses, or keeping live cattle in cellars. Butchers or others are liable to a fine of £20 for exposing diseased meat, fruit, fish, or other provisions; and the same may be seized and destroyed. The Commissioners recommend families freely to use chloride of lime and carbolic powder in their houses, and request that every where the utmost cleanliness should be observed in respect of the condition of areas, basements, cellars, kitchens, and all damp and dark places. They also warn people not to allow the accumulation of rubbish, and to be careful as to the state of their water-butts and cisterns. They add that it is not only necessary that the inspectors should diligently perform their duties, but also that the owners and keepers of houses should be more than ordinarily careful in the management of their property.

SMALL-POX IN SANTA CRUZ.

THE above town is just now entering upon a condition from which we in this country are just emerging; viz., an epidemic of small-pox. We have not many particulars of the matter, but it is reported that small-pox has been for some little time prevalent in Santa Cruz, though we cannot say for certain that it has yet assumed an epidemic form. There is one thing, however, quite certain, and that is, if the vaccination is not promptly and properly looked after, the ravages of this disease will be very great.

IMPROVED WATER-SUPPLY.

THE Grand Junction Water Company have offered, through Dr. Lankester, the Medical officer of St. James's parish, to supply standpipes at all courts, lanes, alleys, and places where imperfect water storage is provided, and to provide an extra supply of water for flushing. The inhabitants will thus be enabled to draw the water especially for drinking and cooking purposes directly from the Company's mains, instead of the common receptacles, which are likely to be tainted. This is a timely and excellent offer. The Company will bear the expense, and their example deserves to be noted and followed.

THE HEALTH OF MINERS.

AT the last annual meeting of the Royal Cornwall Institution, a paper was read on "The comparative health and longevity of Cornish miners", by Mr. Robert Blee. In 1847 the Royal Cornwall Polytechnic Society published in its fifteenth report a paper on the health and longevity of the mining and other populations of the Redruth Union. The tables accompanying that paper bore evidence of the great extent to which the health of the mining population had been affected during a period then not long preceding, by the labours in which they had been engaged. In the quarter of a century which had nearly expired since that paper was written, much good had been done by the society, and by isolated companies of adventurers, in the hope of lessening the dangers of the miners' occupation. Mr. Blee had directed inquiry mainly to three points, as in the paper read in 1847, viz., the proportions in which miners died at different ages, the diseases of which they died, and the comparative number of fatal accidents which had occurred among them, taking the four principal mining parishes in the union—viz., Redruth and Illogan, Camborne and Gwennap—for a period of ten years from January 1860. On the whole, the children of miners did not show a rate of mortality very different from those of other classes. In Redruth and Illogan, the infant children of miners died in somewhat larger proportions, while in Camborne and Gwennap the difference was in favour of the miner. Miners of feeble frame or peculiar susceptibility to disease very early succumbed to the fatal influence of their occupation. Twenty-eight per cent. of the miners registered had died between the ages of 10 and 30 years of age, and of non-miners only 18 per cent. had died between those ages. Between the ages of 40 and 60 years, the difference was largely increased, miners dying at that period in the proportion of 36 per cent., while for other males the proportion was only 20 per cent. Miners living to the age of 70 were 9.07 per cent.; men of other occupation, 31.06 per cent. In the two periods 1847 and 1871, it was shown that, whilst up to 50 years of age fewer miners now died than died twenty-five years ago, now many more died at more advanced ages. He concluded that much of the improvement in the working classes was due to the increase of wages, and the lessened price of bread and other necessities of life. Miners died in immensely larger proportions from disease of the chest than other classes, namely, 49 per cent. against 27 per cent.; and the protection from this cause of death, most imperatively required, seemed to be efficient ventilation, improved modes of ascent from the depths of the mine, and careful protection from the great and sudden changes of temperature. It was shown that out of those who were accidentally killed, 70 per cent. were under 29 years of age, and one-half of these were youths 13 to 19 years old. It was a question whether miners were sufficiently remunerated for the perpetual risk of life and limb they encountered; but that could only be satisfac-

torily determined by more minute investigation than was generally given it. The manner in which miners were paid was chargeable with much of the disadvantage to health under which the men earned their bread. A man, on commencing work, had to labour two months before being entitled to any pay. He was thus often compelled to purchase his goods for those two months, and too generally in perpetuity afterwards, on credit. He condemned the practice of paying men together in bank-notes, which caused them to adjourn to a public-house to change the money, and thus were tempted to spend it. While thanking the Royal Cornwall Polytechnic Society for what they had done for the advantage of the working miner, he begged them not to think that they had already done all that might be done for his benefit, and asked them to continue their exertions on his behalf. In the discussion which followed, Mr. Hill said the adventurers were always desirous of doing full justice to the miners; and if this was alleged to be not so, perhaps they would get some of those scenes which had disgraced the north of England. He spoke very highly of the conduct of the Cornish miners now as compared with years ago. Mr. C. Fox said the last return showed that there was a death every other day from the mode in which the men were raised from the pits. Captain James, as a miner, spoke highly of the miners' position now, and denied that they were dissatisfied. The President praised the conduct of the Cornish miner. They should be careful to invite in no way the Legislature to interfere in what was unnecessary, and in what was not absolutely required, at the expense of the adventurers.

WHOLESALE VACCINATION-PROSECUTIONS AT BRIDGWATER.

LAST week there were fourteen vaccination-prosecutions brought before the county magistrates at Bridgwater. The authorities very wisely had selected a case, as an example, from each of the neighbouring parishes, so that the large district of Bridgwater was represented, so far as the unvaccinated are concerned, at the bar of the petty sessions in the borough town on Thursday last. Out of the fourteen cases, eight were condemned in costs, and two in fines and costs (the former were six-pence each); five were dismissed, and one was adjourned. The effect of the summons was to stir up the parents or guardians of the children to get them vaccinated before the summons became returnable. By so doing, they saved the fine, and only had to pay the costs. The three cases that were dismissed were those in which the medical officers were proved not to have given certificates, although the children had been vaccinated. The clerk thought that these gentlemen should be made to pay the costs. A person in court made the sensible remark, that a child is not *legally vaccinated* until a certificate has been given that it has been so successfully. There have been twelve deaths from small-pox, according to the last quarterly returns. The guardians are still haggling about the expenses of a separate hospital, and are pursuing a policy which has been from the first the cause of the extension of the epidemic into the neighbouring parishes. In case of the invasion of an epidemic, would it not be practicable to pitch a tent as a temporary hospital until a more durable structure could be secured or erected? In case of a hostile invasion of another kind, the volunteers would have to practise this kind of drill. During a severe epidemic of jail-fever which broke out two hundred years ago in Bridgwater, those not attacked encamped on the neighbouring hills for many weeks, not returning until the bill of health was clean in the town.

EPIDEMIOLOGY OF SMALL-POX.

DR. DE RENZY states that in the Punjab, where small-pox is always raging, and slays its victims in thousands, our mortuary statistics show that the mortality from it begins to decline every year in June, the decrease in the number of deaths being steadily progressive in July and August. In the month of September or early in October the disease reaches its *minimum* of destructiveness. The deaths show a marked increase in November, and the increase continues, but somewhat unsteadily, in the succeeding months up to the end of May or beginning of June, when, as already stated, it attains its *maximum*. The cause of the fluctuation is altogether unknown.

THE MIDDLESEX HOSPITAL.

MR. GEORGE LAWSON has been appointed Extra Surgeon to the Middlesex Hospital; and Mr. Henry Morris to the office of Assistant-Surgeon, rendered vacant by the resignation of Mr. Henry Arnott. By Mr. Lawson's promotion, a vacancy as Assistant-Surgeon will occur.

PROSECUTIONS UNDER THE VACCINATION ACT.

A MAN named Tarr has been brought before the magistrates at Manchester, charged with neglecting to have his child vaccinated. He alleged that one of his children had been poisoned through vaccination, and he refused to become a party to "murdering" the other. The magistrate declined to discuss the wisdom of the law, but adjourned the case for evidence as to whether the child was in a fit state for vaccination.—Mr. John Pickering, a town councillor of Leeds, and a member of the Board of Guardians of the Leeds Union, was summoned before the magistrates sitting at the Town Hall on Monday last, for not having had his child, who was born on December 11th, 1869, vaccinated. He was ordered to have the operation performed within fourteen days. He had previously been fined three times.

THE CORONERS OF MIDDLESEX.

THE Home Secretary has lately forwarded to the Middlesex magistrates an instrument under his hand, fixing the salary of Mr. Bedford, the coroner for Westminster, at £474 : 6 : 2 per annum. The Chairman said the amount fixed was that recommended by the justices. The Accounts and General Purposes Committees submitted a report showing the expenses which the coroners had incurred between the 1st of July and the 12th ult., and recommending that the charges made be paid. Captain F. B. Morley moved the adoption of the report, and pointed out that, whereas Mr. Humphry held twenty-nine inquests more than Dr. Lankester, his expenses were less by £69 : 15 : 6. However, by law the magistrates had no option but to pay the money. The motion was agreed to.

ADVICE TO ST. PANCRAS.

A PERVERSE fate affords some of the St. Pancras guardians only too many opportunities to commit themselves. They are clearly unfortunate in their selection of officers, and, with whatever good intentions, unable to keep order or discipline in their establishment, or to procure satisfactory treatment of the inmates. According to the evidence before the coroner, the nurses employed are neither sober, trustworthy, nor attentive to the sick. They give medicines that are not ordered, and contrive to convert a paralytic old man into a gasometer by untimely chemical decomposition of chalk in his intestines; put on mustard poultices on Thursday when they are ordered for Wednesday; fail to make their rounds in the wards; are found at night, "not sober," in an easy chair, when they ought to be attending to ailing patients; and, while the patients are suffering from this neglect, and waiting for the inebriate night-nurse, they are enlivened by the screams of Mrs. Macintyre when beaten by her husband, the casual ward porter, at two o'clock in the morning. It is satisfactory to find that the porter was "admonished"; but it is by no means reassuring to learn that the chief anxiety of one guardian was as to the preservation of nurses reported for neglect, inebriety, crazy conduct, and ribald conduct. Nor is it at all surprising that the General Purposes Committee is unable to control and regulate properly this large establishment, when we find its chairman sitting officially at the Board, so little able to command himself as to allow himself to provoke by shocking insult an officer giving evidence, and to employ epithets so gross as "liar" and "coward". It is unnecessary to say that the circumstances disclose not the faintest justification for such charges but rather the contrary; for, whatever were the provocation, the employment of such language by a person sitting in an official capacity at a public board can on no grounds be defended. We heartily trust that, for its own sake, the General Purposes Committee will require its chairman either to offer a most ample apology for his disgraceful conduct, or compel him to withdraw from a

position which such breaches of propriety degrade and scandalise. We have the cause of local self-government too much at heart not to grieve sincerely at such evidences of incapacity and want of decency. They tend seriously to compromise the promise and usefulness of institutions which every Englishman must desire to see purified, elevated, and extended. The better part of the guardians of St. Pancras assuredly cannot be insensible to the degradation which such conduct as this brings upon every man belonging to the Board. It is for them to insist upon reparation. Meantime we venture to advise Dr. Ellis not to yield to the irritation of provocations, but to pursue an uniformly conciliatory though firm course, calculated to make the guardians respect him and themselves.

STATISTICS OF OPERATIONS.

MESSRS. WALTER WHITEHEAD and S. M. Bradley of Manchester are at present engaged in a statistical work of some magnitude and importance. They are occupied in collating statistics of British surgery; and it is their purpose to issue returns every year of all the operations, including obstetric and ophthalmic surgery, performed in the public medical charities of the British Empire. An endeavour is also being made to secure returns from some foreign sources—Paris, St. Petersburg, Vienna, Berlin, and a few American hospitals, so as to draw a comparison between the results of surgery in different countries. It is also intended to obtain meteorological charts, and trace the connexion, if such exist, between vicissitudes of temperature and barometrical pressure with the death-rate. Comparisons will also be made between the results obtained in town and country hospital practice. The labour of collecting and analysing such statistics will be considerable; but, if successfully carried out, it will obviously be very valuable; and it is to be hoped that the work on which they are engaged will not be hampered by any want of response on the part of the authorities to whom they apply for returns. They purpose issuing blank forms, with full particulars of the nature of the returns which they require, to every public charity throughout the kingdom; and hope to publish the collated results on the 1st of May in each year. The first contribution will appear in the forthcoming number of the *Manchester Medical and Surgical Reports*, of which these gentlemen are the editors.

A REMARKABLE CASE.

UNDER this title the *Times* publishes the following.

A very peculiar case, which has baffled several doctors, and which in a strange manner shows how life can be prolonged without anything in the shape of ordinary nutrition, has just come to light at a place near Preston. In the fold of Ennell-lane, which closely adjoins the village of Walton-le-Dale, and which is about a mile and a half from Preston, there is a cottage wherein for three years a young woman has been lying bedridden, and for between one and two years has had nothing to eat. Her name is Ann Riding; she is thirty-three years of age, and resides with her aunt. Prior to being taken ill, she was a strong, healthy young woman, never losing a day's work, and was employed as an operative at the mill of Messrs. Horrocks, Miller, and Co., Preston. Shortly after sickness set in she left work, was compelled to take to her bed, was medically attended, and for three years has been gradually sinking. Several doctors have at times attended her, but none of them have been able to give her any substantial relief; and six months ago remedial operations were abandoned, and the case left to itself, the idea of the aunt being that the "Almighty had to do with it", and that it was useless continuing to incur expense for medicines without any hope of a cure. For sixteen months the young woman has had no food at all, the only thing she could bear being a drop of water with which to moisten her lips. She is frequently asked if she will not have food, but always refuses it: she had no desire for it, and how she has for such a long period existed without anything possessing the least affinity to meat is a mystery. She is conscious, but very weak, gets a little sleep, and cannot bear a lighted candle in the room at night-time. It is supposed that she is suffering from abdominal atrophy; but the exact nature of the case is not positively understood, and it puzzles every one who is made acquainted with it, and especially when it is recollected that for a year and four months she has not had as much meat and drink as would have been requisite to sustain an infant a single day. The relatives in charge of the young woman are humble, honest people, and make no "show" of the case, which is hardly known in the district.

A CORONER'S PRECEPTS.

IN a recent and most distressing case of child-murder, the coroner held an inquest, and, on his own authority, ordered a medical examination of all the women who lived in the house where the crime most probably occurred. All were to be examined, though the state of one only could give ground for suspicion. A writer, who justly comments upon this extraordinary proceeding, observes that he found, however, two medical men to carry out his precepts, which seems rather extraordinary; the police also helped him by bringing back to the house a person not in regular custody. The coroner's ready mode might be an effectual one, but it was such as no man in this country had legal power to use. The medical gentlemen, no doubt, believed the coroner's precepts to be peremptory, but in obeying them they were from first to last placed in a most distressingly false and painful position.

THE REGISTRAR-GENERAL'S CHOLERA-PRESCRIPTION.

THE Registrar-General's last weekly return of births and deaths has appended to it some remarks on the treatment of cholera more startling than trustworthy. The Registrar-General, not content with advising that in all cases treatment should be applied early, informs the public that his own opinion is in favour of a repressive or astringent treatment of diarrhoea, notwithstanding his admission that in medicine various theories prevail, and that cathartics have been commended by some eminent physicians. So long, however, as eminent physicians differ upon this important practical question, the Registrar-General might advisedly abstain from attempting to cut the knot by an authoritative expression of opinion. The incompetence of this great statistical authority to deal with a purely medical question is shown by the following statement in his report with reference to the choleraic discharges. He says: "The serum escapes with great velocity, and, when once out, is as difficult to replace as the blood from a bleeding wound." Now, it is perfectly well known that the ordinary choleraic discharges, so far from consisting of blood-serum, which is a highly albuminous fluid, are composed mainly of water, with a very small proportion of organic matter. Thus an erroneous statement as to the character of the discharges and their resemblance to loss of blood is actually made the means of terrifying the public into the adoption of a mode of treatment which some high authorities believe to be highly injurious, inasmuch as repressive drugs retain within the system the poisonous sewage-materials with which the air and the water, and even the patient's blood, are known to be contaminated. Among those who differ from the Registrar-General is a pathologist and physician of perhaps equal authority, whose views we recently solicited, and obtained the opportunity of placing before our readers—Sir Thomas Watson. The hundreds of parents who are weekly losing their children from diarrhoea will derive small comfort from being told by the Registrar-General that they have lost them "chiefly because the cases are not treated in their early stages". The tendency of this official statement will be to bring unmerited discredit upon those medical men who, having been called in early, have failed to cure their patients. If this great statistician were a practising physician, he would know, from painful experience, that no cases are more difficult to treat successfully than cases of infantile diarrhoea in large towns. The disease is excited and perpetuated by the breathing of impure air, and in the majority of cases a cure can be effected only by removing the patient from the poisonous atmosphere of the town to the purer air of the country. A natural result of the Registrar-General pronouncing dogmatically upon medical questions, and prescribing what, upon most insufficient evidence, he believes to be a valuable preventive drink, is, that one of his readers publicly requests "that a receipt for some simple and trustworthy remedy should emanate from the same source, and be published." This writer evidently believes that the Registrar-General is a high practical medical authority, which, with all due respect to him and his most useful office, we venture to say he is not. If any authority can properly be asked to make public recommendations as to treatment, it would be the Royal College of Physicians. In

1866, a Committee of the College was requested by the President to undertake this duty. They took much trouble about their anxious and responsible task, and felt much greater difficulty in carrying it out than the Registrar-General finds. Their report was a compromise, evidencing a deep distrust of cut and dried prescriptions such as are now being issued from Somerset House.

FEMALE MEDICAL STUDENTS.

MEDICAL pursuits appear by no means to indispose the female mind to matrimony, or to terrify wooers. One of the *septem contra Edinam* is about to better the example of her metropolitan leader, and will be shortly married, while still a student of medicine.

THE NEW METROPOLIS WATER ACT.

THE object of the statute lately issued is to make further provision for securing to the metropolis a constant supply of pure and wholesome water. It is with the recited Act (15 and 16 Vic., c. 84) to be construed as one Act. "From and after the passing of this Act (Aug. 21), every company shall on Sundays, as on other days, supply sufficient pure and wholesome water for the domestic use of the inhabitants within their water-limits." After eight months from the passing of the Act, every company, when required so to do in the manner directed, is to provide and keep throughout its water-limits a constant supply of water for domestic purposes, and make such water reach the top storey. After six months from the passing, the metropolitan authority may make application for a constant supply within such district; and, when not provided, an appeal is given to the Board of Trade. There are various regulations set forth in the statute, which is to be published; and penalties are to be recovered for non-compliance. The companies may require owners and occupiers to provide proper "fittings", which term includes communication-pipes, and also all pipes, cocks, cisterns, etc., used or intended for supply of water by a company to a consumer, and for that purpose placed in or about the premises of the consumer. Power is given to enter premises for the inspection and repair of the fittings. There are provisions as to fire-plugs. The Board of Trade may appoint persons to inquire and report on the quality of the water. It is an imperfect measure; and, even in passing it, the Government have expressed their sense of its imperfection, and their desire for its further amendment next year. Lord Shaftesbury considers it as just better than nothing; and the Metropolitan Board of Works, fearing it may stop further legislation, as possibly worse than nothing.

SCOTLAND.

By a munificent donation of £1,000 from Mr. R. B. Stewart, of Ascog Hall, and other money, a hospital is to be erected for Rothesay.

WE regret to announce the death of Mr. William Flockhart, of the eminent firm of chemists, Duncan, Flockhart, and Co., Edinburgh. Although not a member of the medical profession, Mr. Flockhart was intimately acquainted with the leading medical men in Edinburgh, and afforded frequent and valuable assistance in many ways to those labouring in pharmaceutical and therapeutical science.

ST. KILDA.

THE great infant mortality of St. Kilda has been the subject of continued correspondence in the *Times*. With regard to the hoarding of manure, one correspondent alludes to a village, nearly a mile in length, of which almost every house consists of but one room without window or chimney, in which at night are collected the whole family, together with their sheep, poultry, cow, and pony, if they possess as much. All the droppings and refuse are swept together during a great part of the year into one large heap at an end of the hut, and only cleared out for manure when the plot of ground is sown or planted. Yet in this village there is a population of healthy and hardy men, equal in strength and stature

to any he is acquainted with in the British Isles. He adds: "I should therefore attribute the mortality to other causes, but principally to the continual intermarrying of a population already closely related, who have little or no communication with the outer world." Another correspondent states as the result of his inquiries that about ten days after birth the jaws begin to relax, the lower one soon sinking quite powerless, and, through inability to suck, the baby wastes away in a few more days. Rear-Admiral Otter, who was in charge of the admiralty survey of the Hebrides, records it as his opinion that the infant mortality is due to the character of the mother's diet, which consists almost entirely of the oil of the fulmar, which gives to the inhabitants, he says, a peculiar odour, and renders the mothers' milk of a character unsuited to the child. As a proof of this, a child born during his stay thrived well, the mother being supplied with meat and other nutritious articles of diet.

ALLEGED FORCIBLE AND ILLEGAL CONFINEMENT IN A LUNATIC ASYLUM.

AN extraordinary account is published in the *Isle of Man Times* of the forcible confinement of a Manx gentleman in the Crichton Royal Institution, Dumfries. The certificate of lunacy is stated to have been signed by three medical men; but since his confinement has been discovered by his friends, he has been certified to be perfectly sane.

IRELAND.

IRISH CORONERSHIPS.

THE coronership of one of the two districts into which Neath is divided has been vacant for three months. It is rumoured that there will be no appointment to the vacancy, but that the local magistrates will conduct the inquiries pending the introduction of a Bill abolishing altogether the office of coroner in Ireland.

SANITARY AFFAIRS IN DUBLIN.

MR. BENSON BAKER, who has been visiting Dublin on a doctor's holiday, and has been investigating its sanitary condition, has addressed a letter to the Dublin papers, in which he draws a gloomy, but, according to a public authority, not over-coloured, picture of the state of the city.

"No one passing through your streets," he says, "can fail not only to see, but to be informed by another sense, that excreta and decomposing vegetable and other refuse are producing 'excrement-reeking air'. No one can inspect the cellars and yards of the poor without seeing the danger to which they are exposed from excrement-sodden soil. The privies and cesspools baffle description; the top water percolates through a mass of filth into the cellars, and fills the house with 'excrement-reeking air'. Water-closets and dust-bins among this class are unknown. The Vartry water is exceptionally good and plentiful, affording, I am informed, twenty-five gallons per head *per diem*. This is the only satisfactory sanitary feature of the city; but even this is not utilised as it might be. It appears that more water than is used by the citizens is wasted in the bye-wash. This might with the greatest advantage be used for the purpose of watering the streets, flushing the sewers, and would go a long way in lessening the concentrated effluvia which arise from the Liffey at low water. As might be expected under these conditions, typhoid fever is endemic in Dublin, and at present is more fatal than typhus. Thirteen thousand of the citizens of Dublin suffer from fever annually, of which nine per cent. die. In a period of twenty-five years, every citizen of Dublin will have had fever; that is, the gross total of fever will equal the population, of which one in thirteen will die. The sanitary authorities have not supplied any mode of conveyance of infectious disease to the various hospitals. I know that public cabs and cars are frequently used to convey patients suffering from fever and small-pox. I myself saw a bad case of small-pox hawked on a costermonger's barrow through the streets of Dublin at one o'clock in the day, accompanied by several members of the family, to the hospital! It is at once evident that Dublin is specially prepared for the reception and multiplication of cholera-germs. The precautions taken for the prevention of cholera are, I must say, unique. By order of the Privy Council, when cholera is discovered amongst the shipping, it is ordered to be brought on shore; there is no special provision made

for the conveyance on shore or to the hospital. Two hospitals have been appointed to receive these cases—one on the north, and the other on the south; thus establishing a cholera-focus on each side of the city. This danger might have been readily averted by obtaining a government ship and improvising a floating hospital."

Mr. Baker's statistical observations are not without flaw, and he does not give credit for the excellent arrangements by which small-pox has been kept at bay; but his strictures are well-intended; and, from what is known of his public character and ability, they are likely to be found based upon facts, and worth serious consideration.

THE CHOLERA.

IN consequence of the cholera being reported in Antwerp, the Minister of the Interior issued (August 24th) an order subjecting all vessels coming from that port to quarantine.

PRECAUTIONS IN FRANCE AND ITALY.

FROM Marseilles, under date of August 23rd, we learn that in conformity with the International Sanitary Convention, Italy is taking precautions against the spread of cholera through ships arriving from the Sea of Azov and the Baltic. The Director-General of the Public Health Department, Dr. Fauvel, is visiting the French coast on the Mediterranean, ordering similar sanitary measures to be adopted. The public health in the South of France is very good.

THE CHOLERA IN PERSIA,

A CORRESPONDENT writes:—The cholera appeared in April at Bushire, left that town and slowly travelled up to Shiraz, where it arrived in May. There were only a very few fatal cases, and Shiraz, as well as the whole province, is now free of the epidemic. At Teheran it broke out in the beginning of May; at the end of that month nearly a hundred persons died of it daily, but at present it has almost disappeared.

CHOLERA IN RUSSIA AND GERMANY.

A BERLIN correspondent writes, under date of August 23rd, that the central and north-western portions of Russia continue to be ravaged by cholera. The provinces St. Petersburg, Moscow, Wilna, Riasan, Tambov, Pskov, Olonetz, Novgorod, Yaroslav, Vladimir, Nishni-Novgorod, Vologda, Kostroma, Kasan, Tver, Tulla, Smolensk, Saratov, Mohilev, and Suwalki, are officially stated to be infected. Moscow, Vladimir, and Suwalki—the latter, bordering on East Prussia, has spread the disease to German territory—are at present the districts most severely visited by the plague. Poland proper is as yet exempt. Reliable statistics as to the number of cases are wanting; but the vast extent of its area, together with what we hear, leads to the conclusion that the disease this time is not to be made light of. In Prussia, where the circles of Lyck, Pilkallen, Oletzko, and Insterburg, have been attacked, Königsberg remains the hotbed of the epidemic. In the seven days ending the 18th, that city had 130 deaths by cholera, among which were 51 children below the age of 14. The preceding week but one-third of this number had succumbed to the scourge. Since the last returns were published, there seems to have been an improvement. As a precautionary measure, the police authorities throughout Prussia have been directed by the Home Office to pay the strictest attention to the state of the sewers and cesspools, which have to be daily disinfected and deodorised, and frequently emptied. It will be a herculean task to cleanse the Augean stables of Berlin. Perhaps the Town Council, who have been so long wavering as to which system to choose, will now at last realise the necessity of selecting one among the various modern methods of drainage. The antiquated cesspools and sewers are simply an abomination. The sale of unripe or rotten fruit is prohibited. From St. Petersburg (August 25th) it is stated the cholera epidemic is considerably abating.

CHOLERA IN GERMANY.

DURING the week from the 18th to the 25th of August, 329 persons died at Königsberg from cholera. Among the number 127 were children. From the 27th to the 29th of August, there were 179 cases in Königsberg, with 79 deaths. At Elbing, up to Sunday last, there had been 34 cases with 20 deaths. The first case of cholera occurred at Altona on the 19th, and up to the 26th 16 persons died of the disease. From the 27th to the evening of the 28th no fresh case of cholera had occurred at Dantzic.

PREPARATIONS FOR CHOLERA IN VIENNA.

ALTHOUGH there is no immediate fear of an outbreak of cholera in Austria, the following regulations have been issued for Vienna and the surrounding districts. 1. All physicians and surgeons are required to report immediately any cases of cholera that may come under their care. 2. The local authorities are to take in charge and continue regularly the systematic cleansing and disinfection of all house-drains and sewers. 3. Sanitary defects in individual houses are to be sought out and as far as possible removed. 4. The food-markets and the hawkers of articles of food are to be rigorously inspected. 5. Cholera-hospitals are to be established in Vienna and the neighbourhood; and patients suffering from the disease are not to be admitted into the general hospitals.

CHOLERA-PRECAUTIONS: PROSECUTIONS OF PILOTS.

SEVERAL Burntisland pilots have been fined for rebelling against the local authority in bringing vessels into the harbour without allowing them first to be inspected by the quarantine officer.

THE SEAMEN'S HOSPITAL SOCIETY.

THE Committee of the Seamen's Hospital Society, being desirous of making proper provision for any cases of cholera that may apply for admission into their institution, addressed the Lords of the Admiralty, requesting the loan of a part of the *Dreadnought* hospital-ship for the reception of such cases; but the Admiralty have replied that, as the ship is at present lent to the managers of the Metropolitan Asylums Board as a hospital for convalescent small-pox patients, their lordships are therefore unable to comply with the request.

MORTALITY FROM DIARRHOEA IN LONDON.

THE deaths in London last week were 218 above the average, and the births 57 below it. The total deaths was 1682. They included 82 from small-pox and 487 from diarrhoea. The mean temperature last week, although showing a decline upon the previous week, exceeded the average on each day of the week. The fatal cases of diarrhoea, which in the two previous weeks had been 299 and 425, further increased to 487 last week; of these 450 were of infants aged under two years, and 21 of persons aged sixty years and upwards, leaving but 16 as occurring among children and adults aged two years and under sixty. These 487 deaths from diarrhoea in London exceeded by 295 the corrected average number in the corresponding week of the ten years 1861-70, and were equal to an annual death-rate of eight per 1000 persons living. The deaths referred to cholera and choleraic diarrhoea in London declined from 40 in the previous week to 28 last week. All who died were children, mostly infants, except three. The mean temperature of the air was 63.0 deg., or 2.4 deg. above the mean temperature of the corresponding week in fifty years. The highest day-temperature in the shade was 78.7 deg on Monday; the lowest night-temperature, 50.6 deg. on Sunday. The highest temperature in the sun was 146.1 deg., on Saturday.

THE HAMPSTEAD SMALL-POX HOSPITAL.

MESSRS. WILLIAM GREAVES, Albert E. Kynaston, and John Aikman, Assistant Medical Officers of the Hampstead Small-pox Hospital, have thought fit to write to the *Times*, bringing grave charges against the management of the institution. The following facts, they say, have been brought to their notice.

Delirious patients, more particularly children, have been tied down to keep them in their beds, and this when their bodies were covered with the eruption which is peculiar to small-pox. Strait-waistcoats have been used with the same motive. Patients in an acute ward—that is, in a ward where the sufferers are still in the height of the disease—have been provided with a totally inadequate supply of milk and beef-tea for their use during the night. On making the morning visit, they have been informed by the nurse in charge that the patients of her ward on low diet have been kept without food of any kind from 7 A.M. till 3 P.M. Complaints have frequently been made to them by both nurses and patients that food supplied has been totally unfit for consumption. Children have been found dead in bed by the medical officer, and the nurse of the ward ignorant of the fact. This, it should be observed, was through the totally inadequate number of nurses provided for the necessities of the hospital, and not through the neglect of the individual on duty. The body of a patient who died at midnight being in the most offensive possible condition, was removed into the

bath-room of the ward, and there kept until the middle of the following day, instead of being at once carried to the dead-house. In addition to the above instances, one child, if not more, has been lost, and all trace of it gone, although at one time reported as convalescent. By continuous opposition and repeated complaints to the Medical Superintendent, they say, they have done some little good; but their task has been a most unthankful one, and has brought upon them no little odium, although one would have expected a contrary effect. The two senior of them have been informed that their services are no longer required; and thereupon the third has at once refused to remain, and has resigned.

We have personally inspected on several occasions the Hampstead Small-pox Hospital; and, since the appearance of the letter in the *Times* of Tuesday, have minutely inquired into the matters complained of. The result of these inquiries has led us to a conclusion very unfavourable to the assistant medical officers, and that the complaints made are mostly childish and exaggerated. That the arrangements of the hospital are incomplete in a few details is to be expected; but it is surprising to find an institution organised to meet a sudden and great emergency conducted with so great regularity and efficiency. If strait-waistcoats have in any instances been used, they were employed by and obtained at the special request of one of the gentlemen who now enter a protest against their use; if the food have been, under any exceptional circumstances, tainted or limited, the fault has been at once remedied on representation in the proper quarter; but the statements about patients being left without food for hours and found dead in bed are apparently inaccurate and most unfairly stated. There appears, however, to be good reason to believe that a child sent to the Convalescent Hospital at Islington has been missing; but how or when, the efforts of the Committee, assisted by the police during the past few weeks, have failed to discover. The matter is still being investigated; and in the meantime we would suggest that for a hospital at some distance from Hampstead, with one to two hundred patients, convalescents though they be, a resident medical officer might with advantage be procured.

With the single and strange exception, of a child being lost sight of in the process of removal, there is nothing to lead us to believe that the Hampstead Small-pox Hospital is otherwise than admirably conducted. We regret that the assistant medical officers should have deemed it necessary to write as they have done at all; but that they should have done so without laying their grounds of complaint before the Managing Committee was, we think, very unfair to the able and energetic medical superintendent, and unworthy of their position and of their responsibility to the institution. We are informed that a Poor-law inquiry will very probably be demanded by the Chairman of the Committee.

SANITARY EXHIBITION.

THE Social Science Association have determined, at the request of many persons interested in sanitary reform, to hold an exhibition of sanitary appliances at their forthcoming annual congress, which is to be held at Leeds from the 4th to the 11th October next. Among the articles which it is intended to receive are: Filters, water-fittings, taps, standpipes and pumps; closet-apparatus; models and plans of improved workmen's dwellings; public baths and washhouses; gymnasiums; cottage and temporary hospitals; illustrations of various disinfecting processes; hospital-ambulances; illustration of drainage; farm, and sewage irrigation works; specimens of preserved meats and other dietetic articles; improved cooling apparatus, warming and ventilating apparatus, etc. The exhibition is intended to bring under the notice of health-officers and the many men interested and experienced in sanitary questions in various parts of the kingdom, who usually attend the congress, the latest appliances of science, having for their object the improvement of the public health, and will probably form an useful as well as an attractive feature of the meeting. Every information may be obtained on application to Dr. Robinson, Honorary Secretary of the Health Department, Social Science Offices, Leeds.

CROYDON GENERAL HOSPITAL.—An entertainment in aid of the funds of this hospital was given by the friendly societies in the town on the 16th instant. The net amount of contributions will, it is believed, amount to eighty guineas.

THIRTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in *PLYMOUTH*, August 8th, 9th, 10th, and 11th, 1871.

PROCEEDINGS OF SECTIONS.—(Concluded.)

SECTION D.—PUBLIC MEDICINE.

The Training, Qualifications, and Duties of Nuisance Officers. By DAVID DAVIES, Esq.—The writer said that a nuisance officer should be free from all organic disease; should have had the small-pox or been successfully vaccinated, and should have passed through scarlet-fever, measles, and maculate typhus. He should have good health, excellent digestive powers, and plenty of courage. The only literary qualifications required were an ability to speak the vernacular, and to enter in his book in intelligible language the chief facts which he observed. When such a man was found and appointed, he should not make himself disagreeable to everybody; but should act in the belief that his duty was to aid in lengthening the lives of those around him, without any consideration of the manner in which those lives were to be spent. The duties of a police-officer and of a nuisance-inspector were incompatible. He should be civil and courteous, should have the respect of the clergymen and ministers, should be friendly with the relieving officers, and should have the confidence and goodwill of the medical men. He should keep his eyes always open to what was going on, and report to the medical officers. He should have some idea of natural science; and should possess some acquaintance with the principles upon which zymotic diseases were propagated, and with their chief characteristics. The inspectors should be well-paid, so as to be able to live generously, and should not be required to do any menial work, but have two labourers under them. As an average, a district containing 20,000 was large enough; the nuisance-officer should be acquainted with the plan of its sewers and drains, and should go through it once a day; and twice a week disinfect all the privies in the courts and alleys.

On the Modes of Dealing with Outbreaks of Pestilential Fevers sanctioned by the Health Authorities of Merthyr Tydfil. By T. J. DYKE, F.R.C.S.—As medical officer of health since 1865, the writer had to direct the modes of dealing with outbreaks of cholera, typhus, and relapsing fever. Taking the acknowledged truism, that "contagious fevers spring from single cases", he argued that the early separation of the sick from the uninfected should prevent the spread of those diseases; and proceeded to instance the modes of dealing, based upon this argument, with the epidemic of cholera in 1866, of typhus in 1868-9, and of relapsing fever in 1870-71. These means were—the removal of the sick to hospitals provided for the purpose, and of the uninfected to places of temporary refuge; the fumigation of the houses with sulphur, and then the transfer of all clothing to a stove, in which it was exposed to a dry heat of 230 deg.; the washing of all walls down to the plastering; cleansing furniture with water and carbolic acid soap, and destroying all rags by fire; the free use of disinfectants in the houses, soaking soiled clothing in water containing disinfectants, and the addition thereof to all excretions. The results which seemed to follow this practice were, that cholera, which in 1849 destroyed 1 out of 30 of the people, in 1866 claimed but 1 victim out of 391. The annual mortality from typhus was formerly 23 in 10,000 living; in the years 1866-70, it was reduced to 8 per 10,000. The rate of deaths from relapsing fever was $2\frac{3}{10}$ per 1000. After the adoption of the modes of removal, etc., the duration of cholera was but six weeks, while typhus and relapsing fevers yielded in two months. The town of Merthyr used to be exceedingly unhealthy. A good supply of pure water, regular scavenging, sewerage, etc., resulted in lessening the death-rate from 36 per 1000 in the years before 1850, to 24 per 1000 in 1866-70, while the average age at death was increased from 17½ to 27½ years. The imperfect working of the sanitary laws was pointed out; but it was stated that even these, with the "heartly good-will of the authorities", could be made of great use both in preparing for the advent and for the treatment of pestilence. In conclusion, instancing the fact that relapsing fever prevailed at Tredegar for two years, and yet that no public information had been given of this epidemic, he urged the necessity of a compulsory registration of cases of small-pox, of typhus and its congeners, and of cholera, as a means through which all sanitary authorities might be warned of the nearness of danger, and thus might be enabled to burnish and sharpen their sanitary armour.

On the Provision of Medical Attendance on the Independent Poor by Provident Dispensaries. By C. B. NANKIVELL, M.D.—The subjects treated of were the following:—The necessity of prompt and efficient medical attendance on the working poor; the defects of gratuitous medical charities and their demoralising consequences; the evils of sick clubs in beating down the terms of their medical attendants, and including persons able to pay for medical advice; the importance of the provident principle in dispensaries in raising early and efficient medical assistance within the means of the poor; their success at Coventry, Derby, Northampton, and other places—at Northampton receiving in one year from the working people £1,880, and paying the medical officers £1,500; the importance in establishing provident dispensaries of having a sufficient number of honorary subscribers to provide a body of governors and defray the expenses of the establishment above the cost of medicine and medical attendance; the number of officers to be in proportion to number of free members, and the advantages of such institutions in practical medical education.

Jenner and his Teachings. By J. G. DAVEY, M.D.—The paper was designed to prove, from the early writings of Jenner, that medical men of this day had failed to practise vaccination after the manner, or rather in the light, of the first great teacher of the art; that they had ignored the preliminaries to which he attached very much importance; and had fallen, therefore, out of the path along which Jenner travelled to reach the success which he realised. From the statements made by Dr. Davey, it followed, necessarily, that Jenner's practice was very much unlike that followed at this time, and that in both theory and practice the practitioners of the day must have fallen away from the teachings of the famous physician of Berkeley. If Jenner doubted (as it was affirmed he did) the virtue of the vaccine lymph after even "five generations"—that is, after its passage through but five persons or children successively—and if he "then thought it prudent, after only five gradations", to seek other and fresh lymph from the cow or heifer, it became our duty to ponder awhile over the very dissimilar views generally entertained, as well as on the practice which these views begot. But according to the Jennerian aspect of the whole question, we were led to believe that other and deeper causes for the altered or diluted and comparatively valueless quality of the vaccine lymph now so much in use existed. The teachings of Jenner prepared us to accept, as indispensable for the production of a pure, fresh, and trustworthy vaccine lymph, whereby to insure the safety of our patients from the variolous contagion, the aid of the horse. The grease from his heel, taken before it had lost its early pellucidity, was, it was stated, the mainspring or starting-point of that virus on which Jenner relied to carry all those which he vaccinated secure from the possible invasion of small-pox through the period of their natural lives. The same grease it was, according to Jenner himself (so said Dr. Davey), which in its passage through the cow was converted into what is the only reliable antidote to small-pox.

The Effect of Submarine Descent on Man, and the Limits of his Capability. By THOMAS LITTLETON, M.B.—The paper contained extracts from a communication addressed by Dr. Littleton to the ASSOCIATION MEDICAL JOURNAL (now the BRITISH MEDICAL JOURNAL) in 1855, with confirmations of the pathological views therein maintained; and in addition some allusions were made to the history of diving operations connected with the port of Plymouth. He referred also to the effects of the sudden removal of atmospheric pressure in the exit of divers from the water, which he had opportunities of observing during the construction of the Royal Albert Bridge at Saltash. He also spoke of the muscular mechanism existing in the throat of the whale, by means of which the air-passage can be closed during descent in the water; and to the practice adopted by some divers of pressing an oiled sponge into the fauces. He believed that, with the means of imitating the conditions found in the whale, man would be able to descend to as great a depth as that animal.

Sewage-Irrigation in connection with Public Health. By WILLIAM HOPE, Esq., V.C.—The introduction of sewage-irrigation, Mr. Hope believed, would do more for the public health of England than almost any other reform which had yet been suggested. He undertook the advocacy of it from a sense of duty, because sewage-irrigation, or sewage utilisation in whatever form, was a problem which demanded not only the co-operation of chemists, engineers, and agriculturists, but the assistance and the jealous supervision of those members of the medical profession who more especially devoted their attention to questions of hygiene. There were proposals to deal with sewage in its liquid and solid forms separately. Indeed, many persons were enthusiastic enough to believe that the average British housemaid, or the average working man's wife, could be trained to carry out a duplicate system of slop-collection—the one for the reception of urine only, and the other for the

reception of dirty water of all kinds. The Rev. Mr. Moule talked about a small area of land for subterranean irrigation as an adjunct to this system; but such an area, intersected by porous pipes, through which the stuff had to percolate under pressure, was to be looked at simply as a series of small elongated leaking cess-pools, by which the subsoil would be kept continually saturated with unoxidised solutions of animal and vegetable matter containing vibrios, bacteria, and other suspicious organisms. Besides, this subterranean irrigation would necessarily pollute any springs or wells that might be within reach. Coming then to those systems which attempted to deal with town sewage, when manufactured by all the usual appliances of water-closets, sinks, drains, and sewers, Mr. Hope observed that, if some very perfect filter were discovered which would reduce the effluent water to the same physical state as that of freshly distilled water, it would probably open up a simple and completely successful plan of dealing with the sewage. But no such filter at present existed. After a passing reference to the desirability of excluding sewage from rivers whence human beings obtained their drinking water, he went on to point out that no chemical system of purification could be successful, and, therefore, set down irrigation as the only means of dealing with the sewage question in all its bearings with a fair chance of success. Irrigation had its dangers. In the opinion of some the germs of entozoic disease might be communicated, both through vegetables grown by sewage and eaten raw, such as lettuce, celery, etc., or through the flesh of oxen and sheep fed upon sewage-grown produce; but experiments conducted for a committee of the British Association had not established that view. He had heard Dr. Letheby allege that all sewage farms were pestilential swamps, and he believed that this description was accurate to a considerable extent, for sewage farms were laid out, as a rule, by civil engineers who had never condescended to study agriculture. The engineering works for the conveyance of sewage from the town into the country were only the means; the agricultural utilisation of the sewage was the end. The means must be subordinated to the end. The equal and uniform distribution of water over the surface of land by irrigation during the night was a problem of such extreme practical difficulty, that it was not too much to say that it was a thing which could not be done. Yet, as a rule, no provision was made for storing sewage at night. No farmer applied more manure to his crops than he thought they could consume. Nevertheless, because one hundred was an easy number to remember, it was the fashion amongst engineers to lay out only one acre to receive the sewage of every hundred persons; in other words, to decree that the plants upon that acre should consume a great superfluous quantity of nitrogen. All botanist farmers knew that the most valuable of cultivated plants would not flourish—sometimes not even grow—in “water-logged” land; but engineers in large practice would argue strongly against draining land which was to be irrigated with sewage. If sewage were run on in a dark night in quantities in excess of the requirements of plants, the necessary result was a swamp. It was erroneous to conclude, however, that all sewage farms must necessarily be swampy. The application of the sewage of 100 or 150 persons to every acre of a farm for an indefinite term of years was absurd. It was evident that the reduction from 100 or 150 to 20 or 30 persons per acre would relieve Dr. Letheby’s “pestilential swamp” of its bad character; and if the land when so relieved were treated according to the teachings of science and of practical agriculture, he was confident that the swampy and objectionable character of sewage-irrigated land would vanish altogether. One of the most important things to be derived from the use of sewage was the extra supply of food which might be obtained, and especially milk for the young. He believed that one, if not the principal, cause of the debility of the town population was the absence of pure milk for the use of children, and this also was one great cause of drunkenness in the old.

Mr. F. W. MOORE asked various questions as to the practical working of the utilisation scheme. He drew attention to the serious statement of Dr. Letheby that irrigated meadow-lands were liable to breed parasitic diseases in the animals which feed in those meadows, and he said he doubted whether the ova did overcome all the disturbance of passing from the sewage to the land, and really enter the animals.—The Mayor of Plymouth (Mr. SERPELL) desired information as to how Mr. Hope would proceed to drain towns, situated as Plymouth and Devonport were, in a hilly district.—Mr. LIDDLE referred to several localities where illness had arisen near places where sewage-irrigation was used. He considered this subject of sewage-irrigation a most important one, as in its practical working other matters of deep importance to the community were associated with it, such as the question of pure water and a larger supply of food, especially of milk.—Mr. BALKWILL said it would be well for Plymouth if it could utilise its sewage; for now it was casting it into the sea, to the nuisance of the neighbourhood. He thought that the proposal made elsewhere to have double sew-

age—one for sewage proper, and the other “slops,” etc.—so as to keep the two classes of material separate, would not be found practical.—Mr. DYKE referred to the attempt being made to utilise the sewage of Merthyr Tydfil. The whole matter had been thrown into chancery. The plan adopted at Merthyr, he said, was on the calculation that thirty acres of land would be sufficient for the sewage of 10,000 population.—Mr. HOOPER drew attention to the manner in which the sewage was carried out at Croydon, and said that it was so done as to leave a nasty smell.—Mr. HASTINGS said that for his part he did not need Mr. Hope’s paper to convince him of the necessity and value of utilising the sewage by irrigation. He had heard very able men discuss the question, and he had arrived at the opinion that irrigation supplied the best and the most economical means of disposing of the sewage of our towns. Water-conveyance was the cheapest incomparably, and the cost of conveying earth in large towns was one element against the use of earth-closets. The irrigation system increased the fertility of the soil, and this fact proved to him that it was sheer waste to go on throwing sewage into the sea. So long as the sewage was thrown into the sea, millions of money would be annually wasted which would otherwise have gone into the pockets of the people. There were disadvantages in connection with the utilisation; for at Malvern the people said that cases of fever in that district were the result of the irrigation. He had himself found a bad smell arising from sewage, and had known cases of fever near where the irrigating was carried out. He should like to ask Mr. Hope if he thought it likely that the fever referred to was likely to arise from the sewage.—Mr. MOORE asked if it was not possible to carry the sewage on to the land by means similar to those adopted for watering lands on a small scale.—The PRESIDENT (Dr. STEWART) added the results of his own observations at Ilford, where a sewage-farm was carried out on Mr. Hope’s plan. His nose was not at all offended by any smell. The farm at Ilford proved that where irrigation was carried out scientifically there was no fear, but where the water in daily use was polluted, local outbreaks of fever were to be expected. Now some local outbreaks of fever came in most healthy places, and there was scarcely any doubt but that there was a connection between the outbreaks of fever at Malvern and the sewage.—Mr. HOPE, in replying, said he never found a town yet in which it would not have been the cheapest plan to carry the sewage to some distance away before utilising it. The cost for a town of a given size could not be stated, for there were expenses which would be entailed in a small and a large town alike, as for purchase of rights of way, obtaining powers, and engineering. We were now arriving at a time when, thanks to the Court of Chancery interfering to prevent the pollution of rivers, towns would have to utilise their sewage, cost what it might. It was as dangerous to throw the sewage into the sea as into the rivers, for the ova passed into the fish of the coast, and so came back. He showed that the animals fed upon the meadows badly and unscientifically irrigated with the Edinburgh sewage, which, judging by its smell, was the foulest sewage in the world, were none the worse, and no parasitic ova were found in their flesh. As to the value set upon the sewage by the farmers who once tried it, he mentioned that some Essex farmers had eagerly set down their names as customers when there was a prospect of some of the sewage being supplied; and, in fact, he obtained in two days the name of 69 farmers who farmed 40,000 acres. The sewage caused fever where it was improperly conducted to the land, as at Malvern. The throwing the sewage on the land had been tried by Lord Essex at Watford, and proved a failure in point of paying, the cost of labour being very great. He would not enter into the probable cost of using the sewage of the three towns on the adjacent lands, because he was a stranger in the neighbourhood.

The MAYOR of PLYMOUTH proposed a cordial vote of thanks to Mr. Hope. Mr. PROWSE seconded the motion, which was carried amid cheers, and was acknowledged.

A New Mode of Hospital Construction. By HENRY GREENWAY, M.R.C.S.—The author proposed that a portion of a hospital building should consist of flats 34 feet wide and of any required length. The floor of the flat should be water-tight and covered with sheet-lead. Within the flat should be a double row of compartments made of glass with iron framework, and placed back to back; each compartment being 10 feet square, 12 feet high in front, and 17 feet at the back, thus causing an inclined ceiling. Between the front of these compartments and the main wall, which would be of masonry, there should be a corridor 7 feet wide, 12 feet high, its ceiling to be likewise of glass. Into this corridor these compartments should open. Each compartment should be ventilated by a tube passing through the masonry wall, and then across and underneath the corridor, and which should open in the floor of the compartment through the length of a grating. Around this tube would be a water appliance to cause a draught; but this would

not make patients catch cold. The corridors could be subdivided by means of glass-folding doors, so as to form anterooms for those patients who would be permitted to leave their compartments. The proper temperature would be maintained by means of water-pipes. The compartment would be illuminated at night by transmitting light from the corridor. At each end of the flat should be placed the usual ward offices. They would be separated from the compartments by a cross passage which would unite the two corridors. In cases of emergency the nurses could be called by signals. The cost of such a building for twenty-one beds and one flat had been estimated by an able Plymouth architect, Mr. Hine, as about £3,000, or £150 a bed. The following were some of the advantages gained by this plan. Each patient was in enjoyment of his own special supply of atmospheric air, not damaged by exhalations from his neighbour. The supply was also being constantly renewed; the compartment being made of glass, no absorption of morbid products could take place in their walls, and by occasionally washing them with water they would for ever retain their purity. There would be no danger on the score of fire; and as a patient lay in his bed he saw not only the transparencies, but could look through his glass door across the corridor at the little garden outside the window. He had also the advantage of a compartment to himself, thus avoiding the unpleasantness often felt on being associated with strangers; and he would not be shocked by death occurring around him. The patient, although plentifully supplied with air, was not exposed to a draught, the under surface of the bed acting as a screen. The patients were not confined to their beds, and having no infection, might be allowed to take their meals in the corridors during the day.

On the Estimation of Atmospheric Ozone by means of Aspirators and Acids. By CORNELIUS B. FOX, M.D.—The author, having pointed out the great importance of estimating correctly the amount of ozone present in the air, if we would ascertain with certainty whether or not an excess or deficiency of this allotropic modification of oxygen was in any way connected with disease, proceeded to comment on the chaotic and inexplicable condition in which all ozone records were involved. The mode of estimating ozone which had been hitherto generally adopted appeared to be liable to the following sources of error:—1. Impurity of chemicals employed; 2. Impurity of paper employed; 3. Ozonimeters faulty in construction; 4. Formation of the iodate of potash; 5. Bleaching and fading of the coloured tests, (a) from formation of the iodate of potash, (b) from presence of *true* antiozone in the air, (c) from volatilisation of the iodine set free, in consequence of (a) a rapid current of air, (b) an excess of moisture in the air, (c) a high temperature; 6. Changes in the force of the wind. Brodie and others considered Schönbein's antiozone to be a myth, whilst some German *savants* had recently proved that it was simply the binoxide of hydrogen. Dr. C. Fox believed in the existence of an antithetical state of the air, and described both the atmospheric conditions under which it occurred and its effects. This principle he named *true* antiozone, to distinguish it from Schönbein's antiozone, with which it had hitherto been erroneously identified. The various errors above enumerated, of which the formation of the iodate of potash was one of the greatest, were then shown to be easily obviated. This colourless salt, into which much of the iodine set free by the ozone was often converted, he decomposed by the application to the tests of tartaric acid in the form of spray, so that the whole of the metalloid might be estimated. The error arising from the changes in the force of the wind was also avoided by the use of aspirators, by means of which a certain amount of air was made to pass over the tests at a certain velocity. The two forms of aspirators which had been employed for this purpose having been adverted to, a third kind of an improved construction, which had been devised and employed by Dr. Fox, was then described. The author considered that it was important to have correct answers to such questions as the following. Have an excess or deficiency of atmospheric ozone, or *true* antiozone, any effect on the public health? If so, what is the nature of this influence? What is the effect of epidemics on their amount? He proposed that a Committee be appointed by the Association to inquire into the merits and feasibility of the new scheme.

Notes on the Institutions for the Relief of the Sick, Wounded, and Disabled of the Royal Navy. By WM. R. E. SMART, C.B., Inspector General Royal Navy.—The medical institutions are traceable to 1588, when, after the defeat of the Armada, the seamen gave a portion of their pay to rescue their maimed shipmates from destitution. This money being deposited in an iron chest kept in the church at Chatham, was distributed to claimants by officers selected annually from the various branches of the Navy. "The Chest of Chatham" was the only medical institution until Greenwich Hospital was founded by William and Mary. Then these institutions became interdependent, the one giving outdoor pensions, and the other in-door maintenance, until the year 1763,

when their means being found insufficient to meet the great demand, the State began to pay out-door pensions to the disabled sailors. Until 1796, the Chatham Chest paid for the medicines and instruments of the Navy; and until 1812, when its funds were about to be thrown into those of Greenwich Hospital, the Chaplains received the best portion of their income from it. In 1869, the State obtained entire control of the united properties of the Chatham Chest and of Greenwich Hospital, yielding an income over £148,000 a year. The inmates of Greenwich Hospital were dislodged, and the out-pension system was extended; sick pensioners being permitted to enter the naval hospitals for treatment under rather close restrictions, which might be rendered less close than at present. The naval hospitals at Portsmouth and Plymouth were built between 1750-60, and their value to the service was at once manifested. These admired establishments reflected credit on the Admiralty, but there was ground to apprehend that in case of a naval war, those now maintained would be very inadequate, and it was desirable that Greenwich Hospital should be altered in readiness for such emergency. The general health of the navy had undergone constant improvement since 1790, and was at present in such a condition, apart from the casualties of seamen's life, as to inspire hope that, by the substitution of iron-clads for wooden hulls, the health-returns of the men in the navy might be soon brought on a par with those of Londoners of the same ages.

THE JOINT-COMMITTEE ON SANITARY LEGISLATION.

THE following resolution was passed at the concluding general meeting of the Association in Plymouth, on August 11th, after the reading of the report of the Joint-Committee on Sanitary Organisation.

Moved by GEORGE W. HASTINGS, Esq., seconded by JOHN LIDDLE, Esq.—

"That this meeting receive and adopt the report now submitted by the Joint-Committee of the British Medical and Social Science Associations, and reappoint, as the Committee of this Association, the following gentlemen, with power to add to their number:—Dr. J. T. Arldige, Newcastle-under-Lyne; Dr. Edward Ballard, London; Dr. W. Budd, Clifton, Bristol; Dr. Burke, Dublin; Dr. Charlton, Newcastle-on-Tyne; David Davies, Esq., Bristol; Dr. Druitt, London; T. J. Dyke, Esq., Merthyr Tydfil; Dr. Falconer, Bath; Dr. W. T. Gairdner, Glasgow; Ernest Hart, Esq., London; Dr. Heslop, Birmingham; Dr. Lankester, F.R.S., London; Dr. James Lewis, Maesteg; John Liddle, Esq., London; Dr. W. M'Ewen, Chester; Dr. Mapother, Dublin; Dr. J. E. Morgan, Manchester; Dr. G. H. Philipson, Newcastle-on-Tyne; Dr. Arthur Ransome, Bowden; Dr. Tindal Robertson, Nottingham; Dr. Joseph Rogers, London; Dr. Sieveking, London; T. Heckstall Smith, Esq., St. Mary Cray; Dr. Strange, Worcester; Dr. W. S. Trench, Liverpool; Dr. Nicholas Tyacke, Chichester; Dr. Washbourn, Gloucester; Dr. A. T. H. Waters, Liverpool; Dr. Edward Wilson, Cheltenham; and Dr. A. P. Stewart, *Honorary Secretary*."

POOR-LAW MEDICAL REFORM COMMITTEE.

THE Poor-law Medical Reform Committee, reappointed at the meeting on August 11th, consists of the following members: Dr. Sibson, F.R.S.; Dr. Falconer; Dr. A. P. Stewart; Dr. Heslop, Birmingham; C. A. Newnham, Esq., Wolverhampton; A. Fleischmann, Esq., Cheltenham; T. Heckstall Smith, Esq., St. Mary Cray; Edwin Chadwick, Esq., C.B.; S. Corrance, Esq., M.P.; Dr. Beatty, Dublin; Dr. Macnamara, Dublin; Dr. Mapother, Dublin; Dr. Joseph Rogers; W. Fairlie Clarke, Esq.; Benson Baker, Esq.; Ernest Hart, Esq., Chairman and Convener; with power to add to their number.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETING.

THE next meeting of the members of the above District will be held at the Church Institute, Ramsgate, on Thursday, Sept. 14th, 1871, at 2 o'clock: JOS. AUSTEN, Esq., R.N., in the Chair.

Dinner will be provided at the Granville Hotel at a quarter to five o'clock precisely. Charge 5s., exclusive of wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

Gentlemen who wish to make communications to the meeting, are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, August 1871.

REPORTS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

J. HUGHES BENNETT, M.D., F.R.S.E., in the Chair.

MR. LISTER showed a patient in whom, more than six years ago, he had Excised the left Wrist-joint. Excellent movement and strong grasping powers were shown, and the patient was able for all the duties of his employment, in charge of an engine.

MR. LISTER also showed a case of Cicatrix after a Burn binding the arm to the side, in process of cure. Movement was nearly restored. He showed the method at present used of antiseptic dressing by means of carbolised gauze and antiseptic bandages.

MR. LISTER exhibited a little boy on whom, some weeks ago, he performed primary Amputation at the Hip-joint for extensive injury of the leg. Antiseptic dressings were used, and, during the whole progress of the case, putrefaction had been completely prevented. The stump was soundly and completely healed.

MR. ANNANDALE showed a case of Club-foot in process of cure, and a case of Amputation of the Hand in which the thumb was retained.

DR. A. G. MILLER showed a specimen of Fracture of the Cervical Spine from a fall from a window.

DR. T. R. FRASER called the attention of the Society to a new Mineral Water of great value recently discovered at Melrose. It is a chalybeate, but is remarkable as containing the iron in the form of carbonate and in considerable quantity, and is the only one yet known in Scotland in which the iron is in this form. It is sparkling, pure, and pleasant in taste.

DR. ARGYLL ROBERTSON showed two Eyes which he had recently obtained. In one, the fatty degeneration of the retina in albuminuric retinitis was well seen; in the other, there was calcification of the choroid.

DR. WARBURTON BEGBIE read a paper on the Therapeutic Actions and Uses of Turpentine. He gave a brief sketch of the ancient history of the drug from the time of Hippocrates, with a notice of the various forms in which the oleo-resins of the coniferæ are used or have been used in therapeutics. Oil of turpentine was described as being irritant and stimulant, quickening the circulation and augmenting the temperature of the body. In larger doses it produces a sort of intoxication; in drachm doses it is hypnotic. Externally it is a valuable rubefacient, and is absorbed by the skin so as very soon to be recognised in the breath, and by its characteristic violaceous odour in the urine. The production of this violaceous odour in its perfection seems to be a test of the integrity of the urinary organs, as it is less marked or absent in disease of the kidneys. The therapeutic actions and uses of turpentine are various. 1. As a cathartic it is uncertain, but along with castor-oil it is useful in cases of obstinate obstruction and tympanitis. 2. As an anthelmintic it is chiefly used as a cure for tapeworm; also, in the form of enema it destroys ascarides and lumbrici. 3. Though turpentine sometimes causes hæmaturia, it cures certain passive hæmorrhages. It is useful in purpura, probably acting through the nervous system; and is useful also in hæmoptysis, hæmaturia, and uterine hæmorrhages. 4. As a stimulant, it is especially valuable in adynamic fevers; as in the stupor of typhus, in certain kinds of delirium, and in the later stages of enteric fever with a dry tongue. 5. In certain nervous diseases, such as epilepsy and chorea, it is said to be very useful; but in epilepsy it is supplanted by bromide of potassium, and in chorea by arsenic. In certain forms of sciatica and crural or brachial neuralgia in the aged, twenty-minim doses thrice daily have very good effect. In the nervous headache of delicate females, and the headache which is induced by fatigue, it is a better stimulant even than strong tea, and without the effect which tea so often has of banishing sleep. 6. In all chronic discharges from mucous membranes, such as chronic and foetid bronchitis, it is very useful, and even is advantageous in gangrene of the lung in checking the fetor. Under this head some interesting cases were given of gangrene of lung depending on the presence of foreign bodies.—A discussion followed, in which the Chairman, Mr. B. Bell, Dr. T. R. Fraser, Mr. Lister, Dr. Smart, Dr. T. G. Stewart, and Dr. Joseph Bell took part. Additional evidence as to the value of turpentine in hæmorrhage and in chronic mucous discharges was elicited.

DR. WARBURTON BEGBIE communicated a very interesting paper by Dr. MICHAEL W. TAYLOR of Penrith, entitled Case of Intestinal Obstruction from a knot on the lower part of the Ileum. A cast, made and coloured by Dr. Taylor, accompanied the paper, and added greatly to its value.—The Society then adjourned for the season.

SURGICAL SOCIETY OF IRELAND.

ALBERT J. WALSH, Esq., President, in the Chair.

MR. WILLIAM STOKES described a method of Amputation of the Thigh, to which he gave the name of Supracondyloid Amputation. In the amputation, the bone was sawn through at a level from one-half to three-quarters of an inch above the line of the cartilaginous incrustation, the cartilaginous surface of the patella was separated, and there were two flaps—one anterior, oval in shape; and one posterior, one-third of the length of the former. The posterior surface of the patella was brought into apposition with the cut surface of the femur, and underwent ankylosis with it. Mr. Stokes exhibited a series of casts showing the results obtained after this operation. Mr. Jessop of Leeds had likewise had a satisfactory recovery in a case where he had performed it. The special advantages to be derived from this method of amputation were described as being the following. 1. The resulting stump was more useful, as pressure could be borne on its extremity. 2. There was a diminished liability to tubular sequestra. 3. The operation was less hazardous to the patient than amputation of the thigh, its situation being more distant from the trunk. 4. It was accompanied by less shock. 5. There was less tendency to the occurrence of suppuration. 6. In the posterior surface of the anterior flap, which was lined with a natural synovial membrane, no vessels or nerves were included. 7. The preserved portion of the patella acted as an osseous curtain covering the cut surface of the femur, and had never yet been known to slough away. 8. That the attachment of the tendon of the quadriceps extensor muscle to the patella, gave an increased power of extending the thigh in progression, and rendered the formation of a conical stump impossible. 9. In the supracondyloid operation, the vessels were divided at right angles to their continuity, and not obliquely, as in all flap-operations, thus being less exposed to the setting up of inflammatory action from the extent of the wounds in them.—MR. H. G. CROLY considered that the operation would be contraindicated in diseases of the knee-joint, such as "white swelling." He asked whether the patella always remained healthy in its new position, or acted as a foreign body—an accident often met with in the case of the os calcis in Pirogoff's operation.—DR. WHARTON thought that the operation advocated by Mr. Stokes was to be contrasted with Mr. Syme's percondyloid amputation, and was not intended to supersede all other amputations of the thigh.—DR. PORTER looked upon the ankylosis of the patella with the cut end of the femur as a most important characteristic of Mr. Stokes's plan. It possessed another great advantage, in the avoidance of including the open ends of vessels in the anterior flap.—MR. WHITE had, by experiments on the dead subject, tested the height to which the operator might go without opening the medullary canal of the femur, and had found Mr. Stokes's estimate perfectly correct. He strongly commended the operation in cases which were unsuited either for resection of the knee-joint or for Teale's amputation of the thigh.—DR. HENRY KENNEDY wished to know the nature of the various cases in which Mr. Stokes had employed his own method.—DR. E. STOKER suggested, as an explanation of the fact that the patella remained healthy, that the large blood-supply to that bone was not materially interfered with by the operation. The os calcis in Pirogoff's operation lost a large portion of its blood-supply, and so was apt to become necrosed.

MR. WHARTON made a communication on the subject of the Modification of Teale's Amputation, proposed by him in 1868, in a letter to the *Dublin Quarterly Journal of Medical Science*. The point of difference in the modified operation from Mr. Teale's were: (1) the absence of a posterior flap; (2) the shortening of the anterior flap by one-fourth; and (3) a consequent considerable saving of bone. Mr. Wharton was now able to speak practically in answer to the objections brought against his suggestions by Mr. Pridgin Teale and Mr. Jessop. He noticed two amputations of the thigh performed according to his method: one by Mr. William Stokes; the second by Dr. Mapother. He also brought under consideration a case of amputation of the leg by Dr. Mapother, and four cases of amputation of the forearm, by the same plan—the operators being Messrs. Porter, Macnamara, Kelly, and Mayne. He referred to an amputation of the thigh performed by Dr. Illingsworth, of the Royal Artillery; but in that gentleman's absence, and as Mr. Wharton did not witness the operation, he was not in a position to state positively whether the removal of the limb had been effected in strict accordance with the modification suggested. For instance, he was not sure whether the single flap, of which the operation consisted, was rectangular or not.—A discussion ensued, in which Dr. Porter, Mr. Stokes, Mr. O'Leary, and Dr. Darby took part.—MR. O'LEARY stated that, in his experience, the pressure of an arti-

ficial limb was always exerted, not on the tuber ischii, but on the stump. He believed that the saving of bone became a matter of but little importance in cases where the medullary canal was opened. He regarded Mr. Wharton's method as one possessing great advantages in amputations of the leg. In such, the delay necessary in dissecting up the posterior flap was obviated by the procedure in question.—Dr. DARBY dwelt on the necessity of suiting any amputation to an individual case. He always formed his flaps of the skin and subcutaneous areolar tissue exclusively.

CORRESPONDENCE.

PATHOLOGY AND TREATMENT OF CHOLERA.

SIR,—I believe that a large majority of the profession—certainly a majority of those who have had practical experience of Asiatic cholera—will now endorse the views of Dr. G. Johnson as to the pathology and treatment of that fell scourge, now unhappily looming in the distance and threatening our shores.

Dr. Johnson has very explicitly described the treatment which he recommends to be adopted in a given case of true Asiatic cholera; but I do not myself apprehend that he has distinctly laid down the treatment of those cases of choleraic diarrhoea which so frequently, though not constantly, precede the advent of the real disease, as the shadow occasionally precedes the substance: yet if these cases partake, even in a minor degree, of the nature of cholera, the more important becomes their successful treatment as tending to prevention.

Permit me through your columns to ask Dr. Johnson whether he would advise to treat such cases on the same principle as that recommended by him in cases of pronounced Asiatic cholera—that is, on the principle of elimination—or whether he would advise that these cases should be treated by means calculated to check the intestinal flux.

I feel assured that many like myself will gladly learn Dr. Johnson's opinion on this very important, and as yet apparently undetermined, point of practice; and I trust that he will kindly answer my query through the medium of your columns, that all readers may have the benefit of his opinion.

I am, etc.,

A. B. BRABAZON, M.D.

12, Darlington Street, Bath, August 30th, 1871.

CHLOROFORM ACCIDENTS.

SIR,—Allow me to make a few remarks on the criticism of my paper on this subject by Professor Lister in your last number. A considerable portion of his interesting paper is taken up in urging the practice of drawing forward the tongue in cases where, although the movements of respiration continue, no air passes through the larynx; and he thinks that I “practically counsel medical men in general to disregard the drawing forward of the tongue”. Now I have never written anything to discourage the practice under the circumstances, but only urged the greater safety of a plan by which such obstruction is prevented from occurring, or from occurring to a degree greater than can be overcome by raising the chin.

The object of my paper was not to discourage the use of the forceps, which may be needed, perhaps, when chloroform is given too freely, but to oppose the statement that giving chloroform upon a towel “without stint” was the safest means of doing it.

Professor Lister says “it is not true that chloroform excites swallowing”; but he admits that it excites the flow of saliva, and that *this* excites swallowing. Whether the chloroform excites swallowing directly, or by first causing saliva to flow, is not material to the question. I am sure that the stronger the chloroform-vapour, the more frequent the swallowing becomes. I am aware that patients ordinarily swallow very well when under chloroform; but when continued, as it often is, to the point of abolishing reflex movements, it is not so. And, as a matter of fact, blood *does* occasionally get into the air-passages in operations which cause bleeding inside the mouth.

Professor Lister begs “to refresh my memory with respect to the fact that Dr. Snow ascertained that, when less than about 5 per cent. of vapour existed in the air, the respiration failed before the circulation.” He need not do this, for it is the very ground upon which I recommend an apparatus to secure an uniform percentage of chloroform. Dr. Snow tried to invent such an apparatus, but failed to do so. The instrument he used gives off a varying amount of vapour, according to the temperature of the room and of the “water-jacket”, and to the atmospheric pressure; and it varies also with the amount of chloroform which has evaporated. The fatal cases which occurred in his practice may be evidence against *his apparatus*, but not against one which

really does insure accurately the maximum amount of vapour in the air to be breathed.

Professor Lister makes the extraordinary statement that “it is manifest that the average quantity taken into the lungs when this (the towel) method is employed is very greatly below that supplied by Mr. Clover's apparatus.” In making this statement, he must have forgotten that the degree of anaesthesia depends upon the amount of chloroform absorbed into the blood; and, to get the same proportion into the blood, it must require the same average percentage of chloroform, whether given uniformly or in varying doses. The experiment of pouring chloroform on a towel, and noting how much evaporates in a given time, gives a very incorrect idea of what occurs in practice, when it is not possible to keep the towel always at the same distance from the face, or make the patient breathe uniformly. The comparison of what happens at the junction of the Arve and the Rhone at Geneva is a bad illustration of what occurs when chloroform is given on a towel. The diffusion of the vapour of chloroform with air in the mouth occurs so rapidly, that they are well intermixed when they arrive at the throat; but, if diffusion did not occur, the vapour should be less pungent, because the pure air coming under the towel should keep on the outside of the current.

Professor Lister says that in Edinburgh, when anything indicated an overdose, it was not failure of the heart, but an obstructed state of the respiration. How, then, does he explain the deaths which have occurred there and elsewhere, where the forceps have been used to draw out the tongue, and artificial respiration set up? These cases ought to have recovered if the circulation was effective at the time the treatment was commenced. Unfortunately, the pulse is so frequently left unwatched, that it is most probable in these cases that the introduction of fresh air into the lungs did not take place until the circulation had ceased. It is obviously impossible to say that the circulation did not fail before the respiration, if it was not watched.

I am, etc., JOSEPH T. CLOVER.

3, Cavendish Place, August 2nd, 1871.

OBITUARY.

HYDE SALTER, M.D., F.R.S.

WE deeply regret to announce the premature death of this accomplished physician at the age of forty-seven, after a painful illness lasting four months. Always of delicate health, and especially a great sufferer from asthma in early life, he had devoted a large part of his time, patience, and ability to the elucidation of the pathology and treatment of this and other diseases of the chest. His work on *Asthma* has been pronounced to be the best ever published in any language. His amiable character, and deeply religious and kindly mind, endeared him to all with whom he came into contact. In the course of a long career as a hospital physician, he has conferred benefits on many thousands of humble friends, who will hear with deep pain of this loss. His death is pronounced by Dr. G. Johnson, who has recently been in attendance upon him, to have been due to abscess of the lung arising probably from debility, due in no small measure to the enforced abstinence from food necessitated by his asthmatic tendency. He has worked bravely and well for years under great physical difficulties, and has left a name which will long be cherished and honoured, and an example of modest worth and unobtrusive merit which deserves to be commemorated.

ARTHUR MARTIN A'BECKETT, F.R.C.S.

MR. A'BECKETT, who recently died in Sydney, was born in London in 1812, and after serving the usual term of apprenticeship, became a student in medicine of the London University in 1834, where he obtained several prizes. He became a Licentiate of the Apothecaries' Company in 1835, and passed his examination as a Member of the Royal College of Surgeons in March 1838, and became a Fellow of the same College in December 1855. He served in the British Legion in Spain, from 1835 to 1837, on the staff of Sir De Lacy Evans, and received the order of a Knight of San Fernando, also an order for distinguished conduct on the field of battle, and another cross and gold medal for the battles of San Sebastian and Irun. How much his conduct was appreciated during his service in Spain, is shown from the following extracts from letters by Sir De Lacy Evans and Mr. Rutherford Alcock (now Sir R. Alcock, K.C.B., Her Majesty's Envoy Extraordinary and Minister Plenipotentiary at Peking). Sir De Lacy Evans says, in a letter dated June 19th, 1838—“It is with the greatest pleasure that I offer you the expression of my entire and very high satisfaction with your conduct during the two years of our service in Spain, both as a gentleman and member of our society, and as a medical officer. My own knowledge of your con-

duct, acting, as you were, immediately under my observation, together with the uniformly strong and gratifying reports to me by your superiors of the useful and skilful assistance they derived from you, have, I assure you, impressed me with a sincere interest in your future happiness, prosperity, and professional advancement. Your exertions in our large hospitals in Spain, as staff-surgeon, have given advantages, in point of experience, of a various description, which few, I believe, at your age have possessed." In the letter from Mr. Rutherford Alcock, late Deputy Inspector-General of Hospitals, British Legion, Spain, dated June 18th, 1838, he says:—"I must not allow you to embark for another land without conveying to you not only my best wishes for your prosperity, but my conviction that you cannot fail to attain success in the practice of your profession. In the service of Spain, where, for two years, you were constantly under my observation in the field, and in the hospitals, your gallantry and intelligence in the first, and uniform zeal and ability in the last, were too obvious to be either overlooked or forgotten. When the Royal Military Order of San Fernando was conferred upon you, I considered it due to you, not less for your exertions and services under fire, than for the more painful, trying, and important duties which you so conscientiously discharged in the wards of our hospitals in Vittoria and San Sebastian. I have shared the same quarters with you, slept in the same bivouac, and watched you and worked with you among sick and wounded. In all these various situations your conduct as a gentleman, your skill and humanity as a surgeon, and your ready compliance as a soldier with all instructions however hazardous or trying the execution, makes me regret that a land so distant should render our meeting again for many years improbable."

He embarked from England for Sydney, New South Wales, in June 1838; and by his indefatigable exertions, zeal, and high professional knowledge, he succeeded in obtaining, and steadfastly maintaining, a high position, and an extensive practice in the colony. During a residence of upwards of thirty years in Sydney, he twice visited Europe. He was one of the first members of the Legislative Council of New South Wales, for several years one of the surgeons of the Benevolent Asylum, and, previously to his last visit to Europe, an examiner of the Medical Faculty of the University of Sydney, and a trustee of the Australian Museum. He was a trustee of the Sydney Grammar School, and a Fellow of the Royal Geographical Society of London. He was brother to the late Gilbert A'Beckett; to the late Sir William A'Beckett, Chief Justice of Victoria; and the Hon. Thomas A'Beckett, of Melbourne.

In noticing his death, a Sydney paper thus speaks of him:—"The death of the late Arthur Martin A'Beckett is a great loss to the medical profession, as well as to the community at large. As a medical practitioner he has long been favourably known in Sydney, and his skill and ability in the treatment of disease have always been held in the very highest estimation by his brother practitioners as well as by the public. But skill and ability were not the only qualifications of our departed friend. The best qualities of head and heart were his. Sterling honesty and outspoken truthfulness were his great characteristics. Honest and honourable himself, he was the fearless and unflinching opponent of every form of dishonest and dishonourable practice in others. To every species of imposture he was a sworn foe. His aim ever was to render the profession which he practised worthy of the respect and esteem of the world, and no line of conduct met with his approval which was not in accordance with this end. Such men as Mr. A'Beckett we can badly afford to lose."

JOHN WHITE, M.R.C.S.

WE regret to have to announce the death, on the 28th July, after a short illness, of Mr. John White, at his residence, Storey's Gate, Westminster, at the age of 73. Mr. White became a Licentiate of the Society of Apothecaries in 1819, and a member of the Royal College of Surgeons (England) in 1821. His practice in Westminster extended over a period of more than forty years. Added to considerable professional knowledge and skill, he had also acquired for himself a name for kindly sympathy and courteous urbanity amongst all classes of his patients, by many of whom he was warmly esteemed and respected as a sincere friend, and by whom he will long be held in grateful memory.

ROBERT SHIPMAN, F.R.C.S., GRANTHAM.

WE regret to announce the death of Mr. Robert Shipman, on July 25th last, from renal dropsy, at the early age of fifty-four years. Mr. Shipman was a pupil of the late Mr. Keal, of Oakham; and after prosecuting his studies at St. Thomas's and Guy's Hospitals, he became a Licentiate of the Society of Apothecaries, and a Member of the Royal College of Surgeons in 1839, and obtained the Fellowship of the Col-

lege in 1854. Besides a large and high-class private practice, he held the appointments of Surgeon to the Grantham district of the Great Northern Railway, and Surgeon of the second battalion of Lincolnshire Volunteer Rifles. He was formerly Surgeon to the Royal South Lincoln Militia. He was also a member of the Borough Corporation, an Alderman, and Justice of the Peace. Although his remains were buried at a distance of some miles from his residence, they were followed to the grave by about forty gentlemen unconnected with his family, including the Mayor and most of the Corporation of Grantham. His kind disposition, urbane manners, and freedom from professional jealousy, had won him the respect and esteem of not merely his professional brethren, but of all who knew him.

WILLIAM FAVELL, F.R.C.S., SHEFFIELD.

AMID the universal regret of the medical profession of Sheffield, one of its oldest members, Mr. William Favell, has passed away, beloved and respected by all his brethren and mourned by a large number of his patients. Mr. Favell was admitted a member of the Royal College of Surgeons in 1821, and became one of the most successful practitioners in Sheffield. His father, the late Mr. John Favell, was one of the surgeons to the Infirmary; his brother, Dr. Charles Favell, who died many years ago, was one of the physicians to that institution; and his son, Mr. W. F. Favell, is now one of the surgeons connected with it. Mr. Favell has almost, it may be said, died in harness, for it was only on entering upon his seventy-fifth year that he, nominally at any rate, retired from the more active duties of his trying and laborious profession, although up to a few weeks of his death old patients gladly sought the advice of one in whose skill and large experience they had justly every confidence. Full of years Mr. Favell has passed away, and few men among the many of Sheffield's most worthy sons will be more regretted. An intimate friend of the deceased gentleman writes to a local paper:—"Although the duties appertaining to a large family and a very extensive practice, prevented Mr. Favell from taking an active part in any of our public institutions or societies, few men were so universally esteemed in the sphere in which he moved, or won so entirely the confidence and admiration of a numerous circle of friends and patients. Careful and cautious in his treatment, clear in judgment, and kindly in manner, with always a genial turn of humour and sparkle of wit that made even his most melancholy visit to the sick-bed bring a ray of sunshine with it; his memory will long be cherished by those who knew him and reaped the benefit of his long experience and wise counsels. Although arrived at the advanced age of seventy-four, in appearance he was scarcely sixty, and his manners and conversation had all the freshness and vivacity of youth; while his erect figure, and handsome countenance will long dwell on the memory as a pleasant reminiscence, and a type of nature's true nobility." Mr. Favell was for many years a member of the British Medical Association, and some years ago filled the office of President of the Yorkshire Branch. He died on August 25th, in the seventy-fifth year of his age.

CHARLES ASPRAY, L.S.A.

CHARLES ASPRAY was born on November 22nd, 1804, at Olney, Bucks, where his family had followed the practice of medicine from father to son for six generations. When quite young, his father sent him to London to study at Guy's Hospital. In 1826, he became a Licentiate of the Apothecaries' Company. For twenty-six years he laboured in his profession, holding many union and club appointments. To the great regret of his numerous friends, he left Olney in 1852, wishing to give his children the advantage of a London education. For the last three years he had suffered considerably from mental depression, occasioned by hepatic derangements; his weakness was very much increased by a chronic bronchitis; he gradually sank and died on August 2nd, aged 66, the immediate cause of his death being a disease of the liver.

ROBERT MANN, M.R.C.S., LATE OF MANCHESTER.

MR. ROBERT MANN, late of Manchester, who died at his residence, Plâs Elwy, St. Asaph, on the 14th instant, was born August 25th, 1790, near the Tower of London; his father, a Captain in the Grenadier Guards, being then quartered there. He served his time as a pupil of Dr. Anderson, of Newcastle-on-Tyne. Whilst with him, he was entrusted almost wholly with a large colliery practice; and the writer of this notice has often heard him say that he had so much hard work night and day, that he frequently went to sleep whilst travelling on horseback. After taking his diploma in 1812, he entered the 2nd battalion of Grenadier Guards as assistant-surgeon, and shortly afterwards was transferred to the 3rd West York Militia, in which regiment he was also ensign,

and saw some active service in Ireland. After the disembodiment of this regiment, he commenced his career of civil practice at North Shields, and there married Eliza, third daughter of the Rev. Moses Manners, Rector of All Saints, Newcastle-on-Tyne. His father, Captain Mann, being shortly afterwards appointed barrack-master in Manchester, he was induced to commence practice there, at the same time assisting his father in his duties. In a very short time after this he became actively engaged in a large general practice. Last year he retired finally to his country residence at St. Asaph, apparently in good health both of body and mind. The severe winter, however, kept him in close confinement to his house, and caused his health to fail. In May last he had a slight attack of paralysis, after which he gradually became weaker, and died on August 14th. He was interred at St. Asaph. The great respect in which he was held by the whole neighbourhood was evident in the shops being shut and the blinds drawn while the funeral *cortège* passed by. His old friend and pastor, the Rev. Canon Bently, officiated at the funeral.

The late Mr. Mann was for many years a member of the British Medical Association, and of the Literary and Philosophical Society of Manchester.

MEDICAL NEWS.

THE GENEVA CONFERENCE.

It is announced that the Conference prior to the Vienna Congress, which we recently mentioned as being under arrangement, will not take place. Both Germany and France have declined to send representatives, on the alleged ground that it is "unpractical and useless". It is further stated that a new organisation is already being formed in Germany—notably in Berlin—the task of which it shall be to replace the Geneva Convention by an institution based on strictly military principles.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent First M.B. Examination.

First Division.

Branfoot, Henry Seymour, Guy's Hospital
Buchanan, Arthur, Guy's Hospital
Colgate, Henry, University College
Dodson, Andrew, Queen's College, Birmingham
Firth, Charles, St. Bartholomew's Hospital
Rayne, Charles Alfred, University College
Schafer, Edward Albert, University College
Skerritt, Edward Markham, B.A., University College
Smith, George Francis Kirby, Guy's Hospital

Second Division.

Addy, Boughton, St. Thomas's Hospital
Appleyard, John, University College
Ashby, Henry, Guy's Hospital
Baker, Edward Cresswell, St. George's Hospital
Blake, Samuel H., University College
Boddy, Hugh Walter, Manchester Royal School of Medicine
Burn, G. W., St. Bartholomew's Hospital
Crespin, E. R. B., Guy's Hospital
Dyson, W., B.A., University College
Harvey, Charles William, University College
Kennedy, Edward, B.A., Manchester Royal School of Medicine
Knox, David Neilson, M.A., University of Glasgow
Lees, David Bridge, University of Cambridge
Lewlas, John, Liverpool School of Medicine
Parry, Thomas Sharpe, University College
Sturge, William Allen, Bristol Medical School and University College

Excluding Physiology.

Second Division.

Dundas, George Albert, Guy's Hospital
Hickman, Richard, St. Mary's Hospital
Nicholson, Arthur, King's College

Physiology only

First Division.

Branfoot, Arthur Mudge, Guy's Hospital

Second Division.

Davies, David Arthur, University College
Moss, Herbert Campbell, King's College
Owen, Edmund Blackett, St. Mary's Hospital
Summerhayes, William, St. Thomas's Hospital
Taylor, John (B), Guy's Hospital
Williams, William, Guy's Hospital

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, August 17th, 1871.

Allen, Marcus Henry, Regency Square, Brighton
Birch, Robert, Lichfield
Bonser, John Hanbury, Sutton-in-Ashfield
Butler, Francis William, Spring Grove House, Peckham

Hosford, Joseph Alexander, Cumberland Street, Barnsbury
Sarjant, Josiah John, Millwall, Poplar
Steele, Edward Henry, Dorchester

The following gentlemen also on the same day passed their first professional examination.

Dixon, Thomas James, Guy's Hospital
Pitts, Robert Zaccheus, Middlesex Hospital
Murphy, Robert William, Guy's Hospital
Stoney, Percy Butler, St. Bartholomew's Hospital

The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, August 24th, 1871.

Newberry, William John, Liverpool Road, Holloway

The following gentlemen also on the same day passed their first professional examination.

Dickinson, William Wood, Guy's Hospital
Hamlin, William Thorne, St. Mary's Hospital
Maybury, Aurelius Victor, St. Thomas's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ATCHAM UNION, Salop—Medical Officers for the St. Chad's and St. Mary's Districts.
BATTLE UNION, Sussex—Medical Officers for the Mountfield and Brightling Districts.
BRISTOL LUNATIC ASYLUM, Stapleton—Assistant Resident Medical Superintendent.
BRISTOL POLICE—Surgeon.
BRISTOL ROYAL INFIRMARY—Dispenser.
CHRISTCHURCH UNION—Medical Officer for the Eastern District.
EXETER DISPENSARY—Surgeon.
GOVAN COLLIERY, Rutherglen—Surgeon.
GOWER UNION—Medical Officer and Public Vaccinator for the Western District.
ISLINGTON—Medical Officer of Health and Analyst.
KING'S LYNN UNION, Norfolk—Medical Officer to the Workhouse and Infirmary.
LEXDEN and WINSTREE UNION, Essex—Medical Officer for District No. 8.
MONMOUTH HOSPITAL and DISPENSARY—Dispenser.
NORFOLK and NORWICH HOSPITAL—House-Surgeon.
NORTHERN HOSPITAL, Liverpool—Physician.
ST. SAVIOUR'S UNION, Surrey—Medical Officer for District No. 3.
SOUTHAMPTON UNION—Medical Officer for District No. 2.
TOWCESTER UNION, Northamptonshire—Medical Officer and Public Vaccinator for the Towcester District and the Workhouse.
UNST, Shetland—Parochial Medical Officer and Public Vaccinator.
WEST RIDING OF YORKSHIRE CONSTABULARY—Surgeon for the Mirfield District.
YORK UNION—Medical Officer and Public Vaccinator for District No. 4.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

MULHOLLAND, Owen, L.R.C.P. Edin., appointed Medical Officer, etc., for the Tullyvin Dispensary District of the Cootehill Union, co. Cavan.
SHIPMAN, George W., Esq., appointed Surgeon to the Grantham District of the Great Northern Railway.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

ANDERTON, Henry, L.R.C.P. Ed., at Newbury Park, near Birkenhead, aged 81, on August 1st.
DAY, William M. H., Esq., Assistant House-Surgeon of the Bristol Lunatic Asylum, at Bath, suddenly, aged 53, on August 9th.
HALL.—On August 29th, at Sneinton, near Nottingham, aged 83, Sarah, sister of the late Marshall Hall, M.D.
MANN, Robert, Esq., Surgeon, late of Manchester, at Plâs Elwy, St. Asaph, aged 80, on August 14th.
NEWBOLD, Ambrose, M.K.Q.C.P., at Carnew, co. Wicklow, aged 44, on Aug. 7th.
PERKINS, John S. S., Esq., Surgeon, at Exeter, from the bursting of an abdominal aneurism, aged 26, on August 17th.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The following scholarships and prizes have been awarded for the winter and summer sessions 1870-71:—Jeaffreson Exhibition—E. Crétin. Senior Scholarship in Medicine, Surgery, Materia Medica, and Therapeutics—H. E. Bridgeman, W. Furner, and T. Strafford (equal). Senior Scholarship in Anatomy, Physiology, and Botany—1, C. Firth; 2, R. W. Leftwich. Junior Scholarships—1, E. Crétin; 2, P. H. Dicken; 3, A. F. Stevens. Kirkes Medal—D. P. James. Bentley Prize—H. Taylor. Practical Anatomy (Senior)—Foster Prize—P. Benson; 2, H. J. Ilott; 3, H. A. A. Nicholls and H. Wilcox; 5, E. Milner, F. W. Strugnell, and J. L. Whitsed; 8, J. F. Dixon; 9, P. Haig; 10, W. L. Webber. Wix Prize—H. E. Bridgeman. Hichens Prize—F. E. Jackson. Practical Anatomy (Junior)—Treasurer's Prize—G. Andrew and S. Verco; 3, J. T. Duncan; 4, A. F. Stevens; 5, J. Mills; 6, H. Boulter and P. H. Dicken; 8, J. J. Weakley; 9, J. W. Groves; 10, E. J. Burgess.

EDUCATIONAL NUMBER.

PLAIN TRUTHS TO MEDICAL STUDENTS.

THE few words which we shall offer to students this year will be, in the main, a repetition of what we said last year. We stepped aside then from the beaten track, and, in lieu of the traditional exhortations and glorifications, we told them plainly of shortcomings which mar their usefulness and success in after-life, and disfigure their course of education. The past year has singularly proved the usefulness and attested the fruitfulness of the advice which we offered. We repeat it. The students who come to our medical schools are in a large proportion deficient in preliminary education, and wholly untrained in any kind of scientific knowledge or method. They come too young, and too little instructed. They come often under the influence of effete traditions, and looking for success under conditions which can and ought only to bring failure. No student should enter a medical school till he is seventeen years of age: he should look upon the prescribed four years not as the *maximum*, but as the *minimum*, period of study. He should bring to his medical school not only the ordinary humanities of a little Latin and Greek, but a well grounded preliminary acquaintance with the facts of natural science.

We see with great satisfaction that there is a growing tendency to demand of students at their stages of subsequent candidature for diplomas a knowledge of the things themselves which constitute the art and science of medicine, and not merely of that which may be said or written about them. The student will remember that he will henceforth be asked at the day of trial to put up a fracture, instead of repeating a lesson how it ought to be put up; to discriminate and describe specimens under the microscope, instead of writing out descriptions which he has committed to memory; and to produce and reason upon chemical reactions instead of merely enumerating them. It is a painful but not unnatural consequence of the introduction of these practical tests that students coming, as we have said, half-educated and ill-trained to our medical schools, and still under the influence of the old traditions of cramming and book-work, have failed in very large proportions to satisfy the actual demands of their examiners, and still more so their consciousness of that standard which ought to be reached. We have warned students of the folly of neglecting the "refinements" of microscopy, of chemistry, and of physics, as not belonging to every-day practice and medical use. These are, on the contrary, now the daily and necessary implements of medical science. They lie at the foundation of the simplest manipulations; of successful pill-making; of rational prescribing; of the moral right to order a black draught or to prescribe a shower-bath.

There are still floating about in surgeries and wards, and in the back places of medical talk, sneers at scientific medicine, laudations of the rule of thumb, and much vapouring about experience. Let our student beware of such snares, and keep his head out of this mist. Every dose of medicine which he gives is a scientific experiment, performed under peculiarly difficult and complex circumstances. To be capable of observing or recording its effects in a manner worthy of any attention, or other than delusive, and more mischievous than useful, requires a very thorough physical, chemical, and logical training, such as the student will only succeed in obtaining by the utmost labour that he can devote to his work throughout his four years of studentship. A word of caution against the contempt sometimes expressed for prizes and rewards. There are exceptions to every rule; but, almost without exception, those who have taken the highest and most numerous school-prizes have been rewarded by the highest and most noble achievements in science in after-life. For what is called success in practice, other qualities also are needed. Balance of character, steadiness of purpose, rectitude and self-denial, sagacity, and kindness of manner and of purpose, are characteristics which do not necessarily accompany intellectual activity and strenuousness: they have the highest value in life, and, both in school and out of it, will help to make or mar a man's career. But those idle

persons who sneer at school distinctions are no friends to the student or to science. In any case, however, the distinction is only the badge; it pretends to imply knowledge. If the badge be won by any dodge, and in the absence of that which it typifies, it is as worthless as are all other shams. It must be the object of the student to get real knowledge, that he may be able to do his work well, and to respect himself while he is helping others. In proportion to the reality of his knowledge he may account himself successful. In respect, therefore, to all that he learns, he must try to look upon books not as containing the things which he is to learn, but as guiding him to the things which he is himself to inspect in very fact and compare with book-descriptions. He must no more think himself a surgeon from being able to quote by heart pages of a treatise on surgery, than he would think himself an Alpine climber because he could recite pages of Murray's *Handbook to Switzerland*. He should never content himself without handling and seeing and doing all that can be handled, seen, or done. He will find in the laboratory, the dissecting-room, the microscope-room, the ward, the out-patient-room, and the dispensary, his proper fields for work. He will find there the things which belong to his work; and he must think nothing achieved till he has compared facts and accomplished the manipulations of which his books can only tell him. He will find that, for early clinical study and preliminary practical work of all kinds, provincial hospitals afford much readier occasions, and greater wealth of unoccupied space and material, than the often overcrowded wards and pharmacies of London hospitals; and we advise the working student to avail himself of their opportunities—now too little used.*

CHANGES IN THE HOSPITALS AND MEDICAL SCHOOLS.

THE following changes in the hospitals and medical schools have taken place since the commencement of the last winter session.

At St. Bartholomew's Hospital, Mr. Luther Holden has retired from the chair of Anatomy, which he has long and honourably filled. Mr. Callender, for some time the colleague of Mr. Holden, retains the lectureship; in which Mr. Thomas Smith is now associated with him. Dr. Russell has succeeded the late Dr. Matthiessen as lecturer on Chemistry and teacher of Practical Chemistry. Mr. Willett succeeds Mr. Langton and Mr. Marsh in teaching Operative Surgery, and Mr. Symons is appointed demonstrator of Practical Physiology. Dr. Claye Shaw has been appointed lecturer on Psychological Medicine in the room of Dr. Thorne Thorne. The resignation by Sir James Paget of his post as surgeon of the hospital has been followed by his appointment as consulting-surgeon, the promotion of Mr. Callender from the office of assistant-surgeon to that of surgeon, and the appointment of Mr. Morratt Baker as assistant-surgeon.

The staff of the Charing Cross Hospital has just sustained a severe loss in the death of Dr. Hyde Salter, the senior physician to the hospital, and lecturer on Medicine. His successor has not yet been appointed. Dr. Pollock has been promoted to a full physicianship; and Dr. Douglas Powell has been appointed assistant-physician. The surgical staff has been increased by the appointment of Mr. Fairlie Clarke as assistant-surgeon.

At St. George's, Mr. Pick is associated with Mr. Holmes as Lecturer on Surgery, and replaces Mr. Rouse as Teacher of Operative Surgery. A special course of lectures by Dr. Lockhart Clarke, on Diseases of the Brain and Spinal Cord, is announced for the winter session. Mr. Dalby has been appointed Lecturer on Aural Surgery.

At Guy's Hospital, Dr. Pavy has been promoted to the rank of physician, and Dr. Pye-Smith has been appointed assistant-physician. Mr. Cock has resigned office as senior-surgeon and has been appointed consulting-surgeon; Mr. Bryant, late senior assistant-surgeon, has consequently become full surgeon; and Mr. Howse and Mr. Davies-

* See *Preliminary Medical Education at Provincial Hospitals*. By William Paul Swain, F.R.C.S., Devonport. London: Churchill. Price Sixpence.

Colley have been appointed assistant-surgeons. Dr. Hilton Fagge is associated with Dr. Moxon in teaching Pathological Anatomy; and Dr. Thompson Dickson has been appointed Lecturer on Mental Diseases.

In King's College, Mr. Bloxam has succeeded the late Dr. Miller as professor of Chemistry; and Dr. Edgar Sheppard has been appointed professor in the new chair of Psychological Medicine. Mr. Henry Smith has become full surgeon to the hospital; and Mr. Wood replaces Mr. Partridge as one of the lecturers on Clinical Surgery.

At the London Hospital, Dr. Hughlings Jackson has been promoted to the post of physician. Dr. Prosser James has succeeded Dr. Down as lecturer on *Materia Medica*; and Dr. Meymott Tidy has taken Dr. James's place as lecturer on Forensic Medicine in conjunction with Mr. Rodgers.

Numerous changes have occurred at St. Mary's Hospital. Dr. Sibson has retired from the office of physician, Mr. Samuel Lane from that of surgeon, and Dr. Tyler Smith from that of obstetric physician—all in consequence of the expiry of their term of appointment. Dr. Broadbent has been promoted to the post of physician, and Dr. J. A. Nunneley has been appointed assistant-physician. Mr. E. Owen has been appointed assistant-surgeon; and Dr. A. Meadows obstetric physician and lecturer on Midwifery. Mr. Norton is the sole lecturer on Anatomy, Mr. Gascoven having taken the place of Mr. Spencer Smith as Mr. J. R. Lane's colleague in the chair of Surgery. Mr. Wright teaches Chemistry and Practical Chemistry in the room of Dr. W. Russell, appointed to St. Bartholomew's Hospital. Dr. Broadbent has been appointed lecturer on Medicine in conjunction with Dr. T. K. Chambers, *vice* Dr. Handfield Jones. Dr. Nunneley teaches Histology in place of Dr. Lawson; and Dr. Cheadle Pathology in the room of Dr. F. Payne, who has been transferred to St. Thomas's Hospital. Mr. Howard Hayward has succeeded Mr. Sercombe as lecturer on Dental Surgery.

At the Middlesex Hospital, Dr. Murchison, in consequence of his appointment to St. Thomas's Hospital, has resigned the office of physician and lecturer on Medicine, and is succeeded in the last named post by Dr. Greenhow, who consequently retires from the joint-lectureship on Medical Jurisprudence. Dr. Burdon Sanderson has vacated the office of assistant-physician; and Mr. Henry Arnott, having been appointed to St. Thomas's Hospital, has retired from the office of assistant-surgeon. Dr. Cayley and Dr. John Murray have been appointed assistant-physicians; and Mr. Henry Morris assistant-surgeon. Mr. Lowne has become lecturer on Physiology in the room of Dr. Ferrier, and teacher of Histology in place of Dr. Cayley. Dr. Murie lectures on Comparative Anatomy in place of Dr. Spencer Cobbold. Mr. Taylor has retired from the chair of Chemistry, leaving it occupied by Mr. Heisch alone. Operative Surgery is to be taught by Mr. Hulke, Mr. Lawson, and Mr. Morris. Dr. John Murray is announced to give a course of Laryngoscopic Demonstrations.

The transference of St. Thomas's Hospital to the new buildings is attended with an increase of the medical and surgical staff, and some changes in the *personnel* of the school. The appointments in the hospital staff have been those of Dr. Murchison as physician; of Drs. Stone, Ord, John Harley, and Payne, as assistant-physicians; of Mr. Mac Cormac, Mr. F. Mason, and Mr. H. Arnott, as assistant-surgeons; and of Mr. Liebreich as ophthalmic surgeon. In the school, Dr. John Harley succeeds Dr. Bristowe as the colleague of Dr. Ord in the lectureship on Physiology; Mr. F. Mason and Mr. Wagstaffe become lecturers on Anatomy, in place of Mr. Sydney Jones; Dr. Murchison lectures on Medicine in place of Dr. Barker, conjointly with Dr. Peacock; Mr. S. Jones becomes the colleague of Mr. Le Gros Clark in the lectureship on Surgery—Mr. Solly having retired from that chair as well as from the office of surgeon to the Hospital; Mr. Stewart lectures on Comparative Anatomy in place of Dr. Ord; and Mr. Liebreich on Ophthalmic Surgery in the room of Mr. Sydney Jones. Special instruction in Operative Surgery will be given by Mr. Croft and Mr. Mac Cormac.

At University College Hospital, Dr. Charlton Bastian has been

promoted to the post of physician; and Mr. Berkeley Hill and Mr. C. Heath have in like manner become full surgeons. Mr. Marcus Beck has been appointed teacher of Surgical Pathology; and Dr. Roberts assistant-teacher of Clinical Medicine.

At the Westminster Hospital, Mr. Hillman has retired from the office of surgeon; and Mr. Mason, having accepted an appointment in St. Thomas's Hospital, from that of assistant-surgeon. Mr. R. Davy and Mr. Thomas Cooke have been appointed assistant-surgeons. Dr. Basham has retired from the lectureship on Medicine, leaving it occupied by Dr. Anstie alone; who again is succeeded by Dr. Sturges as Lecturer on *Materia Medica*. In consequence of the retirement of Mr. Mason, Mr. Hothouse is the sole occupant of the lectureship on Surgery. Dr. R. J. Lee succeeds Dr. Sturges as the co-lecturer with Dr. Gibb on Medical Jurisprudence. Dr. Maclure, the lecturer on Physiology, will also teach Practical Physiology.

At Queen's College, Birmingham, Mr. J. F. West has retired from the lectureship on Anatomy. Mr. Jolly has been appointed surgeon to the General Hospital; and Mr. John Clay obstetric surgeon to the Queen's Hospital.

In the Bristol Medical School, Mr. Tibbits has retired from the lectureship on Anatomy, and has taken the place of Mr. Crosby Leonard as lecturer on Surgery in conjunction with Mr. Coe. Mr. E. C. Board has become lecturer on Anatomy in place of Mr. Tibbits; and is succeeded as lecturer on Forensic Medicine by Mr. Keall. Dr. E. Ludlow has been appointed assistant-physician, and Mr. Board assistant-surgeon, to the Royal Infirmary.

In the Leeds School of Medicine, Mr. Wright and Mr. Walker succeed Mr. Hall and Mr. Jessop as lecturers on Physiology. Mr. S. Hey retires from the lectureship on Surgery; and Mr. Jessop is appointed one of the lecturers. Mr. J. A. Nunneley gives instruction in Aural Diseases. Dr. Chadwick has resigned the post of physician to the Infirmary and has been appointed consulting-physician; Dr. J. E. Eddison has been appointed physician.

Dr. Caton has been appointed demonstrator of Practical Physiology in the Liverpool Royal Infirmary School of Medicine. Dr. Inman has resigned the office of physician to the Liverpool Royal Infirmary, and has been succeeded by Dr. Waters.

In consequence of the death of Mr. Dumville, Mr. Bowring, lately dispensary surgeon, has become full surgeon to the Manchester Royal Infirmary.

In the University of Durham College of Medicine at Newcastle, Dr. Arnison lectures (in conjunction with Dr. Humble) on *Materia Medica* in place of Botany.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and the names of the gentlemen appointed to deliver introductory addresses. Where no name is inserted, it is to be understood that there is no special introductory lecture.

- St. Bartholomew's Hospital—October 2nd.
- Charing Cross Hospital—Dr. Green—October 2nd, 8 P.M.
- St. George's Hospital—Dr. John Clarke—October 2nd, 2 P.M.
- Guy's Hospital—Dr. Oldham—October 2nd, 2 P.M.
- King's College—Dr. Rutherford—October 2nd, 4 P.M.
- London Hospital—Dr. Little—October 2nd, 3 P.M.
- St. Mary's Hospital—Dr. A. Meadows—October 2nd, 8 P.M.
- Middlesex Hospital—Dr. John Murray—October 2nd, 3 P.M.
- St. Thomas's Hospital—Mr. Le Gros Clark—October 2nd, 2 P.M.
- University College—Dr. Charlton Bastian—October 2nd, 3 P.M.
- Westminster Hospital—Dr. Basham—October 2nd, 8 P.M.
- Bristol Medical School—October 2nd.
- Birmingham (Queen's College)—Dr. Russell—October 3rd, 3 P.M.
- Leeds School of Medicine—Dr. Clifford Allbutt—Oct. 2nd, 12 noon.
- Liverpool Royal Infirmary School of Medicine—Dr. W. Carter—October 2nd, 3 P.M.
- Manchester Royal School of Medicine—Mr. R. T. Hunt, October 2nd, 12 noon.
- Newcastle College of Medicine—Dr. Philipson—October 2nd, 2 P.M.
- Sheffield School of Medicine.—Mr. A. Allen—October 2nd.
- Aberdeen University—November 1st.
- Edinburgh University—Sir A. Grant, Bart., LL.D.—November 1st.
- Edinburgh School of Medicine—Mr. Annandale—November 1st, 11 A.M.
- Glasgow University—Dr. Dickson—October 31st.
- „ Anderson's University—October 31st.

The Dublin Medical Schools open their Dissecting-Rooms on October 1st, but lectures do not begin until the end of the month.

REGULATIONS

OF

THE GENERAL MEDICAL COUNCIL AND
MEDICAL LICENSING BODIES.

SESSION 1871-72.*

THE GENERAL MEDICAL COUNCIL.

Recommendations and Opinions on Preliminary Examination.

THAT Testimonials of Proficiency granted by the National Educational Bodies, according to the subjoined list, may be accepted, the Council reserving the right to add to, or take from, the list. I.—*Universities of the United Kingdom.* Oxford: Examination for a Degree in Arts; Responsions; Moderations; Local Examinations (Senior), Certificate to include Latin and Mathematics. Cambridge: Examination for a Degree in Arts; Previous Examination; Local Examinations (Senior), Certificate to include Latin and Mathematics. Durham: Examinations for a Degree in Arts; Examination for Students in their Second and First years; Registration Examination for Medical Students; Local Examinations (Senior), Certificate to include Latin and Mathematics. London: Examination for a Degree in Arts; Matriculation Examination. Aberdeen, Edinburgh, Glasgow, or St. Andrew's: Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery. Edinburgh: Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh. Dublin: Examination for a Degree in Arts; Entrance Examination. Queen's University (Ireland): Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts; Previous Examination for B.A. Degree. II.—*Other Bodies named in Schedule (A) to the Medical Act.* Royal College of Surgeons of England: Examination conducted, under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors. Society of Apothecaries of London: Examination in Arts. Royal College of Physicians, Edinburgh, and Royal College of Surgeons, Edinburgh: Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined. Faculty of Physicians and Surgeons of Glasgow: Preliminary Examination in General Literature. Royal College of Surgeons in Ireland: Preliminary Examination, Certificate to include Mathematics. Apothecaries' Hall of Ireland: Preliminary Examination in General Education. III.—*Examining Bodies in the United Kingdom, not included in Schedule (A) to the Medical Act.* Royal College of Preceptors: Examination for a First Class Certificate. The Examiners for Commissions in the Military and Naval Services of the United Kingdom: Certificate to include all the subjects required by the General Medical Council. IV.—*Colonial and Foreign Universities and Colleges.* University of Calcutta, Madras, or Bombay: Entrance Examination, Certificate to include Latin. University of McGill College, Montreal, of Toronto, of King's College, Toronto, of Queen's College, Kingston, of Victoria College, Upper Canada, of Fredericton, New Brunswick, or of Sydney: Matriculation Examination. University of King's College, Nova Scotia: Matriculation Examination; Responsions. University of Melbourne: Matriculation Examination, Certificate to include all the subjects required by the General Medical Council. Codrington College, Barbadoes: English Certificate for Students of two years' standing, specifying the subjects of Examination; Latin Certificate, or "Testamur." Tasmanian Council of Education: Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics. Christ's College, Canterbury, New Zealand: Voluntary Examinations, Certificate to include all the subjects required by the General Medical Council. Cape of Good Hope: Third Class Certificate in Literature and Science, granted by the Board of Public Examiners.—N.B. A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient Testimonial of Proficiency.—That it be recommended to the Licensing Boards not to accept the certificate of proficiency in general (preliminary) education from any of the Bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in—I. English Language, including Grammar and Com-

position.* 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin, including Translation and Grammar. And in one of the following *Optional Subjects*:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—That students who cannot produce any of the testimonials referred to in the first recommendation be required to pass an Examination in Arts, established by any of the bodies named in Schedule (A) to the Medical Act, and approved by the General Medical Council.—That certificates of proficiency, to be received from all bodies legally authorised to examine in General Education in Great Britain and Ireland, and from the several Licensing Bodies enumerated in Schedule (A) to the Medical Act in Great Britain and Ireland, shall bear evidence that the candidates have been examined and approved in at least the above subjects.—That, in the case of certificates received from similar educational and licensing bodies in other parts of the empire and foreign countries, satisfactory evidence shall be given to the Medical Council, or Branch Councils, that such certificates are equivalent to those recognised in the United Kingdom.—That it shall be delegated to the Executive Committee to prepare annually and lay before the Council for recognition a list of Examining Bodies, whose examinations shall fulfil the conditions of the Medical Council as regards Preliminary Education.

Registration of Medical Students.

Every medical student shall be registered in the manner prescribed by the General Medical Council.—No medical student shall be registered until he has passed a Preliminary Examination.—The commencement of the course of Professional Study recognised by any of the qualifying bodies, shall not be reckoned as dating earlier than fifteen days before the date of registration.—The registration of medical students shall be placed under the charge of the Branch Registrars.—Each of the Branch Registrars shall keep a Register of medical students according to a form, containing the Date of Registration, the Name, the Preliminary Examination and Date, and the Place of Medical Study.—Every person desirous of being registered as a medical student, shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to the annexed form,† which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and a statement of his place of medical study.—The Branch Registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration.—Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students.—The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory.—A copy of the Register of Medical Students, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st December in each year, to the Registrar of the General Council; who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an Alphabetical List of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.—The several qualifying bodies are recommended not to admit, after October, 1870, to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name had not been

* The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate.—1. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition. 2. To write a portion of an English author to dictation. 3. To explain the grammatical construction of one or two sentences. 4. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature. 5. To give the derivation and definition of a few English words in common use. Provided always that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

† *Form of Application for Registration as a Medical Student.*—I hereby apply to be registered as a Student in Medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars. [Name of applicant (to be written in words at length); Surname; Christian name; Preliminary examination; Date of preliminary examination; Place of medical study; Applicant's signature; Address; and Date of application. To the Registrar of the Branch Council for —.]

N.B.—The above Form of Application, duly and legibly filled up, must be forwarded to the Registrar, post free, and be accompanied by a Certificate of the applicant's having passed a Preliminary Examination, as required by the General Medical Council, and a statement of his place of Medical Study.

* To save space, we omit those portions of the Recommendations of the General Medical Council and of the Regulations of the Examining Bodies, which are not of direct importance to medical students.

entered in the Medical Students' Register at least four years previously.—In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.

Age for Licence to Practise.

That the age of 21 be the earliest age at which a candidate for any Professional Licence shall be admitted to his final examination; that the age shall, in all instances, be duly certified; and that a return of any exceptions to this recommendation allowed by the Licensing Bodies, together with the reasons for such exceptions, be transmitted to the Branch Council of that part of the United Kingdom in which they have been granted.—That no Licence be obtained at an earlier period than after the expiration of forty-eight months subsequent to the registration of the candidate as a medical student.

Professional Education.

That the course of Professional Study required for a Licence shall comprehend attendance during not less than four winter sessions, or three winter and two summer sessions, at a school recognised by any of the Licensing Bodies mentioned in Schedule (A) to the Medical Act.—That the following are the subjects without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered:—1. Anatomy; 2. General Anatomy; 3. Physiology; 4. Chemistry; 5. *Materia Medica*; 6. Practical Pharmacy; 7. Medicine; 8. Surgery; 9. Midwifery; 10. Forensic Medicine. "Chemistry" should include a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine. "Medicine and Surgery" should include a knowledge of systematic and Clinical Medicine and Surgery, and also of Morbid Anatomy.—That it be recommended to the several Licensing Bodies that the courses of instruction required by them be framed in such a manner as to secure a due share of attention, both to preparatory branches and to those more strictly connected with the practice of medicine and surgery; and that it be suggested accordingly to these bodies, that their regulations should be such as to prevent attendance upon lectures from interfering with hospital and clinical study.—That the Council will view with approbation any encouragement held out by the Licensing Bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.

Professional Examination.

That it is desirable that the different Licensing Bodies should combine their examinations, when this is practicable, so as to secure that the knowledge of every practitioner whose name appears on the *Register* shall have been tested in all the subjects of professional education which the Council has determined to be essential, as above enumerated.—That the professional examination for any Licence be divided into two parts; the first embracing the primary or fundamental branches directly connected with the Practice of Medicine and Surgery. That the former be not undergone till after the close of the winter session of the second year of professional study; and the latter, or final examination, not till after the close of the prescribed period of professional study.—That the examination in Physics, Botany, and Natural History may be undergone at an earlier period than the first professional examination.—That the professional examinations be conducted both in writing and orally; and that they be practical in all branches in which they admit of being so.—That not less than two examiners, or one examiner with an assessor, should be present at every oral examination.—That the oral examinations should be so far public as to be open at least to the medical and surgical graduates, or members of the examining body.—That the questions to be answered in writing should be so numerous, and embrace such a variety of the details of each subject, as may adequately test the proficiency of the candidate; and that they should be submitted to the whole body of examiners for consideration and revision, if desirable, before being proposed to the candidates.—That the written answers should be submitted to more than one of the examiners.—That excellence in one or more subjects should not be allowed to compensate for failure in others.—That if a candidate be rejected for failure in any one subject, he should be re-examined in all.—That examiners should only be elected for definite periods, with power of reappointment.—That the professional examinations be held by the several Licensing Bodies, except in special cases, at stated periods, to be publicly notified.—That returns from the Licensing Bodies in Schedule (A) be made annually, on January 1st, to the General Medical Council, stating the number and names of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.*

EXTRACTS OF BYE-LAWS RELATING TO MEMBERS.

Any person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the Bye-Laws and Regulations of the College, may be proposed to the College to be admitted a Member. Every Candidate for the Membership who shall have commenced his professional studies after September 1861, shall satisfy the Censor's Board that previously to the commencement of his professional studies he has obtained a Degree in Arts from some University of the United Kingdom or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts. Every Candidate for membership shall furnish proof that he has attained the age of 25; and shall produce a testimonial of moral character and conduct from a Fellow or Member of the College.—Every Candidate (*except such as are specially exempted as below described*) shall produce proof of his having been engaged in professional studies during five years, of which four years at least shall have been passed at a medical school or schools recognised by the College; and shall produce evidence, satisfactory to the Censors' Board, of having studied the following subjects. [The subjects are the same as those required for the Licence (see next page); but Morbid Anatomy must be attended during six months, and Clinical Medicine during *three winter and three summer sessions*.] He must also give evidence of having attended diligently during three winter sessions and three summer sessions the medical practice, and *during three winter sessions and two summer sessions the surgical practice*, of an hospital containing at least 100 beds; of having been engaged during six months in the clinical study of Diseases peculiar to Women; and of having served the office of clinical clerk in the medical wards during at least six months.—Every candidate who has prosecuted his studies abroad, whether in part or to the full extent required by the preceding bye-law (*except such as shall be exempted as below stated*), shall, nevertheless, bring proof of his having attended, during at least twelve months, the medical practice of an hospital in the United Kingdom containing at least 100 beds.—If the Censors' Board doubt the sufficiency of the certificates and testimonials produced by any candidate, or his fitness for admission to examination, they may submit the case to a general meeting of the Fellows.—No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist, or any other person, for the supply of medicines; or who practises medicine or surgery in partnership by deed or otherwise, so long as that partnership continues; or who refuses to make known, when required by the President and Censors, the nature and composition of any remedy he uses.—Every candidate (*except in cases specially exempted*) shall give proof of his acquirements by written answers to questions, and shall be examined *vivâ voce* at three separate examinations, and shall be approved by the President and Censors, or by the major part of them.

Exemptions.—Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, wherein the courses of study, and the examinations to be undergone by the students previously to graduation, shall have been adjudged by the Censors' Board to be entirely satisfactory, shall be exempt (if the Censors shall think fit) from all or any part of the examinations hereinbefore described, except such as relate to the third or pass examination; the nature and extent of which examination shall, in the case of each candidate, be determined by the Censors' Board. Every candidate for the membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.—If any candidate who has attained the age of 40 years shall produce testimonials satisfactory as to his moral character and conduct and his general and professional acquirements, further showing that he has improved the art or extended the science of Medicine, or has at least distinguished himself highly as a medical practitioner; the Censors' Board, having well considered these testimonials, may, if they see fit, submit them to the Fellows at a general meeting, and it shall be determined by the votes of the Fellows present, or of the majority of them, taken by ballot, whether the candidate shall be admitted to examination, which shall, in every such case, be as full and complete as the Censors may deem sufficient.—Any candidate who shall produce satisfactory evidence of having passed an

* The requirements printed in italics apply to candidates who commence their Professional Education in the United Kingdom on or after October 1st, 1867; and to candidates who commence their Professional Education at a recognised Foreign or Colonial School on or after October 1st, 1868.

examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the primary examination.—Any candidate who shall have obtained a degree in Surgery at an University in the United Kingdom, or who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

Every candidate approved by the Censors' Board, shall be proposed, at the next general meeting of Fellows, as qualified to become a Member of the College; and if the majority of the Fellows present shall consent, he shall, on complying with the regulations prescribed by the bye-laws, be admitted a Member. The Fee for admission shall be Thirty Guineas.

Every candidate for the Membership of the College (except such as shall be exempted as above stated), will be required to pass the following examinations.

The First Examination, on Anatomy and Physiology, will be conducted on successive days as follows. First Day: *Evening*, from seven to ten, by written questions. Second Day: *Evening*, commencing at seven o'clock, *viva voce*, on Dissections and Preparations.

The Second Examination will be conducted on successive days, as follows. First Day: *Evening*, from seven to ten, by written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Second Day: *Morning*—The candidate's practical knowledge will be tested, either at the College or in the surgical wards of a Hospital. *Afternoon*, from one to four, on *Materia Medica*, and on Chemistry in its applications to Pathology, Pharmacy, and Toxicology.* (This examination will be conducted partly by written questions and partly in a practical manner.) *Evening*, commencing at seven o'clock, by written questions on Midwifery and the Diseases Peculiar to Women.

The Third, or Pass Examination, will be conducted on successive days as follows. First Day: *Afternoon*, from two to six, by written questions on Medical Anatomy and on the Principles of Medicine. Second Day: *Afternoon*, from two to six, by written questions on the Practice of Medicine, including the *Principles of Public Health*, and on Psychological Medicine. Third Day: The candidate's practical knowledge will be tested, either at the College or in the medical wards of a Hospital. Fourth Day: *Afternoon*, commencing at three o'clock, *viva voce*, on Medical Anatomy, and on the Principles and Practice of Medicine.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second examination until after the termination of four years of professional study, nor to the third or pass examination until after the completion of the required course of professional study.—Any candidate who shall be rejected at the first examination, will not be readmitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of dissections, or other professional study, satisfactory to the examiners, during that time.—Any candidate who shall be rejected at the second examination, will not be readmitted to examination until after the lapse of six months, and will be required to produce a certificate of attendance on the practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures.—Any candidate not approved by the Censors' Board at the third or pass examination, will not (except by special permission of the College) be readmitted to examination until after the lapse of a year.—Every candidate must give fourteen days' notice in writing to the Registrar of the College, of his intention to present himself for examination, at the same time transmitting the following certificates. *For the Primary Examination*: Evidence of having passed an Arts Examination; and, in the case of those who shall have commenced professional studies after 1861, evidence of having previously obtained a Degree of Arts from some University of the United Kingdom, or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. *For the Second Examination*: Evidence of having completed four years of professional study; of having attained the age of 21 years; of instruction and proficiency in the prac-

tice of vaccination; and of having attended not less than twenty labours. *For the Pass Examination*: Proof of having attained the age of 25 years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of professional study.

Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the college.

Examinations of Candidates for the Membership of the College will take place in 1872 as follows. *First Examination*, commencing on Mondays, February 5th, April 1st, July 1st, October 7th, December 2nd. *Second Examination*, commencing on Mondays, February 12th, April 8th, July 8th, October 14th, December 9th. *Third, or Pass Examination*, commencing on Thursday, January 18th, April 18th, July 18th, October 19th.

BYE-LAWS RELATING TO LICENTIATES.

Every candidate for the College Licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect.—Of having attained the age of 21 years.—Of moral character.—Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College.—Of having been registered as a medical student in the manner prescribed by the General Medical Council.—Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions, in one or other of the following ways: 1. Attending the practice of a hospital or other institution recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner, holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction.*—*Of having attended, during three winter sessions and two summer sessions, the Medical and Surgical Practice at a recognised Hospital or Hospitals*, and of having been engaged during six months in the clinical study of Diseases peculiar to Women.—Of having studied the following subjects: Anatomy (with Dissections), two winter sessions;† Physiology, two winter sessions; Chemistry, six months; Practical Chemistry, three months; *Materia Medica*, three months; Practical Pharmacy, three months;‡ Botany, three months;§ Morbid Anatomy, two winter sessions;|| Principles and Practice of Medicine, two winter sessions;¶ Principles and Practice of Surgery, two winter sessions; ** Clinical Medicine, and Clinical Surgery, each two winter sessions and two summer sessions;†† Midwifery and Diseases peculiar to Women, three months;‡‡ Forensic Medicine, three months.—Of having passed the professional examination.

Examination for the Licence.

Every candidate for the Licence, before he is admitted to examination, will be required to sign a declaration, stating whether he has or has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

The first examination, and the second examination as far as the end of the second day, are conducted at the same hours and on the same subjects as the first and second examinations for the membership. The remainder of the examination is as follows. Third day: *Evening*, from seven to ten, by written questions on Medical Anatomy, and on the Principles and Practice of Medicine, including the Principles of Public Health. Fourth day: *Morning*—The candidate's practical knowledge will be tested, either at the College or in the medical wards

* Professional studies commenced before the candidate shall have passed an examination in the subject of general education, will not be recognised by the College.

† The winter session comprises a period of six months, and the summer session a period of three months.

‡ By Practical Pharmacy is meant instruction in the Laboratory of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society of Great Britain, or of a Public Hospital or Dispensary recognised by the College.

§ This course of lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination, will be exempt from attendance on this course.

|| This includes attendance and instruction in the *Post Mortem* Room during the period of Clinical Study.

¶ It is required that the Principles of Public Health should be comprised in this course of lectures, or in the course of lectures on Forensic Medicine.

** The attendance on the lectures on Medicine and Surgery must not commence earlier than the second winter session at a recognised medical school.

†† The attendance on the lectures on Clinical Medicine and Clinical Surgery must not commence until after the first winter session at a recognised medical school. By Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with lectures on cases.

‡‡ Certificates must also be produced of attendance on not less than twenty Labours, and of instruction and proficiency in Vaccination.

* Candidates who shall have passed the first examination for the Licence at this College before October 1st, 1867, are exempted from re-examination on *Materia Medica*, and on Chemistry in its application to Pharmacy.

of a Hospital. *Evening*, commencing at seven o'clock, *viva voce*, on the Principles and Practice of Medicine, Surgery, and Midwifery.

Candidates will not be admitted to the first examination until after the termination of the second winter session of professional study at a recognised medical school, nor to the second or pass examination until after the termination of four years of professional study. The College will not admit to the pass examination any candidate (not exempted from registration) whose name had not been entered in the Medical Students' Register at least four years previously.

Any candidate who shall be rejected at the first examination, will not be re-admitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of Dissections, or other professional study satisfactory to the examiners, during that time. Any candidate who shall be rejected at the second or pass examination, will not be re-admitted to examination until after six months, and will be required to produce a certificate of attendance on the practice of a recognised Hospital during that time, and also of attendance on Clinical Lectures.

Every candidate intending to present himself for examination, is required to give fourteen days' notice in writing to the Registrar of the College, at the same time transmitting the following certificates. *For the First Examination*—Evidence of having passed an Arts Examination; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school. *For the Second, or Pass Examination*—Evidence of having completed four years of professional study; of having attained the age of 21 years; of proficiency in the practice of vaccination; and of having attended not less than twenty labours. A testimonial of moral character is required of every candidate. Blank forms of the required certificates of attendance on hospital practice and on lectures may be obtained on application at the College.

The exemptions in the regulations regarding the Membership, are applicable also to candidates for the Licence; and any candidate who shall have obtained a Degree in Medicine at an University recognised by the College, after a course of study and examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination.—Any Registered Medical Practitioner, whose qualification or qualifications shall have been obtained before the 1st day of January, 1861, having been, with the consent of the College, admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examination as his qualifications may seem to the examiners to render in his case unnecessary.*

The fee for the Licence is Fifteen Guineas, of which Five Guineas are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the Licence; and he will be admitted to one subsequent first examination without the payment of an additional fee.† Any candidate who shall be rejected at the second or pass examination will have the fee, paid on admission to this examination, returned to him, less Three Guineas.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

Examinations of candidates for the College Licence will take place as follows. *First Examination*, commencing on the first Mondays of February, April, July, October, and December. *Second, or Pass Examination*, commencing on the second Mondays of the same months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE DIPLOMA OF MEMBER.

Section I.—Preliminary General Education and Examination.

CANDIDATES who commenced their professional education on or after the 1st of January, 1861, will be required to produce one or other of the following certificates:—1. Of Graduation in Arts at an University recognised for this purpose; viz., Oxford; Cambridge; Dublin; London; Durham; Queen's University in Ireland; Edinburgh; Glasgow; Aberdeen; St. Andrew's; Calcutta; Madras; Bombay; McGill College, Montreal; and Queen's College, Kingston, Canada. 2. Of having passed an examination for Matriculation, or such other examination as shall, in either case, from time to time be sanctioned by the Council of this College, at an University in the United Kingdom, or at a Colonial or

Foreign University recognised by the Council of this College.* 3. Of having passed the preliminary examination for the Fellowship of this College. 4. Of having passed the preliminary examination of the Royal Colleges of Surgeons in Ireland or of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow. 5. Of having passed the examination in Arts of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland. 6. Of having passed the first-class examination of the Royal College of Preceptors. 7. Testamur of the Codrington College, Barbadoes. 8. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate that the student has been examined in Latin and Mathematics. 9. Of having passed the voluntary examinations of Christ's College, Canterbury, New Zealand, the certificate to include all the subjects required from time to time in the Preliminary Examination of the College. Candidates who shall not be able to produce one or other of the foregoing certificates, will be required to pass an examination in English, Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.†

Section II.—Professional Education.

Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge, in conformity with the regulation in the preceding section, are not recognised.—The following will be considered as the commencement of professional education:—1. Attendance on the practice of a hospital, or other public institution recognised by this College; 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council; 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College. *The commencement of professional study otherwise than by attendance on lectures in recognised Medical Schools, or by attendance on the practice of recognised Hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College, by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the Hospital or other institution to the practice of*

* The following are the Examinations at present recognised under this Clause (No. 2), viz.: Oxford—Responsions or Moderations; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics. Cambridge—Previous Examination; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics. Dublin—Entrance Examination. London—Matriculation Examination. Durham—Examination of Students in Arts in their second and first years; Middle-Class Examinations, Senior, the Certificates to include Latin and Mathematics; Registration Examination for Medical Students. Queen's University in Ireland—Two years' Arts Course for Diploma of Licentiate in Arts; Preliminary Examinations at end of B.A. Course; Middle-Class Examinations, the Certificates to include Latin and Mathematics; Matriculation Examinations. Edinburgh, Aberdeen, Glasgow, and St. Andrew's—Preliminary or Extra Professional Examinations for Graduation in Medicine. Calcutta, Madras, and Bombay—Matriculation Examinations. Canada: McGill College, Montreal; University College, Toronto; Queen's College, Toronto; University of Laval, Quebec—Matriculation Examinations. Queen's College, Kingston—Matriculation Examination; Preliminary Examination of Students in Medicine. University of Melbourne—Matriculation Examination, with a Certificate that the Student has passed an Examination in Latin.—Sydney—Matriculation Examination.—New York, Bellevue Hospital Medical College—Matriculation Examination.

† The following are the subjects of the examination during the year; viz.—Part I. *Compulsory Subjects*. 1. Reading aloud a passage from some English author. 2. Writing from dictation. 3. English Grammar. 4. Writing a short English composition: such as a description of a place, an account of some useful or natural product, or the like. 5. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple or compound, of Vulgar Fractions, and of Decimals. 6. Questions on the Geography of Europe, and particularly of the British Isles. 7. Questions on the outlines of English History; that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics: Euclid, Books I and II; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of Cæsar's *Commentaries De Bello Gallico*.—Part II. *Optional Subjects*. Papers will also be set on the following six subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—1. Translation of a passage from the first Book of the *Anabasis* of Xenophon. 2. Translation of a passage from X. B. Saintine's *Picciola*. 3. Translation of a passage from Schiller's *Wilhelm Tell*. Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional. 4. Mechanics: the questions will be chiefly of an elementary character. 5. Chemistry: the questions will be on the elementary facts of Chemistry. 6. Botany and Zoology: the questions will be on the Classification of Plants and Animals. The quality of the handwriting and the spelling will be taken into account. N.B. Each candidate (who has not already paid the amount) is required to pay a Fee of £2 on the morning of the first day of the examination, prior to his admission thereto. The next examination will be held on or about the third Tuesday or Wednesday in December. The exact dates of the examination are duly advertised when fixed in the Medical Journals; and candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of each examination. NOTE. A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I, to pass in Greek, French, or German; and in one, at his option, of the remaining subjects in Part II.

* Forms of application may be obtained of the Registrar of the College.

† The Fee must be paid within three days prior to the day on which the examination commences.

which he shall have entered, and will date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the preliminary examination in general knowledge.—Candidates will be required to produce certificates:—1. Of being 21 years of age. 2. Of having been engaged, subsequently to passing the preliminary examination, during four years, or during not less than four winter and four summer sessions, in the acquirement of professional knowledge. 3. Of having attended the following courses: Lectures on Anatomy, two winter sessions. 4. Dissections, not less than two winter sessions. 5. Lectures on General Anatomy and Physiology, one winter session. 6. Practical General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class.* 7. Lectures on Surgery, one winter session. 8. Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by Clause 7.† 9. One Course of Lectures on each of the following subjects, viz.: Chemistry;‡ *Materia Medica*; Medicine; Forensic Medicine; Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months. 10. Practical Pharmacy, three months. 11. A three months' course of Practical Chemistry (with manipulations), in its application to medical study. 12. Instruction and proficiency in the practice of Vaccination.§ 13. Of having attended, at a recognised hospital or hospitals, the practice of Surgery during three winter|| and two summer¶ sessions. 14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.** 15. Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended, at a recognised hospital or hospitals, Clinical Lectures on Surgery during two winter and two summer sessions. 16. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a Surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. 17. Of having attended, during the whole period of attendance on Surgical Hospital Practice (see clause 13), demonstrations in the *post mortem* rooms of a recognised hospital. 18. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine and Clinical Lectures on Medicine during one winter and one summer session.

NOTICE.—*Clauses 6, 8, 11, 14, and 17, and the notes to clauses 6, 8, 9, 12, and 14, together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause 9, are applicable to candidates who commenced their professional education on or after the 1st of October, 1870.*

N.B.—Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

Section III.—Concerning Certificates, etc.

1. Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be

* By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.

† The course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in—the application of anatomical facts to Surgery, on the living person, or on the dead body; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person, or on the dead body; the performance, where practicable, of the operations of Surgery on the dead body; the use of Surgical Apparatus; the examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

‡ The course of lectures on Chemistry will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

§ In the case of candidates who commenced their professional education on or after the 1st of October, 1868, the certificate of instruction in vaccination will only be received from recognised Vaccine Stations, or from recognised Vaccine Departments in Medical Schools or Hospitals, or other Public Institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place.—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

|| The Winter Session comprises a period of six months; and, in England, commences on the 1st of October and terminates on the 31st of March.

¶ The Summer Session comprises a period of three months; and, in England, commences on the 1st of May and terminates on the 31st of July.

** It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the Hospital.

considered as one branch of science. 2. Certificates will not be recognised from any hospital in the United Kingdom, unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any School of Surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom. 3. No Metropolitan Hospital will be recognised by this College which contains less than 150, and no Provincial or Colonial Hospital which contains less than 100 patients. 4. The recognition of Colonial Hospitals and Schools is governed by the same regulations, with respect to number of patients and to courses of lectures, as apply to the recognition of Provincial Hospitals and Schools in England. 5. Certificates of attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for the period of at least six months will be required. 6. Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in the provincial schools in England, unless their names shall be duly returned from their respective schools.* 7. Candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma. Candidates who shall have pursued the whole of their studies at recognised foreign or colonial Universities will be admitted upon the production of the several certificates required for their degree by the authorities of such Universities. 8. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom; Graduates in Surgery of any University recognised for this purpose by this College; and 9. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College, will be admitted to examination on producing their Diploma, Licence, or Degree, together with proof of being 21 years of age. In each of these cases, 7, 8, and 9, the candidate will also be required to produce a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Section IV.—Professional Examination.

This examination is divided into two parts. 1. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. 2. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine, is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. [A candidate can claim exemption from examination in Medicine under the following conditions, viz.: a. The production by the candidate of a Degree, Diploma, or Licence in Medicine entitling him to register under the Medical Act of 1858, or a Degree, Diploma, or Licence in Medicine of a Colonial or Foreign University approved by the Council of the College. b. A declaration by the candidate, prior to his admission to the final examination for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph; in which case the Diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.] 3. The primary examinations are held in January, April, May, July, and November, and the pass examinations generally in the ensuing week respectively. 4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of attendance at a recognised school or schools; nor to the pass or surgical examination until after the termination of the fourth year of professional education. 5. The fee of Five Guineas, paid prior to the primary examination, and allowed on the whole fee of Twenty-

* At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

two pounds* payable for the diploma, is retained; and after any two consecutive failures at the primary examination, the candidate is required to pay an *additional* fee of Five Guineas prior to being again admitted to that examination, which *additional* fee is also retained. 6. Five guineas, part of the sum of sixteen pounds fifteen shillings, the balance of the whole fee due for the diploma and paid prior to the pass examination, is retained; and after any two consecutive failures at the pass examination, the candidate is required to pay an *additional* fee of five guineas prior to being again admitted to the said pass examination, which *additional* fee is also retained. 7. A candidate having entered his name for either the primary or pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within three months from the date at which he shall have so failed to attend. 8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference. 9. A candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the Surgical Practice of a recognised hospital, together with Lectures on Clinical Surgery, subsequently to the date of his reference.

REGULATIONS RELATING TO THE DIPLOMA OF FELLOW.

Section I.—Preliminary Examination.

Candidates must produce certificates of graduation in Arts at an University recognised for this purpose;† or of having passed such examinations in Arts as shall from time to time be required for graduation in Medicine at Oxford, Cambridge, Dublin, London, or Durham. Candidates who shall not be able to produce one or other of the foregoing certificates will be required to pass an examination conducted by the Board of Examiners of the Royal College of Preceptors.‡

Section II.—Professional Education.

I. Except in the cases provided for to the contrary, every candidate for admission to the First or Anatomical and Physiological Examination for the Fellowship is required to produce, in addition to certificates of the same kind as are described in Section II, Clauses 3, 5, 6, 10, and 11 of the Regulations for the Membership, Certificates of having passed the preliminary examination; of having performed Dissections during three winter sessions; of having attended one course of lectures on Comparative Anatomy and one course of Lectures on Chemistry.

II. Except in the cases provided for to the contrary, every candidate before his admission to the Second or Professional Examination is required to produce, in addition to the certificates described in Section II, Clauses 7, 8, 9 (except Chemistry, included in the first examination), 12, 14, and 15 of the Regulations for the Diploma of Member, certificates of being 25 years of age; of having been engaged for six years in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College (or, if the candidate be already a Member of the College, certificates of having been engaged for two years in the acquirement of professional knowledge in recognised hospitals and schools, in addition to the certificates required for the diploma of Member); of having performed Operations on the dead body under the superintendence of a recognised teacher; of having attended the Surgical Practice of a recognised hospital or hospitals during four winter and four summer sessions, and the Medical Practice during one winter and one summer session; of having attended, during three winter and two summer sessions, demonstrations in the *post mortem* rooms of a recognised hospital; of having attended Clinical Lectures on Medicine during one winter and one summer session; and of having served the office of house-surgeon or dresser for not less than six months.

III. In the case of a candidate who shall have taken by examination the Degree of Bachelor or Master of Arts in any University in the United Kingdom recognised by the Council, it shall be sufficient for him to produce a certificate or certificates that he has been engaged for five years (instead of six years) in the acquirement of professional knowledge in hospitals or schools of Anatomy, Surgery, and Medicine recognised by the Council of the College.

IV. Any Member of the College shall, after the expiration of eight years from the date of his diploma, be entitled to be admitted to the professional examination for the Fellowship upon the production of a certificate, signed by three Fellows, that he has been for eight years in

the practice of the profession of surgery, and that he is a fit and proper person to be admitted a Fellow if upon examination he shall be found qualified.

Section III.—Professional Examinations.

The examinations are held twice in the year, in May and November, and at such other times as the Council may appoint. They occupy not less than two days. The subjects of the first examination are the same as for the membership; the second examination, on Pathology, Therapeutics, and the Principles and Practice of Surgery and Medicine,* is partly written, partly *viva voce*, and partly on the practical use of surgical apparatus, and includes the examination of patients, and operations on the dead body.—The Fees are: for the first examination Five Guineas, to be allowed on the fee for the Diploma of Fellow, but to be retained in case of rejection; for the second examination Five Guineas (if the candidate be a member) over and above charges for stamps, to be retained in case of rejection; Twenty-five Guineas (if he be not a Member) over and above charges for stamps, of which Five Guineas will be retained in case of rejection.† A candidate whose qualifications are found insufficient on his anatomical and physiological examination cannot present himself for re-examination until after the expiration of six months; and a candidate whose qualifications shall be found insufficient upon his pathological and surgical examination cannot present himself for re-examination until after the expiration of one year, unless the Court of Examiners shall otherwise determine.

SOCIETY OF APOTHECARIES, LONDON.

REGULATIONS RELATING TO ALL CANDIDATES FOR EXAMINATION.

Every candidate for a certificate of qualification to practise as an Apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. (This examination must be passed before the commencement of professional studies, which is defined by the Medical Council to be "the time of commencing studies at a medical school".) 2. Of having served an apprenticeship or pupilage of not less than five years to a practitioner qualified by the Act of 1815. (This period may include the time spent in attending lectures and hospital practice.) 3. Of having attained the full age of 21 years. 4. Of good moral conduct. 5. Of having pursued a course of medical study in conformity with the regulations of the Court. 6. Of having served the office of clinical clerk at a recognised hospital during the period of six weeks at least. 7. Of having been examined at the class-examinations instituted by the various lecturers and professors of the respective medical schools and colleges.

The Court meets every Thursday; and candidates are required to attend at 3.45 P.M. Every candidate intending to offer himself for examination must give notice on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials, with the fee, at the office of the beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturdays, ten to two.

Course of Study.

Every candidate whose attendance on lectures shall have commenced on or after October 1, 1863, must attend the following lectures and medical practice during not less than three winter and two summer sessions (each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from May 1 to July 31). *First Year: Winter Session:* Chemistry; Anatomy and Physiology; Dissections. *Summer Session:* Botany; Materia Medica and Therapeutics; Practical Chemistry.—*Second Year: Winter Session:* Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. *Summer Session:* Midwifery and Diseases of Women and Children, and Vaccination; Forensic Medicine and Toxicology; Clinical Medical Practice.—*Third Year: Winter Session:* Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.—No certificates of lectures or of anatomical instruction delivered in private to particular students, apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners.—All students are required *personally* to register the several tickets of

* This sum of twenty-two pounds is exclusive of the fee of two pounds paid for the preliminary examination.

† See Regulation for Diploma of Member, Section i, Clause 1.

‡ For the Subjects, see Note to Section i, Clause 9, page 286.

* For the condition of exemption from examination in Medicine, see Regulations respecting the Diploma of Member, Section iv, Clause 2. A candidate who has passed an examination in Medicine for the Membership will not be required to pass any further examination in Medicine for the Fellowship.

† The sum of £2, paid on the Preliminary Examination, will be allowed against these amounts.

admission to lectures and medical practice within the first fifteen days of the months of October and May.

Examinations in the subjects of preliminary education will be held at the Hall of the Society on Friday and Saturday, January 26th and 27th, April 26th and 27th, September 27th and 28th, 1872.—Candidates will be examined in the following branches; and no candidate will be approved unless he show a competent knowledge of each branch:—1. The English Language; 2. The Latin Language; 3. Mathematics; 4. One of the following subjects, at the option of the candidate; (a) Greek; (b) French; (c) German; (d) Natural Philosophy.* Candidates applying to be admitted to any examination must pay the fee (One Guinea) at least one week before the examination; and must sign their names in the candidates' book between 11 A.M. and 3 P.M., not later than the previous Thursday.

If a candidate fail to pass the examination, the fee will not be returned to him; but he will be admissible to either or both of the two next following examinations in Arts without the payment of an additional fee, upon giving the usual notice, and signing the candidates' book. Certificates in Arts granted by any of the bodies whose certificate is recognised by the Medical Council will be accepted as equivalent to having passed the above examination.

The examination of candidates for the Licence is divided into two parts, and is conducted partly in writing, and partly *viva voce*.

The *First Examination*, which may be passed after the second winter session, embraces the following subjects:—The *British Pharmacopœia*; Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany and Materia Medica.

The *Second Examination*, after the third winter session (the five years' pupillage having been completed), includes: Principles and Practice of Medicine; Pathology and Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

Modified Examinations.—All Graduates in Medicine of British Universities will be admitted to a practical examination in Medicine and Midwifery only.—Licentiates of the Royal Colleges of Physicians of London or of Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *viva voce* examination in Medicine, Midwifery, Forensic Medicine, and Toxicology.—Members of the Royal College of Surgeons of England; and Licentiates of the Royal Colleges of Surgeons of Edinburgh, and of Ireland, possessing a surgical qualification only, will be admitted to a first and second examination on one evening. The first, or *viva voce* examination, will include Physicians' Prescriptions, Visceral Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Pharmacy; the second, partly written and partly *viva voce*, will include Practice of Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicological Chemistry.—Any candidate who has passed his first examination for the Licence of the Royal College of Physicians, London; the Licence of the King and Queen's College of Physicians, Ireland; the joint Licence of the Royal Colleges of Physicians and Surgeons, Edinburgh; or for the single Licence of the College of Physicians, Edinburgh; the Licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the Degree of M.B., or Master in Surgery in the Universities of Oxford, Cambridge, or London; or the second part of the professional examination for the degree of M.D., or Master in Surgery in the Universities of Edinburgh, Aberdeen, St. Andrew's, and Glasgow; or the first examination for medical and surgical degrees in the Irish Universities; or the first examination for the Licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Materia Medica, Therapeutics, Medicine, Pathology, Midwifery, and Toxicology, part of which examination will be conducted in writing.

No rejected candidate for the Licence can be re-examined until the

expiration of six months from his former examination. A candidate rejected on his first professional examination can be admitted to re-examination after the expiration of three months.

Fees.—For a certificate of qualification to practise, Six Guineas, the half to be paid at the first examination; for an assistant's certificate, Two Guineas.

Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most in the examination; and of a silver medal and a book to the candidate who does so in the next degree. The examination in Botany will be held at the Hall of the Society on the second Wednesday in June, at 10 A.M., and will be conducted by printed papers and *viva voce* question. The examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the third Wednesday, and on the following Friday, in October, from ten in the forenoon to one in the afternoon of each day; by printed papers on the Wednesday, and by *viva voce* questions on the Friday.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student must reside either in one of the Colleges or Halls, or in a Licensed Lodging-House for three years. During these three years he has to pass two examinations in Arts, and one in either Mathematics, Natural Science, or Law and Modern History; when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honours, he has to pass a third examination in *Literis Humanioribus*. A student deciding to graduate in medicine must, after passing the requisite examination for the degree of B.A., spend two years in study prior to a scientific examination for the Degree of Bachelor of Medicine, unless he shall have taken a first or second class in the natural science school, when he may go in at the first opportunity for the first M.B. Examination. Two years after passing this examination, and after four years of professional and scientific study, he may go in for the second or practical examination for the M.B. Degree. These four years of medical study may be spent either in or out of Oxford, in an approved medical school.

The M.B. Degree confers the License to practise. For the Degree of Doctor in Medicine a dissertation has to be publicly read three years after taking the M.B. Degree.

The medical examinations take place annually in Michaelmas Term.

Scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other Colleges, by competitive examination in natural science. Every year a Radcliffe Travelling Fellowship is competed for by any one who, having taken a first-class in any of the Public Examinations of the University, or having obtained some University Prize or Scholarship open to general competition, proposes to study medicine. The travelling Fellows receive £200 a year for three years, half this period being spent in study abroad.

UNIVERSITY OF CAMBRIDGE.

DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.

A STUDENT proceeding to this degree must—1, Reside in the University two-thirds of each of nine terms; 2, Pass the previous examination;* 3, Pursue medical study for five years, unless he have obtained honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, in which case only four years are required. Of this time of five years he must spend six terms in medical study in the University† after

* A student who is, at least, in his second term of residence, may be admitted to the previous examination, and also to the examination in the additional subjects, held in the Lent Term, provided he presents to the Registry a certificate from the Master of his College, or his *locum tenens*, stating that he has declared that it is *bona fide* his intention to register himself as a medical student and to study medicine in the University. But in order that such a student may be admitted to the examination for any Tripos, or to the Degree of Bachelor of Arts or Bachelor of Law, a certificate from the Regius Professor of Physic that he has been *bona fide* engaged in medical study, including hospital practice, subsequently to having passed the previous examination, and also certificates that he has attended three courses of medical lectures subsequently to his having passed the previous examination, must be presented to the Council.

† That is, by attending, in each Term, courses of lectures delivered in the University on two of the following subjects; viz., Chemistry, Botany, Human Anatomy and Physiology, Comparative Anatomy, Materia Medica and Pharmacy, Pathology; or, instead of two courses of lectures, by attending one course of lectures and the Medical Practice of Addenbrooke's Hospital.

* The following is the Syllabus of Subjects for Examination in 1872. 1. English. The leading features of its History. Its Structure and Grammar. English Composition. [The Books recommended for study in this subject are Adams's *Elements of the English Language*, and Trench, *English, Past and Present*.]—2. Latin. January: Virgil, *Aeneid*, Books I and II. April: Cicero, *Oratio pro Milone*. September: Horace, *Odes*, Books III and IV. Re-translation of easy sentences. Grammatical Questions will be introduced into the Latin Paper, and each Candidate will be expected to give satisfactory answers to these.—3. Mathematics: The Ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Simple Equations; The First Two Books of Euclid.—4. (a) Greek: Herodotus, Book I; Grammatical Questions. (b) French: Molière, *Le Bourgeois Gentilhomme*: Translation from English into French; Grammatical Questions. (c) German: Schiller, *Der Taucher*, and *Der Gang nach dem Eisenhammer*; Translation of short sentences from English into German; Grammatical Questions. (d) Natural Philosophy: Mechanics; Hydrostatics and Pneumatics. [The Book recommended for study in this subject is Snowball's *Cambridge Course of Elementary Natural Philosophy*.]

passing the previous examination, unless he has obtained honours in one of the above-mentioned Triposes, in which case four terms only are required.—A student who has not graduated in Arts is required, before keeping the terms of medical study, in addition to passing the previous examination, to pass in Algebra either in the examination for the additional subjects of the previous examination (which he may do in his second term of residence or in any subsequent term), or in the general examination for the ordinary B.A. Degree.

There are three examinations for the Degree of Bachelor of Medicine, conducted partly by written answers, and partly *viva voce*. The examinations include chemical analysis, the recognition and description of specimens (healthy, morbid, and microscopical), dissections, and the examination of patients.

The subjects of the first examination are—1, Mechanics and Hydrostatics; 2, Chemistry with Heat and Electricity; 3, Botany.* The student may present himself for this examination at any time after passing the previous examination. He must produce certificates of having diligently attended one course of lectures on Chemistry, including manipulations, and one course on Botany.

The subjects of the second examination are—1, Elements of Comparative Anatomy;† 2, Human Anatomy and Physiology; 3, Pharmacology. Before presenting himself for this examination, the student must have completed two years of medical study, the time of medical study required to be spent in the University being included in these two years. He must have attended hospital practice during one year, have practised dissection during one season, and must produce certificates of having diligently attended a course of lectures on each of the following subjects:—1, Elements of Comparative Anatomy; 2, Human Anatomy and Physiology; 3, Materia Medica and Pharmacy; 4, Pathology.

The subjects of the third examination are—1, Pathology and the Practice of Physic (two papers); 2, Clinical Medicine; 3, Medical Jurisprudence.—Before presenting himself for this examination, the student must have completed the course of medical study, must have attended hospital practice during three years, and must produce certificates of having attended one course of lectures on each of the following subjects:—1, Principles and Practice of Physic; 2, Clinical Medicine; 3, Clinical Surgery; 4, Medical Jurisprudence; 5, Midwifery.

After these examinations have been passed, an Act must be kept in the schools. The candidate reads a thesis, composed in English by himself on some subject approved by the professor; the professor brings forward arguments or objections in English for the candidate to answer, and examines him *viva voce* as well as on questions connected with his thesis as on other subjects in the faculty of a more general nature. The exercise must continue at least one hour.

Degree of Doctor of Medicine.

This may be taken by a Bachelor of Medicine in the ninth term after his inauguration. He is required to produce certificates of having been engaged five years in medical study, to keep an act similar to that for M.B., and write an extempore essay. He pays ten guineas to the Professor of Physic for the act.—A Master of Arts may proceed to the Degree of M.D. in the twelfth term after his inauguration as M.A. without having taken the Degree of M.B. He must pass the three examinations for M.B., and keep the act, for the M.D. Degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice are required as of the candidate for the Degree of M.B.; but he is not required to have kept medical terms in the University.

Degree of Master of Surgery.

The subjects of the examination for this degree are—1, Surgical Anatomy; 2, Pathology and the Principles and Practice of Surgery; 3, Clinical Surgery; 4, Midwifery.—Before admission to this examination, the candidate must have passed all the examinations for the Degree of M.B., and must produce certificates of having attended the surgical practice of a hospital for three years, of having been house-surgeon or dresser for six months, and of having attended—1, a second course of lectures on Human Anatomy; 2, one course of lectures on the Principles and Practice of Surgery; 3, lectures on Clinical Surgery, during one year; 4, ten cases of Midwifery; 5, of having practised Dissection

* Students who have obtained Honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, or passed the general examination for the B.A. Degree, are not required to be examined in Mechanics and Hydrostatics; and those students who have obtained Honours in the Natural Sciences Tripos are not required to be examined in Botany or Chemistry, with Heat and Electricity, if they have passed with credit the examination in the Tripos in those subjects. Students who have passed the special examination in Botany for the B.A. Degree, are not required to be examined again in that subject.

† Students who have obtained honours in the Natural Sciences Tripos, and passed with credit the examination in Comparative Anatomy for that Tripos, are not required to be examined again in that subject.

during a second season.—The examination takes place at the same time as those for M.B., and in a similar manner. The candidate is required to perform operations on the dead body, and to examine patients in the hospital.

UNIVERSITY OF LONDON.

DEGREES IN MEDICINE AND SURGERY.

THE following Examinations for Degrees in Medicine are held in the University of London. Each takes place once yearly.

Preliminary Scientific Examination, commencing on the third Monday in July.

Bachelor of Medicine (M.B.) First Examination: Last Monday in July.

Bachelor of Medicine (M.B.) Second Examination: First Monday in November.

Bachelor of Surgery (B.S.): Tuesday following the fourth Monday in November.

Master in Surgery (M.S.): Fourth Monday in November.

Doctor of Medicine (M.D.): Fourth Monday in November.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

The fee for each examination is Five Pounds.* If a candidate withdraw or fail to pass either of the examinations, the fee is not returned; but he is admitted without further payment to two subsequent preliminary scientific, first M.B., second M.B., or B.S. examinations, or to one subsequent M.S. or M.D. examination, provided that he give notice to the Registrar at least fourteen days before the commencement of the examination.

Bachelor of Medicine.

Every candidate for the Degree of Bachelor of Medicine is required—1. To have passed the Matriculation Examination, or to have taken a Degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided in the last case, that Latin has been one of the subjects in which he has passed). 2. To have passed the preliminary Scientific Examination.† 3. To have been engaged in his professional studies during four years subsequently to Matriculation or Graduation in Arts, or one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in medicine.

First M.B. Examination.—The candidate must produce certificates:—1. Of having completed his nineteenth year. 2. Of having passed the preliminary scientific examination at least one year previously. 3. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the following subjects: Descriptive and Surgical Anatomy; General Anatomy and Physiology; Comparative Anatomy; Pathological Anatomy; Materia Medica and Pharmacy; General Pathology; General Therapeutics; Forensic Medicine; Hygiene; Obstetric Medicine and Diseases peculiar to Women and Infants; Surgery; Medicine.‡ 4. Of having dissected during two winter sessions. 5. Of having attended a course of Practical Chemistry. 6. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. Candidates are examined in Anatomy; Physiology; § Materia Medica

* For the degree of Doctor of Medicine, the fee will continue to be Ten Pounds to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of Five Pounds at the Preliminary Scientific Examination.

† Candidates for the Degree of M.B. are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies. For the Preliminary Scientific Examination, a candidate must have completed his seventeenth year, and have either passed the Matriculation Examination or taken a degree in Arts in either of the Universities of Sydney, Melbourne, or Calcutta (provided in the last case that Latin be one of the subjects in which he has passed). Candidates are examined in Mechanical Philosophy, including Statics, Dynamics, Hydrostatics, Hydraulics, Pneumatics, and Optics; Natural Philosophy, including Heat, Electricity, and Magnetism; Inorganic Chemistry; Botany and Vegetable Physiology; Zoology. They must show a competent knowledge in all the subjects of examination. Candidates who matriculated previously to January 1861, are not required to pass the Preliminary Scientific Examination in any other subjects than Chemistry and Botany; and they are allowed to pass the Preliminary Scientific Examination and the First M.B. Examination in the same year, if they so prefer.

‡ The subjects numbered 3, 4, and 5, must be attended after taking a Degree in Arts or passing the Matriculation Examination.

§ Any candidate is allowed, if he so prefer, to postpone his examination in Physiology from the First M.B. Examination at which he presents himself for examination in the remaining subjects until the First M.B. Examination in the next or any subsequent year; but such candidate is not admitted to compete for honours on either occasion; and he cannot be admitted as a candidate at the Second M.B. Examination until after the lapse of at least twelve months after having passed his examination in Physiology.

and Pharmaceutical Chemistry; Organic Chemistry. Candidates must show a competent knowledge in all the subjects of examination. The examinations are conducted by printed papers and *vivâ voce* interrogation, by demonstration from preparations and specimens, and by dissections. After 1871, there will be a practical examination in histology.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in (1) Anatomy, (2) Physiology, Histology, and Comparative Anatomy, and (3) Materia Medica and Pharmaceutical Chemistry, and Organic Chemistry. If in the opinion of the examiners sufficient merit be evinced, the candidate who distinguishes himself most in each of these three divisions receives an exhibition of £40 *per annum* for the next two years, payable in quarterly instalments; provided that on receiving each instalment he declare his intention of presenting himself at the second M.B. examination within three years from the time of passing the first M.B. examination. Under the same circumstances, the first and second candidates in each subject receive each a Gold Medal of the value of Five Pounds.

*Second M.B. Examination.**—No candidate is admitted to this examination within two academical years of the time of his passing the first examination, nor without certificates:—1. Of having passed the first M.B. examination. 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the first examination. 3. Of having conducted at least twenty labours.† 4 and 5. Of having attended the surgical and the medical practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine.‡ 6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, and Midwifery, with special charge of patients, in Hospital, Infirmary, Dispensary, or Parochial Union, during six months. 7. Of having acquired proficiency in vaccination.§ The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics, and Hygiene; Surgery; Medicine; Midwifery; Forensic Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *vivâ voce* interrogation; by practical examinations on obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstration from specimens and preparation. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in (1) Medicine, (2) Midwifery, and (3) Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Midwifery and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a Gold Medal of the value of Five Pounds.

Bachelor of Surgery.

The candidate must produce certificates:—1. Of having taken the Degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having

operated on the dead subject. The examinations are conducted by printed papers on surgical anatomy and surgical operations; by examination and report on cases of surgical patients; by performance of operations upon the dead subject; by application of surgical apparatus; and by *vivâ voce* interrogation.

Examination for Honours.—Any candidate who has passed the B.S. examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a Gold Medal of the value of Five Pounds.

Master in Surgery.

The candidate must produce certificates:—1. Of having taken the Degree of Bachelor of Surgery* in this University. 2. Of having attended subsequently—(a) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (b) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (c) or of having been engaged during five years in the practice of his profession, either before or after taking the Degree of Bachelor of Surgery in this University.† 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *vivâ voce* interrogation; and the candidates are examined in Logic and Moral Philosophy,‡ and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a Gold Medal of the value of Twenty Pounds.

Doctor of Medicine.

The candidate must produce certificates analogous to those required for candidates for the Degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and *vivâ voce* interrogation; and candidates are examined in Logic and Moral Philosophy, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a Gold Medal of the value of Twenty Pounds.

UNIVERSITY OF DURHAM.

REGULATIONS REGARDING DEGREES IN MEDICINE.

EVERY student in medicine must have been registered, and no one shall be registered unless he have passed the Registration Examination or such other examination as the Warden and Senate shall deem equivalent. The Registration Examination is directed to the rudiments of Religion, Literature, and Science; and is conducted by two or more examiners nominated by the Warden. The Registration Examination will begin on April 18th and September 19th, 1871, at 9 A.M. on each day.

Licence in Medicine.

The candidate must be of the age of 21 years, and must, since his registration, have spent four years in medical study at one or more of the schools recognised by the Licensing Bodies named in Schedule A of the Medical Act, 1858. There are two public examinations: the first after two years at least of medical study; the second after four years at least of medical study. Candidates must produce satisfactory testimonials of conduct, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

Bachelor of Medicine.

The candidate must be of the standing of three terms at least as a Licentiate in Medicine, and of eighteen terms (six years) at least from the date of registration or matriculation.—No one who is not a Bachelor of Arts shall be admissible to the Degree of Bachelor of Medicine, unless he have kept three terms by residence at Durham or

* Any candidate for the Second M.B. Examination who has passed the First M.B. Examination under the former regulations, is required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present regulations; at which examination he is not allowed to compete for honours.

† Certificates on this subject will be received from any legally qualified practitioner in medicine.

‡ The student's attendance on the Surgical and on the medical hospital practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B. Examination. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice. The Senate regard it as highly desirable that candidates for the Degree of M.B. should practically acquaint themselves with the different forms of insanity by attendance in a Lunatic Asylum.

§ Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

* Candidates who have obtained the degree of Bachelor of Medicine previously to 1866, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates, the attendance on surgical practice required by regulation 2, may commence from the date of the M.B. Degree.

† One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

‡ Any candidate who has taken the degree either of B.A., B.Sc., or M.D. in this University, is exempted from this part of the examination; and any candidate who has passed the Second M.B. Examination, may at any subsequent M.S. Examination present himself for Logic and Moral Philosophy alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.—An analogous exemption is allowed in the case of candidates for the degree of M.D.

at Newcastle, and have passed the final examination for the Degree of Bachelor of Arts, or an equivalent to it, besides the examination for the Degree of Bachelor of Medicine, nor unless he have spent one year at least in medical study at some school of medicine in connexion with the University.—The examination for the Degree of Bachelor of Medicine is directed chiefly to the Practice of Medicine.

Doctor of Medicine.

The candidate must be a Bachelor of Medicine of the standing of twenty-one terms at least (seven years) from his registration or matriculation, and of three terms at least from his admission to the Degree of Bachelor of Medicine; and must perform such exercises as the Warden and Senate require.

Licence in Surgery.

The candidate must be of the age of 21 years, and have spent four years in medical and surgical study since his registration as a student in medicine. In other respects, the regulations are similar to those for the Licence in Medicine; but the second examination is partly in surgical subjects.—The second examination for a Licence in Surgery may or may not be passed at the same time with the second examination for a Licence in Medicine.

Master in Surgery.

The candidate must be a Licentiate in Surgery, and also a Licentiate in Medicine, and of the standing of eighteen terms (six years) at least from the date of his registration or matriculation, and of three terms at least from the date of his admission to the Licence in Surgery.—[In other respects, the regulations for this degree are analogous to those for that of Bachelor of Medicine, but having relation to Surgery in place of Medicine.]

The Warden and Senate shall have authority to arrange for students in the Faculty of Medicine an examination equivalent to that for the Degree of Bachelor of Arts, by substituting for the theological part of it an examination in Hippocrates, Galen, or such other ancient medical author or authors as they may think fit.

Any student in medicine who was registered before Easter Term, 1868, shall be entitled to be admitted to the Degree of Master in Surgery on the same conditions as above are required for a Licence in Surgery.

These regulations shall not interfere with the power of the University to grant degrees by diploma to persons of sufficient standing and approved merit.

Fees for Examination and Degrees.—Senior Middle-Class Examination, £1; Examination at the end of First Year, £1; Registration Examination, £1; Extraordinary Registration Examination, £2; Registration, 5s.; each Public Examination in Medicine and in Surgery, £1; Licence in Medicine or Surgery, £3; Degree of Master in Surgery, Bachelor in Medicine, or Doctor in Medicine, each £6.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

No one can obtain the Licence of the College until he has completed the age of 21 years. Every applicant must produce satisfactory evidence of having been engaged in the study of medicine during at least four years subsequently to registration as a medical student, and of having attended the following courses at an University, or at a medical school recognised by the College:—Anatomy, Practical Anatomy, Chemistry, Practice of Medicine, Clinical Medicine, and Principles and Practice of Surgery, each a six months' course; Practical Chemistry, Materia Medica and Pharmacy, Physiology or Institutes of Medicine, Clinical Surgery, Midwifery, Medical Jurisprudence, General Pathology or Pathological Anatomy, and Practical Pharmacy, each a three months' course. The applicant must have attended the practice of a Public Hospital (containing not fewer than eighty beds) during not less than twenty-four months, twelve of which must have been spent in attendance on the medical wards. He must also have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital; or have been engaged during six months as visiting assistant to a registered practitioner. He must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner. Every applicant, before being admitted to the final examination, will be required to produce a certificate that he has studied vaccination under a competent and recognised teacher, and that he is thoroughly informed in every necessary part of the subject. He must have passed the Preliminary Examination in Literature and Science before he can be admitted to the professional examination.* Masters and Bachelors of Arts of any British or

Foreign University, whose course of study may from time to time be approved of by the College, will be exempted from the preliminary examination; also those who have passed the examination of the national educational bodies, or of any of the licensing boards recognised by the Medical Act.

The professional examination will be divided into two parts: (1) Anatomy, Physiology, Chemistry; (2) Materia Medica and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until he has completed two, or to the second until he has completed four, years of professional study. The following will be the periods of examination to October 1872:—1. Preliminary examinations, October 21 and November 4, 1871; April 20 and July 20, 1872. 2. First professional examinations, October 18, 1871; January 17, March 27, May 1, July 17, and October 16, 1872. The second professional examinations will be held on the Thursdays following the first professional.

Candidates who already possess a qualification from a recognised Licensing Body, or who have passed the first professional examination before a qualifying body (provided it be as extensive as that required by this College), will be at once admitted to the second examination. Meetings for the examination of candidates who already possess a qualification from a recognised Licensing Body will be held on the first Wednesday of every month (except September and October), and, if necessary, on the following days. Candidates are required to communicate with the Secretary to the College not less than eight days before the date of the examination.

No candidate is admissible to examination who has been rejected by any other licensing board within three months previous to his examination.

The Fee payable by a Licentiate is Ten Guineas. If a candidate be unsuccessful, Two Guineas will be retained to pay expenses.

Candidates may be admitted to special examination on bringing forward satisfactory reasons and paying an extra Fee.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA.

The regulations regarding schools of medicine, preliminary examination, and professional study and examination, are similar to those for the double qualification (see next page), except that the third course of Medicine and the course of Pathological Anatomy are not required.

Registered medical practitioners whose degree or licence in medicine is dated prior to October 1st, 1861, are exempt from the first professional examination. The examinations under this regulation may take place on the first and third Tuesdays of each month.

At the second examination, the student, in furnishing the statement of his professional study, must, if he has been an apprentice, insert the name of his master, the date of his indenture, and the length of time for which he was bound. If the candidate have been an apprentice to a Fellow of the College, he must also produce his discharged indenture.

Recent Dissections, Anatomical Specimens, and articles of the Materia Medica, are employed during the examinations; and all candidates are required to write out formulæ of prescription. They are also subjected to a practical clinical examination in the Surgical Hospital.

No candidate shall be admissible to examination who has been rejected by any other Licensing Board within three months preceding his application to be examined.

The Fees are: for the first examination, £4; for the second, £6; in each: £2 will be returned to unsuccessful candidates. The Fee from candidates who have elsewhere passed the first professional examination is £10, of which £2 is retained if the candidate be unsuccessful.

Special examinations are held when required, the regulations being the same as in Clause 16 of the regulations for the professional examination for the double qualification, and an extra Fee being paid.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh, while they still continue to give their Diplomas separately, have made arrangements by which, after one series of examinations, the student may obtain the Diplomas of both Colleges. This joint examination is conducted by a Board, in which each body is represented for examination in those branches which are common to both Medicine and Surgery; but the College of Physicians takes exclu-

* For the subjects, see note to regulations for double qualification

sive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. Students passing that examination are enabled to register two qualifications—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

1. Every candidate must have followed his course of study in an University, or in an established School of Medicine, or in a Provincial School specially recognised by the College of Physicians and Surgeons of that division of the United Kingdom in which it is situate. 2. Under the title *Established School of Medicine* are comprehended the medical schools of those cities of Great Britain and Ireland in which Diplomas in Medicine or Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Professional Education.

1. Candidates commencing professional study after September 16th, 1866, must have been engaged, during four years after the examination in general education, in not less than four winter sessions* or three winter and two summer sessions' attendance at a recognised medical school.* 2. The candidate must have attended the following courses of lectures:—Anatomy, two courses† of six months each, and Practical Anatomy, twelve months; or Anatomy, one course of six months, and Practical Anatomy, eighteen months; Physiology, not less than fifty lectures;‡ Chemistry, Practice of Medicine, Clinical Medicine, § Medicine (a third course, either Practice or Clinical, at option), § Principles and Practice of Surgery, Clinical Surgery, § Surgery (a third course, either Principles and Practice or Clinical Surgery, at option), § each six months; Practical or Analytical Chemistry, Materia Medica, Midwifery, and Diseases of Women and Children, Medical Jurisprudence, and Pathological Anatomy, || each three months. ¶ 3. He must also produce certificates:—*a.* Of having attended at least six cases of labour under the superintendence of a registered medical practitioner. *b.* Of having attended, for three months, instruction in Practical Pharmacy. The teacher signing the certificate must be a Member of the Pharmaceutical Society of Great Britain, or a chemist and druggist recognised by either College on special application, or the superintendent of the laboratory of a Public Hospital or Dispensary, or a registered practitioner who dispenses medicine to his own patients. *c.* Of having attended, for twenty-four months, a public General Hospital containing, on an average, at least eighty patients. *d.* Of having attended, for six months, the practice of a public Dispensary specially recognised by either College; or of having been engaged for six months as assistant to a registered practitioner. *e.* Of having been instructed in vaccination; the certificate to be signed by the teacher, who must be a registered practitioner.—It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.**

Preliminary Examination in General Education.

All students who intend becoming candidates for the Diplomas of the Colleges must have passed the complete examination in General Education,†† and have had their names inscribed in the Register of Me-

* Candidates commencing study prior to the above date, will be admitted to examination after four winter sessions* or three winter and two summer sessions' attendance on classes at a regular Medical School.

† The two courses must not be attended in the same session.

‡ In those Schools of England and Ireland in which two separate courses of Lectures are delivered at separate hours—one on Anatomy, the other on Anatomy and Physiology—the former of these courses will be received as a course of Anatomy, and the other as a course of Physiology.

§ Two courses of Clinical Medicine or of Clinical Surgery of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the period of attendance at the Hospital where they are delivered.

|| A certificate of attendance at the *Post Mortem* Examinations at a General Hospital will be accepted in lieu of this course.

¶ The six months' courses delivered in Scotland must consist of not fewer than one hundred lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' courses must consist of not fewer than fifty lectures.

** The following order of study is recommended as a guide to the student, though not enjoined. *First Year*—Anatomy; Practical Anatomy; Chemistry; Practical or Analytical Chemistry; Hospital. *Second Year*—Anatomy; Practical Anatomy; Physiology; Surgery; Materia Medica (the last either in this or the third year); Hospital. *Third Year*—Practice of Medicine; Clinical Surgery; Practical Anatomy; Practical Pharmacy; Clinical Medicine; Pathological Anatomy; Hospital. *Fourth Year*—Surgery or Clinical Surgery; Midwifery and Diseases of Women and Children; Practice of Medicine or Clinical Medicine; Medical Jurisprudence; Practical Midwifery; Hospital.

†† The examination will embrace the following subjects:—1. English language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin: Cicero, *De Senectute et de Amicitia*; or Horace, *Carmina*, Lib. II and III. 5. One of the following subjects, at the option of the candidate:—(1) Greek: Herodotus, *History*, Book I; and Homer, *Iliad*, Book II. (2) French:

Voltaire's *Henriade*. (3) German: Schiller's *Wilhelm Tell*. (4) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. In Latin, Greek, French, and German, parsing of words from the passages given to be translated will be required; also, translation of short sentences from English into the respective languages.

dical Students.—Testimonials of proficiency granted by the educational bodies recognised by the Medical Council will be accepted as sufficient evidence of general education, and will exempt from the preliminary examination.—The preliminary examinations will take place on October 21st and November 4th, 1871, and on April 20th and July 20th, 1872.—Students who intend to undergo the preliminary examination must give in their names, addresses, and places of birth to the officer of either College, not later than two days before the day of examination; and must pay a fee of Ten Shillings, not to be returned in case of rejection; but they will be admissible to re-examination at a future period without paying another fee.—Candidates, the commencement of whose professional studies was prior to September 17th, 1866, may pass the preliminary examination in general education at any of the periods previous to the first professional examination, but are recommended to do so at the earliest possible period. Candidates under this regulation, who have not passed a preliminary examination in general education, will be admitted to a special examination in general education previously to their first professional examination. For this they pay a fee of £1.

Professional Examination.

1. Candidates for the double qualification are subjected to two professional examinations. 2. Opportunities for both examinations will be presented six times in each year. On each of these occasions, the candidates write answers to the questions proposed. The oral examinations are conducted on the days immediately succeeding. 3. Unsuccessful candidates are remitted to their studies for not less than three months. 4. The first examination embraces Anatomy, Physiology, and Chemistry; and takes place not sooner than the end of the second winter session. 5. Candidates who desire to pass this examination must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination;* and must produce tickets, and also certificates of attendance on those courses of lectures which have reference to the subjects of the examination, and evidence of having passed the preliminary examination. 6. The sum of £6 must be paid to the Inspector of Certificates for this examination, not later than 10 A.M. of the day preceding it. This sum will be considered as paid to account of the entire Fee of £16 payable for the two Diplomas. 7. In the case of a candidate being unsuccessful at this examination, £4 will be returned to him. 8. The second examination embraces Medicine, Surgery and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and does not take place before the termination of the winter session of the last year of study. In the case of candidates who began their course of study after September 16th, 1866, it will not take place until four years after the examination in general education. 9. Applications for examination must be made to the Inspector of Certificates not later than the Monday previous to the day of examination. 10. Every candidate must produce to the Inspector—*a.* Satisfactory evidence of having attained the age of twenty-one years; *b.* A certificate of having passed the preliminary examination, unless this certificate have been already seen by the Inspector of the Colleges; *c.* A certificate of registration in the books of the General Medical Council; *d.* A certificate of having passed the first professional examination; *e.* The certificate of his classes, etc.; *f.* A tabular statement (for which a printed form will be furnished by the Inspector), exhibiting the full amount of his professional education, and distinguishing the classes, hospitals, and dispensaries attended during each session of his studies. 11. The fee payable for this examination, which is £10, must be lodged with the Inspector not later than 10 A.M. of the day preceding the examination-day. 12. On the production of the above documents, and after receiving the fees, the Inspector gives the candidate a letter authorising the examiners to take him on trial. 13. In case of a candidate being unsuccessful at the second examination, £8 will be returned to him. 14. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second professional examination on producing certificates of the whole course of study prescribed, and of having passed their preliminary and first professional examinations. If any of the three subjects of the first examination have been omitted, such candidates will have to undergo an examination on the omitted subjects; and none of the subjects set down in § 8 will be omitted at the second

Voltaire's *Henriade*. (3) German: Schiller's *Wilhelm Tell*. (4) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. In Latin, Greek, French, and German, parsing of words from the passages given to be translated will be required; also, translation of short sentences from English into the respective languages.

* Candidates at a distance are requested to send their certificates much earlier, so as to give sufficient time for the exchange of one or two explanatory letters; as much disappointment has been occasioned by the discovery of defects in their course of study when it was too late to rectify them by the production of documents.

examination, even if some of them should have formed part of the first examination by another Board. The fee payable by such candidates is £16, and unsuccessful candidates will receive back £14. 15. In addition to the written and oral examinations, all candidates shall be subjected to a practical Clinical Examination in Medicine and Surgery, which shall include the examination of patients, physical diagnosis, the use of the microscope, surgical appliances, bandages, etc. 16. Candidates desirous of special examination on other days than those fixed by the regulations must prepare a case to be submitted for the consideration of the authorities of the Colleges, with evidence to show why it was and is impossible for them to avail themselves of the ordinary examinations, past or future. They must at the same time produce certificates of the whole of the prescribed course of study and of the preliminary examination, and state the earliest and the latest days within which they can present themselves. It is very desirable that all such candidates, and especially those who are at a distance from Edinburgh, should present their applications as long beforehand as possible. An extra fee is required in such cases. 17. No candidate shall be admissible to examination who has been rejected by any other Licensing Board within the three months preceding his examination.

Communications from candidates to be addressed to DR. GAIRDNER, Inspector and Treasurer of the Double Qualification, at 45, Northumberland Street, Edinburgh.

The following will be the periods of examinations for the Double Qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, for the year 1871-72. *First Professional Examinations.*—Tuesdays, October 24th, 1871, January 23rd, April 2nd and 30th, July 9th and 23rd, October 22nd, 1872. *Second Professional Examinations.*—These will take place immediately after the conclusion of the first professional examinations, at each of the above mentioned periods. In no case will they be begun on an earlier day than the Thursday of any period, nor will they usually be later than that day.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS FOR THE DIPLOMA.

THE Regulations respecting the Curriculum of Professional Study are similar to those of the Royal College of Surgeons of Edinburgh.

Preliminary Examinations in General Literature will be held on October 20th and November 3rd, 1871, and on April 26th, July 19th, October 18th, and November 1st, 1872.* The Fee is Ten Shillings. Candidates are requested to give in their names to the Secretary at least two days before the examination, and to give intimation of the optional subject they select.

The *First Professional Examinations* take place on the second Tuesday every month. The *Second Professional Examinations* take place, the written part on the second Tuesday of every month, and the clinical and oral parts on the succeeding day.

The Fee is £10; viz., £4 for the first, and £6 for the second examination.

The examinations are conducted partly in writing and partly orally. Recent Dissections, Anatomical Specimens, Chemical Tests, Articles of the Materia Medica, the Microscope, Surgical Apparatus, and Pathological Specimens are employed at the discretion of the examiners. Candidates are also subjected, at the second examination, to a practical Clinical Examination at the Hospital.

Candidates for the Diploma of the Faculty, who possess a qualification to practise, or who have passed the examination in Anatomy, Physiology, and Chemistry, before any of the Licensing Bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, will be admitted to the second professional examination. In such cases, the full fee is exigible. In the case of unsuccessful candidates, £2 of the fee is retained.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee.

* The examination will embrace the following subjects:—1. English Language, including Grammar and Composition; and, in 1872, writing to dictation. 2. Latin: Translation from one of the two following Books, at the option of the candidate; viz., for 1871, the Fourth Book of Cæsar's *Commentaries De Bello Gallico*; Virgil, *Æneid*, Lib. I; for 1872, the Second Book of the *Commentaries*, and *Æneid*, Lib. vi; an Exercise in rendering English correctly into Latin, the Latin words being supplied. 3. Arithmetic, to Vulgar and Decimal Fractions inclusive; Algebra, including Simple Equations. 4. Geometry: First two Books of Euclid. 5. One of the following subjects at the option of the candidate. *a.* Natural Philosophy: Mechanics, Hydrostatics, and Pneumatics. *b.* Greek: Xenophon's *Anabasis*, Book II; or Homer's *Iliad*, Book VI. *c.* French: Voltaire, *Histoire de Charles XII.* *d.* German: in 1871, First Two Books of Schiller's *Geschichte des dreissigjährigen Kriegs*; in 1872, Schiller's *Wilhelm Tell*. In the Latin, Greek, French, and German papers, questions on Grammar will be given.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, conjointly grant their Diplomas after one series of examinations before a Board of Examiners* in which each body is represented. The regulations as to the curriculum of study are the same as those for the conjoined examinations of the Royal Colleges of Physicians and Surgeons of Edinburgh. The fee for the two diplomas granted conjointly is £16.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

Three Medical Degrees are conferred by each University; viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The Degree of C.M. is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.

The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass a satisfactory examination in at least two of the following subjects:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.* The examinations on both classes of subjects take place† before the candidate has entered on his medical curriculum.‡

A Degree in Arts (not honorary) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Court, exempts from all preliminary education; [and an examination in Arts by any corporate

* The Universities of Glasgow, Aberdeen, and St. Andrew's, include Natural History.

† As far as possible.—*Aberdeen.*—At *Glasgow*, the examination in the first class of subjects must take place before the commencement of the Medical Curriculum; and that in the second class previously to the first professional examination (as far as possible, previously to the commencement of professional study).

‡ In Edinburgh, examinations on these subjects will be held on 17th and 18th of October 1871, and 20th and 21st March 1872. 1. *English*—A portion of an English author must be written to dictation; the grammatical construction of one or two sentences must be explained; the grammatical errors in a sentence ungrammatically composed must be pointed out, and their nature explained; and the derivation and definition of a few English words in common use must be given (see Bain's *English Grammar*, and Angus on the *English Language*). 2. *Latin*—Ninth *Æneid* of Virgil, an easy passage from a Latin Prose Author, and a single passage of English (translated from a Latin Author) to be re-translated into Latin, the more difficult Latin words being given. 3. *Arithmetic*—The Common Rules, including Decimals. 4. *Elements of Mathematics*—Euclid, Books I, II, and III; and the Rudiments of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. *Elements of Mechanics*—Elementary Mechanics and Hydrostatics.—At the same date, examinations will also take place in the additional subjects, as follows. 1. *Greek*—Fourth Book of Xenophon's *Anabasis*. 2. *French*—Voltaire's *Henriade* (i-vi). 3. *German*—Schiller's *Death of Wallenstein*. 4. *Higher Mathematics*—Euclid, Books I to VI; Algebra, Trigonometry, and Conic Sections. 5. *Natural Philosophy*—Balfour Stewart's *Elementary Physics*. 6. *Logic*—Fowler's *Elements of Deductive Logic*. 7. *Moral Philosophy*—Stewart's *Outlines of Moral Philosophy*, Part II, with McCosh's Notes.

In Glasgow, examinations will take place on October 13th, 1871, and April 12th, 1872, as follows. *First or Elementary Part*, Exercises in all of which are required. *English*—Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions in Grammar. *Latin*—Third Book of the *Æneid* of Virgil, and Fourth Book of Cæsar *De Bello Gallico*; Translations of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions in Grammar and Construction. *Arithmetic*—the Common Rules, including Vulgar and Decimal Fractions. *Elements of Mathematics*—Euclid, Books I, II, and III; Algebra, as far as Simple Equations. *Elements of Mechanics*—Questions, for which such works as Tomlinson's *Rudimentary Mechanics* may serve as text-books. *Second Part*, Exercises in two of which, to be selected by the candidate, are required. *Greek*—*Anabasis* of Xenophon, Book I, and the Gospel according to St. John; Translations of passages from Greek authors not prescribed, and of English passages into Greek—the principal Greek words supplied; Questions in Grammar. *French*—Voltaire's *Charles XII*; Translations and exercises as in Latin and Greek. *German*—Schiller's *William Tell*; Translations and exercises as in the other languages. *Mathematics*—Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. *Natural Philosophy*—Such a knowledge of the principles as may be obtained from the Text-books of Golding Bird and Brooke, and Ganot. *Natural History*—Geology or Zoology. Text-books—Jukes, Lyell, Dana, R. Jones, Dallas, Milne-Edwards. *Logic*—Whateley's *Logic*, Books II and III. *Moral Philosophy*—The General Principles, as stated in Dugald Stewart on the Active Powers, or Dr. Fleming's Manual.

body, whose examination has been recognised by the General Medical Council, and also approved by the University Court, shall exempt from preliminary examination in Arts on all subjects comprised in the examination of the said corporate body.]**

Degree of Bachelor in Medicine and Master in Surgery.

Candidates for the Degree of Bachelor of Medicine or Master in Surgery must have been engaged in medical and surgical study for four years—each *Annus Medicus* being constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than 50 lectures each; with the exception of the clinical courses, in which lectures are to be given at least twice a week.

Every candidate for the degrees of M.B. and C.M. must give sufficient evidence by certificates—1. That he has studied Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine and of Surgery, Midwifery and the Diseases of Women and Children,† General Pathology,‡ during courses including not less than 100 Lectures; Practical Anatomy, a course of the same duration as the preceding; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or attendance on six cases under a registered medical practitioner; Clinical Medicine and Clinical Surgery, each course of not less than 100 lectures or two courses of three months; Medical Jurisprudence, Botany, Natural History, including Zoology, courses of not less than 50 Lectures. 2. That he has attended for at least two years, the Medical and Surgical Practice of a General Hospital with not fewer than eighty patients. 3. That he has been engaged for at least three months in compounding and dispensing drugs at the Laboratory of a Hospital or Dispensary, Member of a Surgical College or Faculty, Licentiate of the London or Dublin Society of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.§ 4. That he has attended, for at least six months, the out-practice of a hospital or the practice of a dispensary, or of a registered practitioner. Evidence of a practical knowledge of vaccination is also required.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entitled to give the Degree of Doctor of Medicine.|| [At St. Andrew's, no one can be received as a candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges; viz., the Universities of St. Andrew's, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Attendance during at least six winter months on the medical or surgical practice of a General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the Edinburgh University Court, may be reckoned as one of the four years.¶ All candidates not students of the University of Edinburgh, availing themselves of the permission of attending the lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee.

Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—1. A declaration, in his own handwriting, that he is 21 years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.**

* This portion, enclosed in brackets, is in the Regulations of the University of Edinburgh alone.

† Two courses of Midwifery, of three months each, are reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

‡ Or a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine.

§ In the Laboratory of an Hospital or Dispensary, of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society of Great Britain.—*Glasgow.*

|| Entitled to grant Degrees in Medicine.—*Glasgow.*

¶ The other two years may be constituted by attendance upon courses in the great Hospital Medical Schools of London or Dublin; and, in default of such attendance, one of the four years may be constituted by attendance on any general Hospital containing not less than eighty beds, provided attendance has been given at the same time on a course of Practical Anatomy.—*Glasgow.*

** The Universities of Aberdeen and St. Andrew's require an Inaugural Dissertation to be presented previously to the final examination for M.B. In Edinburgh and Glasgow, no Thesis is now required until the candidate seeks the Degree of M.D.

Each candidate is examined in writing and *viva voce*—1, on Chemistry, Botany, and Natural History; 2, on Anatomy, Institutes of Medicine, Materia Medica (including practical Pharmacy), and Pathology; 3, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4, Clinically on Medicine and on Surgery in a Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica and Pathology, are conducted, as far as possible, by demonstrations of objects. Students may be admitted to examination on the first division of these subjects at the end of their second year, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of the fourth year. If any candidate be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other school of medicine.

[The above are the regulations, regarding professional examination, of the University of Edinburgh. Those of the other three Universities differ somewhat from those of Edinburgh. They are as follows.]

Every candidate for the Degrees of Bachelor of Medicine and Master in Surgery shall undergo three professional examinations, which will be conducted in writing and *viva voce*. The first examination (not to be taken before the end of the second year of study) to include Chemistry, Elementary Anatomy, and Botany.* The second examination (not to be taken before the end of the third year) to include advanced Anatomy, Physiology, and Zoology with Comparative Anatomy.† The third examination (not to be taken before the end of the fourth year) to include Materia Medica, General Pathology, Surgery, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery.‡ The examinations in Anatomy, Chemistry, Physiology, Botany, Zoology, and Materia Medica, will be conducted, as far as possible, by demonstrations of objects exhibited to the candidates; and those on Medicine and Surgery, in part, by clinical demonstrations. Candidates may be admitted to examination on the first two of these divisions at the end of the third year, or to the three examinations at the end of their fourth year. If any candidate be found unqualified, he shall not be again admitted to examination unless he shall have completed another year of medical study, or such portion of another year as may be prescribed by the examiners.]

Degree of Doctor of Medicine.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of 24 years, and has been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice. The candidate must be a Graduate in Arts, or must, before or at the time of his obtaining the degree of Bachelor of Medicine, or within three years thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects: viz., French, German, Higher Mathematics, and Natural Philosophy.§ He must submit to the Medical Faculty a Thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, and in Aberdeen before November 1861, are entitled to be examined for the degree of Doctor of Medicine, without previously taking that of Bachelor of Medicine, under the regulations then in force in each University respectively.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of 40 years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiners of the sufficiency of the professional knowledge, provided always that degrees shall not be conferred under this section on a greater number than ten in any one year.

The Graduation Fees in each of the Universities are—for the Degree of M.B., three Examinations, each £5:5=£15:15; for the Degree

* And Materia Medica.—*St. Andrew's.*

† And Surgery.—*St. Andrew's.*

‡ Materia Medica and Surgery in the two previous examinations.—*St. Andrew's.*

§ In Greek and in Logic or Moral Philosophy, and in any one of the other optional subjects in the examination in General Education.—*Glasgow.* Natural History added in optional subjects.—*St. Andrew's.*

of C.M., £5 : 5 additional ; for the Degree of M.D., £5 : 5 additional to that for M.B., together with Government Stamp Duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25 ; at St. Andrew's, the fee for the Degree of M.D. under the section relative to Registered Medical Practitioners is 50 Guineas. Stamp Duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

REGULATIONS RELATIVE TO THE LICENCE IN MEDICINE.

EXAMINATIONS for the Licence in Medicine are held on the second Wednesday in each month (except August and September). The name of every candidate, together with his schedule and the documents hereafter mentioned, must first be submitted to the College at one of its meetings. These are held regularly on the first Friday in each month (except August and September), and no name can be received later than the Monday previous to such meeting. If permission to be examined be granted, the candidate may present himself at the next examination, or at a subsequent one : in the latter case, however, he must intimate his intention three clear days before the examination.

A candidate who has not, previously to entering his name, obtained any medical or surgical qualification recognised by the College, must produce certificates—1. Of having been engaged in the study of Medicine for four years. 2. Of having passed the preliminary examination of one of the recognised Licensing Corporations before the termination of the second year of medical study. 3. Of having studied at a school or schools recognised by the College the following subjects ; Practical Anatomy ; Anatomy and Physiology, or Institutes of Medicine ; Botany ; Chemistry ; Practical Chemistry ; Materia Medica ; Practice of Medicine and Pathology ; Surgery ; Midwifery ; Medical Jurisprudence. 4. Of having attended a Medico-Chirurgical Hospital in which regular courses of Clinical Lectures are delivered, together with clinical instruction, for twenty-seven months, or such hospital for eighteen months, with nine months at a medical hospital. 5. Of having attended Practical Midwifery for six months at a recognised Lying-in Hospital, or evidence satisfactory to the College of having attended Practical Midwifery. 6. Of character, from two registered physicians or surgeons. A candidate who has already obtained a medical or surgical qualification recognised by the College, is required to fill up a schedule which will be supplied on application, and to lodge it in the same manner, as a candidate not previously qualified ; but the only documents which he is required to produce are his diploma or certificate of registration, and the certificate of Practical Midwifery, and testimonials as to character.

The examination is conducted, first by printed questions, to be answered in writing, and afterwards *viva voce*, and consists* of two parts :—1. Anatomy ; Physiology ; Botany ; Chemistry. 2. Materia Medica ; Practice of Medicine ; Medical Jurisprudence ; Midwifery. Candidates will also be examined at the bedside.

Candidates qualified as follows are required to undergo the *second part* of the professional examination *only* ; viz.—1. Graduates in Medicine of an University in the United Kingdom, or of any Foreign University approved by the College. 2. Fellows, Members, or Licentiates of the Royal Colleges of Physicians of London or Edinburgh, who have been admitted upon examination. 3. Graduates or Licentiates in Surgery. 4. Candidates who, having completed the curriculum above mentioned, have passed the previous examination of any of the Licensing Corporations in the United Kingdom. Physicians or surgeons of five years' standing are further exempted from the written portion of the final examination. Fee for Licence in Medicine, £15 : 15.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

REGULATIONS REGARDING DIPLOMAS.

REGISTERED pupils are admitted to the preliminary examination at any period previous to the Final Examination for Letters Testimonial. Students who are not registered pupils are also admitted to answer the preliminary examination upon payment of ten shillings ; but they are not enrolled as registered pupils, or entitled to the privileges of such pupils, until they have paid the full registration fee of Five Guineas.*

* The following are the subjects on which candidates for the Preliminary Examination will be examined :—The English Language, including Grammar and Composition. Arithmetic, including Vulgar and Decimal Fractions. Algebra, including Simple Equations. Geometry, first two Books of Euclid. Latin and Greek, including Translation and Grammar. In Greek—The Gospel of St. John, the *Menippus* of Lucian, or the First Book of Xenophon's *Anabasis*. In Latin—The First and Second Books of the *Aeneid* of Virgil, the *Jugurthine War* of Sallust, or the Third Book of Livy.

No student is admitted as a candidate to the quarterly examination, or to the final examination for letters testimonial, until he has been enrolled as a registered pupil.

Letters Testimonial.

Every registered pupil shall be admitted to an examination for Letters Testimonial if he shall have laid before the Council the following documents :—A receipt showing that he has lodged a sum of £21 in the Bank of Ireland to the credit of the President, and for the use of the College, and certificates that he has passed an examination in the Greek and Latin Languages, and that he has been engaged in the study of his profession for not less than four years.

Examinations are held quarterly, commencing on the second Tuesday in January, April, July, and October, at which candidates are divided into two classes—Junior and Senior. The junior class must produce certificates of having attended three courses each of Lectures on Anatomy and Physiology, and on Practical Anatomy with Dissections ; two courses of Lectures on Chemistry ; one course each of Lectures on Materia Medica, Botany, and Forensic Medicine. This class is examined in Anatomy, Physiology, and Materia Medica. The senior class must produce certificates of having attended three courses of Lectures on the Theory and Practice of Surgery, and one course each of Lectures on the Practice of Medicine, and of Lectures on Midwifery ; also certificates of attendance on a recognised hospital for three winter and three summer sessions. This class is examined in Surgery, Operative Surgery, the Practice of Medicine, and forms of Prescription.

Candidates for Letters Testimonial or Fellowship of the College, being Licentiates of a College of Physicians or Graduates in Medicine of an University, are examined in General and Descriptive Anatomy, Physiology, the Theory and Practice of Surgery, and Operative Surgery ; and, if recommended to the Council for admission as Licentiates, are admitted by the Letters Testimonial. The examinations are both oral and written. Candidates, whose answering shall be found insufficient, will not be allowed to present themselves a second time until after six months from their first examination.

The fee for the junior examination is £5 : 5 ; for the senior, £15 : 15 ; making, with the preliminary examination fee (10s.) and registration fee (£5 : 5), a total of £26 : 15 for Letters Testimonial. Every candidate rejected at the quarterly examination must pay £2 : 2 on applying for re-examination.

Fellowship.

Every registered pupil or licentiate may be admitted to examination for the Fellowship on producing a certificate that he is 25 years of age, and that he is a Bachelor of Arts, or has been examined with a view to ascertain that he has obtained a liberal preliminary education ; also a certificate, signed by two or more Fellows of the College, of good general conduct. He must have been engaged in the acquisition of professional knowledge not less than six years (five years being required in the case of Bachelors of Arts), during three of which he must have studied in one or more of the schools and hospitals, recognised by the Council. The other three years may have passed in any approved school. He must also have acted as House-Surgeon or Dresser in a recognised hospital ; and must have attended the lectures required of candidates for Letters Testimonial, together with one course of lectures on Comparative Anatomy, and one on Natural Philosophy. He must present a thesis on some medical subject, or clinical reports, with observations of six or more medical or surgical cases taken by himself.

Licentiates of the College, who may not be able to show that they have followed the course of study specified in the regulations, may, at the expiration of ten years from the date of their Diploma, be admitted to the examination for the Fellowship, on producing satisfactory evidence that they have conducted themselves honourably in the practice of their profession.

Each candidate for the Fellowship is examined on two days. The subjects of the first examination are Anatomy and Physiology (Human and Comparative) ; those of the second—Pathology, Therapeutics, the Theory and Practice of Medicine and Surgery, and such other branch of medical science as the Council may, from time to time, direct. The examinations are both oral and written. The candidates must perform Dissections and Operations on the dead body. Rejected candidates cannot present themselves a second time until after one year from the first examination.

The Fee payable is £21 if the candidate be a Licentiate, or £36 : 15 if he be a registered pupil ; provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he pays, if a Licentiate, £31 : 10 ; if a registered pupil, £47 : 5. Fellows entering on the country list, who may subsequently settle as Practitioners in Dublin, or within ten miles thereof, must pay £10 : 10 to the College.

APOTHECARIES' HALL OF IRELAND.

REGULATIONS REGARDING THE LICENCE TO PRACTISE.

EVERY candidate for the Licence to practise is required to undergo a Preliminary and a Professional Education and Examination.* The Arts Examination will be held on the third Thursday in January, April, July, and October, at 12 noon. Answers in writing must be given to printed questions. Unsuccessful candidates will be remitted to their studies for six months.

Professional Education and Examination.

Every candidate for the Licence must produce certificates:—1. Of having passed an examination in Arts previously to entering on professional study. 2. Of being at least 21 years of age, and of good moral character. 3. Of apprenticeship to a qualified apothecary, or of having been engaged at practical pharmacy with an apothecary for a period of three years subsequent to having passed the examination in Arts. 4. Of having spent four years in professional study. 5. Of having attended the following courses; viz., Chemistry, Principles and Practice of Medicine, and Surgery, each during one winter session; Anatomy and Physiology, Demonstrations and Dissections, each during two winter sessions; Botany and Natural History, and Forensic Medicine, each during one summer session; Practical Chemistry (in a recognised Laboratory) and Practical Pharmacy, each during three months; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (twenty cases); instruction in vaccination. 6. Of having attended, at a recognised hospital or hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. 7. Of having performed vaccination successfully under a recognised vaccinator.

The examination for the Licence to practise is divided into two parts. The first part comprehends Chemistry, Botany, Anatomy, Physiology, and Pharmacy. The second—Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene. The first part may be undergone at the close of the second winter session; and the second at the termination of the fourth winter session.

The examinations will be held on the first and second Mondays in January, April, July, and October.

Candidates who fail to pass the first part of the professional examination will be remitted to their studies for three months. Unsuccessful candidates at the pass examination will not be re-admitted until after six months.

UNIVERSITY OF DUBLIN.

DEGREES AND LICENCES IN MEDICINE.

THE degrees in Medicine and Surgery granted by the University are: 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Master in Surgery. It also grants Licences in Medicine and Surgery.

Bachelor in Medicine.

A candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same commencement as that at which he receives his Degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Theoretical and Operative Surgery; Chemistry; Practice of Medicine; Midwifery. *Summer*—Botany; Institutes of Medicine; Materia Medica and Pharmacy; Medical Jurisprudence. *Term Courses*—Heat (Michaelmas); Electricity (Hilary); Magnetism and Comparative Anatomy (Trinity). Two courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by

* The following are the subjects of Preliminary Examination:—*Compulsory*. 1. *English*: Grammar, Composition, writing from Dictation, the Roman History (the Punic Wars), and the English History (the reign of George I to the end of George III). 2. *Arithmetic and Algebra*: Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. *Geometry*: First Two Books of Euclid. 4. *Latin*: the Twenty-first Book of Livy, the First Three Books of the *Æneid* of Virgil, the First Two Books of the *Odes* of Horace (any two of the three). 5. *Greek*: the First Two Books of the *Anabasis* of Xenophon, the Ninth Book of the *Iliad* of Homer, the *Ajax* of Sophocles (any two of the three). 6. *French*: *Charles XII*, *Histoire de Vie* of Voltaire, or *Voyage en Orient* of Lamartine, or *Picciola* of Saintine. 7. *German*: *Wilhelm Tell* or *Die Räuber* of Schiller.—Candidates will be examined in either French or German, as they may select.—*Optional*. 1. *Natural Philosophy*: Mechanics, Hydrostatics, and Pneumatics. 2. *Natural History*: The Classification, Elementary Structure, and General Physiology of Vegetables and Animals.

the Board.* Six months' instruction in practical Midwifery,† including clinical lectures. A certificate of personal attendance on fever cases, with names and dates of cases. Six months' dissection, and three months' laboratory instruction in Chemistry. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows.‡ The Fee for the *Licent ad Examinandum* is £5; for the Degree of M.B., £11.

Doctor in Medicine.

A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this Degree, £13.

Master in Surgery.

The Degree of Master in Surgery can only be obtained by students who are Bachelors of Arts, and who have completed the professional curriculum, and passed the examinations required. The curriculum comprises the following, in addition to the complete course for the M.B. Degree: Theoretical and Operative Surgery, one course; Dissections, two courses; Ophthalmic Surgery, one course; Nine months in Sir Patrick Dun's or other recognised metropolitan hospital, with clinical lectures. Attendance on the practice of a recognised county infirmary for two years previously to the commencement of medical study in Dublin, is allowed to count as one year of hospital attendance. Candidates are required to perform surgical operations on the dead subject. Candidates for the Degree of Master in Surgery, who have already passed the examination for the Degree of Bachelor in Medicine, will be examined in Anatomy and Surgery only. Fee for the *Licent ad Examinandum*, £5; for the Degree of M.Ch., £11.

University Licences.

Candidates for the Licences in Medicine or Surgery must be matriculated in medicine, and must have completed two years in Arts and four years in medical studies.

In case the student should wish to continue the undergraduate course in Arts, with a view to the Degree of B.A., his answering in the matriculation examination§ will be reckoned as equivalent to the entrance examination and the Hilary examination of the Junior Freshman year.

The medical course and examination for the Licence in Medicine is the same as for the Degree of M.B. A Licentiate in Medicine, on completing his course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the Degree fees, without further examination in medicine. Fee for the *Licent ad Examinandum*, £5; for the Licence in Medicine, £5.

The surgical course and examination necessary for the Licence in Surgery, are the same as for the Degree of Master in Surgery. Fee for the *Licent ad Examinandum*, £5; for the Licence in Surgery, £5.

Examinations.

Candidates for Degrees and Licences in Medicine and Surgery are required to pass an examination in the following subjects previously to their Degree examination: Descriptive Anatomy; Botany, Materia Medica and Pharmacy; Chemistry; and Physics. Two Medical Scholarships, of £20 each for two years, are awarded to the best answers at the previous examinations, on certain conditions. Candidates for Degrees and Licences in Medicine and Surgery are examined at the bedside.

Qualifications in State Medicine.

Doctors of Medicine, who wish to obtain from the University a certificate of qualification in State Medicine, can do so on passing an

[Continued at page 300.]

* The following Hospitals are recognised:—1. Sir Patrick Dun's Hospital; 2. Meath Hospital; 3. House of Industry Hospitals; 4. Dr. Steevens' Hospital; 5. Jervis Street Infirmary; 6. City of Dublin Hospital; 7. Mercer's Hospital; 8. St. Vincent's Hospital; 9. Adelaide Hospital; 10. Mater Misericordiae Hospital.

† Certificates of Practical Midwifery are received from 1. the Rotundo Hospital; 2. the Coombe Hospital; 3. Sir P. Dun's Hospital Maternity; 4. Dr. Steevens' Hospital Maternity.

‡ The following schools, in addition to the School of Physic of Trinity College, are recognised:—1. The School of the Royal College of Surgeons in Ireland; 2. The Carmichael School; 3. The School of Dr. Steevens' Hospital. 4. The St. Peter Street School; 5. The School of the Catholic University. The recognition is conditional on the students being furnished with *bona fide* certificates of regular attendance equivalent to that required by the University; i.e., three-fourths of the entire Lectures in each course.

§ The following are the subjects of examination. Homer's *Iliad*, Books I, II (omitting Catalogue of Ships), III; Lucian's *Dialogues* (Walker's edition); Xenophon's *Anabasis*, Books I, II, III; Virgil, *Æneid*, Books I, II, III; Sallust; Horace, *Satires*; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra, to the end of Simple Equations; Euclid, Books I, II, III.

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1871-72.

For further particulars regarding each Hospital and Medical School, see pp. 300 et seq.

| LECTURES, ETC. | ST. BARTHOLOMEW'S HOSPITAL. | CHARING CROSS HOSPITAL. | ST. GEORGE'S HOSPITAL. | GUY'S HOSPITAL. | KING'S COLLEGE AND HOSPITAL. |
|--|---|--|---|---|--|
| WINTER SESSION. | | | | | |
| PHYSIOLOGY | Mr. Baker..Tu. Th. F., 2.30 | Dr. Silver..M. Tu. W. F., 3.30 | Dr. W. Ogle..Tu. Th., 3; F., 11 | Dr. Pavy..M. W. F., 4.15 | Dr. Rutherford..M. W. Th. F., 4 |
| ANATOMY, DESCRIPTIVE AND SURGICAL DEMONSTRATIONS | Mr. Callender and Mr. T. Smith..Tu. W. Th. F., 9 Mr. Langton, Mr. Marsh..Daily, 10.15 to 2 | Mr. Barwell..M. W. F., 9; Th., 3 Mr. Bellamy and Mr. J. M. Bruce, M.B..Daily | Mr. Rouse..M. W. F., 9 Mr. Goldsmith and Mr. Bennett | Mr. Durham and Mr. Howse..Tu. W. Th. F., 9 Mr. Davies-Colley, Dr. F. Taylor, and Mr. Dalton | Mr. Partridge..Daily, exc. M., 9 Mr. Curnow and Mr. Perriu |
| CHEMISTRY | Dr. Russell..M. W. F., 10 | Mr. Heaton..M. Th. F., 11 | Dr. Noad..Tu. Th. S., 11.30 | Mr. Debus & Dr. Stevenson..Tu. Th. S., 11 | Mr. Bloxam..M. W. Th. S., 10.15 |
| MEDICINE | Dr. Black, Dr. Andrew..M. Tu. Th., 3.30 | (Vacant) | Dr. Barclay..M. W. F., 9 | Dr. O. Rees and Dr. Wilks..M. W. F., 3 | Dr. Johnson..Tu., 4 P.M.; Th. F., 5 |
| SURGERY | Mr. Coote, Mr. Savory..M. W., 2.30; S., 9 A.M. | Mr. Canton..Tu. Th. S., 9 | Mr. Holmes and Mr. Pick..M. W. F., 3 | Mr. Birkett & Mr. C. Forster..Tu. Th., 3.30; F., 10.30 | Mr. J. Wood..M. Tu. W., 5 |
| HOSPITAL PRACTICE: Physicians | Dr. Black..M. Tu. Th., 1 Dr. Harris..Tu. Th. S., 1.30 Dr. Andrew..Daily, exc. W., 1.30 Dr. Southey..M. W. Th. S., 1.30 | Dr. Headland..Tu. Th. S. Dr. Pollock..Tu. Th. S. Dr. Beigel (Skin) | Dr. Fuller..Tu. S., 1 Dr. Barclay..M. F., 1 Dr. J. Ogle..M. F., 1 Dr. Wadham..Tu. S., 1 | Dr. Owen Rees..Tu. Th. S., 1.30 Dr. Habershon..Tu. Th. S., 1.30 Dr. Wilks..M. Th., 1.30 Dr. Pavy..M. F., 1.30 Dr. Braxton Hicks..W. S., 1.30 | Dr. Johnson..M. Th., 2 Dr. Beale..Tu. S., 2 Dr. Garrod..W. F., 2 Dr. Guy (out-p.) Dr. Priestley..Tu. Th. S., 1.30 |
| Obstetric Physicians | Dr. Greenhalgh (in-p.)..Th., 1.30; (out-p.) S., 9 | Dr. J. W. Black..M. W. F. | Dr. J. Clarke..in-p. Tu. S., 1; out-p. Th., 12 | Dr. Moxon..M. 12 Dr. Fagge..Tu. F., 12 Dr. Pye-Smith..W., 12 Dr. Phillips (obs.)..M. F., 1.30 (out-p.) Th. S., 12 | Dr. Duffin..W. S., 1 Dr. Yeo..M. Th., 1 Dr. Kelly..Tu. F., 1 Dr. Playfair (obs.)..Tu. Th. S., 12.30 |
| Assistant-Physicians | Dr. Church..Tu. F., 11 Dr. Gee..W. S., 11 Dr. Duckworth..M. Th., 11 Dr. Hensley | Dr. Silver..Tu. F. Dr. Green..M. Th. Dr. Powell..W. S. | Dr. Dickinson..Tu. S., 12 Dr. W. Ogle..M. F., 12 | Mr. P. Hewett..M. F., 1 Mr. Pollock..Tu. S., 1 Mr. H. Lee..Tu. S., 1 Mr. Holmes..M. F., 1 Mr. Brodhurst (orthopædic)..M. W. F., 2 Mr. Rouse..Tu. S., 12; Th., 12 (ear) | Sir W. Fergusson, Bart..Tu. Th. S., 1.30 Mr. Wood..M. W. F., 1.30 Mr. H. Smith..M. W. F., 1 |
| Surgeons | Mr. Coote..M. W. F. S., 1.30 Mr. Holden..Tu. F. S., 1.30 Mr. Savory..M., 1; Tu. W. Th. F. S., 1.30 Mr. Callender..Daily, 1.30 | Mr. Hancock..M. Th. Mr. Canton..Tu. F. Mr. Hird..W. S. Mr. Barwell (out-p.) M. Th. | Mr. P. Hewett..M. F., 1 Mr. Pollock..Tu. S., 1 Mr. H. Lee..Tu. S., 1 Mr. Holmes..M. F., 1 Mr. Brodhurst (orthopædic)..M. W. F., 2 Mr. Rouse..Tu. S., 12; Th., 12 (ear) | Mr. Birkett..M. Th., 1.30 Mr. Poland..W. S., 1.30 Mr. C. Forster..M. Th. 1.30 Mr. Bryant..M. Th., 12 | Dr. Garrod..W. F., 2 Dr. Guy (out-p.) Dr. Priestley..Tu. Th. S., 1.30 |
| Assistant-Surgeons | Mr. T. Smith..M. Th., 12.30 Mr. Willett..W. S., 12.30 Mr. Langton..Tu. F., 12.30 Mr. Morraut Baker | Mr. Bellamy..W. S. Mr. Fairlie Clarke..Tu. F. | Mr. Rouse..Tu. S., 12; Th., 12 (ear) | Mr. Durham..W., 12 Mr. Howse..M. Tu., 12 Mr. Davies-Colley..S., 12 | Mr. H. R. Bell..Tu. Th. S., 1 |
| Ophthalmic Surgeons | Mr. Power..Tu. F., 2; Mr. Vernon..M. Th., 2 | .. | Mr. R. B. Carter..Tu. W. S., 2 | Mr. Bader....W. S., 1.30; out-p., Tu. F., 12 | Mr. Soelberg Wells..Tu. Th. S., 1 |
| Dental Surgeon | Mr. Coleman..S., 10 | Mr. G. A. Canton..Daily, 10 | Mr. Vasey..Tu. S., 9; Th., 1 | Mr. J. Salter..Th., 12 | Mr. Cartwright..Tu. F., 10 |
| CLINICAL MEDICINE | The Physicians..Weekly | The Physicians and Assistant-Physicians | Dr. Fuller and Dr. J. Ogle..M., 2 (Winter) Dr. Barclay..M., 2 (Sum.) | The Physicians (Winter)..S., 1.30; The Assistant-Physicians (Sum.)..W., 1.30 | Dr. Johnson..alt. M., 3 Dr. Beale..alt. Tu., 3 Dr. Garrod..alt. F., 3 |
| CLINICAL SURGERY | Mr. Skey and Sir J. Paget (Consulting - Surgeons), and the Surgeons..Weekly | The Surgeons and Assistant-Surgeons | Mr. Hewett and Mr. H. Lee..Tu., 2 (Win.) Mr. Holmes..Tu., 2 (Sum.) | The Surgeons (Win.)..W., 1.30; The Assistant-Surgeons (Sum.)..F., 1.30 | Sir W. Fergusson..alt. Th., 3 Mr. Wood..alt. F., 3 Mr. Wells (ophth.)..alt. M., 3 Mr. Cartwright (dental)..alt. Tu., 10.30 |
| CLINICAL MIDWIFERY | Dr. Greenhalgh..Weekly | Dr. J. W. Black.....Fortnightly | Dr. J. Clarke..F., 2 (Win.) | Dr. Hicks (Win.)..W., 1.30; Dr. Phillips (Sum.)..M., 3 | Dr. Priestley..alt. Th., 3 |
| OPERATIONS | Wednesday & Saturday, 1.30 | Saturday, 2 | Thursday, 1 | Tuesday and Friday, 1.30; on Eye, M., 1.30 | Wednesday, 2; Saturday, 1.30 |
| SUMMER SESSION. | | | | | |
| MATERIA MEDICA | Dr. F. J. Farre..Tu. Th. S., 10; W., 11.30 | Dr. Headland..Tu. Th. S., 12 | Dr. Dickinson..M. W. F., 3 | Dr. Habershon..Tu. Th. F., 3 | Dr. Garrod..Tu. W. Th. F., 8 A.M. |
| BOTANY | Rev. G. Henslow..M. W. F., 10 | Dr. Dowson..Tu. Th. S., 11 | Mr. Child..Tu. Th. S., 12 | Mr. C. Johnson..Tu. Th. S., 11.30 | Mr. Bentley..M. Tu. W. F., 12.15 |
| MIDWIFERY | Dr. Greenhalgh..Tu. W. F. S., 1.30 A.M. | Dr. J. W. Black..M. W. Th., 3 | Dr. J. Clarke..M. W. F., 9 | Dr. Braxton Hicks..Tu. W. Th. F., 8.45 | Dr. Priestley..Tu. W. Th. F., 9 |
| FORENSIC MEDICINE | Dr. R. Southey..M. Th. S., 9 | Dr. A. J. Pollock..M. W. F., 4 | Dr. Wadham..Tu. Th. S., 9 | Dr. Taylor..Tu. Th. S., 10 | Dr. Guy..M. Tu. W. F., 12.15 |
| PRACTICAL CHEMISTRY.. | Dr. Russell..M. Tu. F., 11 to 1 | Mr. Heaton and Mr. Francis..M. F., 10 to 1 | Dr. Noad..M. W. Th. F., 10 | Dr. Debus..M. W. F., 10 to 1 | Mr. Bloxam..M. W. Th., 10.15 |
| COMPARATIVE ANATOMY | Dr. Church (Winter)....M. Th., 11 | Mr. Galton (Sum.) Tu. Th., 4 | Dr. Cavafy (Sum.)..M. F., 4.30 | Dr. Pye-Smith (Sum.)..M. F., 12.45 | Mr. Rymer Jones (Sum.)..Tu. F. S., 10.15 |
| PRACTICAL PHYSIOLOGY AND HISTOLOGY | Mr. Symons | Dr. Silver | Dr. Cavafy..Tu. Th. S., 10 | Dr. Pye-Smith (Win. and Sum.)..M. F., 1 | .. |
| PATHOLOGY AND MORBID ANATOMY | Dr. Gee, 1; Surgical Registrars, 2.30 | Dr. T. H. Green (Sum.)..W. F., 12 | Dr. Dickinson (Win.)..Th., 3 | Dr. Moxon & Dr. Fagge, daily, 2.30 (Win.); S., 9 (Sum.) | Dr. Beale (Sum.) Tu. Th., 4 |
| OPERATIVE SURGERY | Mr. Willett..Christmas vac. and Sum. | Mr. Barwell (Sum.) | Mr. Pick (Sum.)..M. W. F., 3 | (Sum.) W., 2 | .. |
| OPHTHALMIC MEDICINE AND SURGERY | Mr. Power..Tu. W., 12.45 Mr. Vernon (Dem.)..W., 2 | .. | Mr. R. B. Carter (Win.)..W., 10 | .. | Mr. Soelberg Wells (Sum.)..M. S., 9 |
| DENTAL SURGERY | Mr. Coleman..(Jan. Feb. March), F., 10.30 | Mr. Parkinson (Sum.) | Mr. Vasey (Sum.)..Tu., 10 | .. | Mr. Cartwright (Sum.)..Tu. F., 9 |
| DISEASES OF SKIN | Dr. Duckworth..F., 1.30 | Dr. Beigel..Tu., 2.30 | Dr. Barclay (Sum.)..Th., 2 | Dr. Fagge..Tu., 12 (Win.) | Dr. Duffin..Tu. |
| VACCINATION | Dr. Gee & Dr. Duckworth, W. | Mr. R. W. Dunn | Obstetric Assistant..Th., 10 | Dr. Phillips | Diseases of Throat and Laryngoscope: Dr. Johnson, W. Chapel..Daily, 10 |
| MISCELLANEOUS | Psychological Medicine: Dr. Claye Shaw (Sum.) Th., 11.45 Diseases of the Ear: Mr. T. Smith..F., 2.30 Orthopædic Surgery: Mr. Willett..F., 12.30 | Psychological Medicine: Dr. W. J. Hunt (Sum.)..M., 12 Case-taking: Dr. Powell Auscultation: Dr. Green, Tu. | Orthopædic Surgery: Mr. Brodhurst (Win.)..Tu., 10 Psychological Medicine: Dr. Blandford (Sum.)..Th., 3 Diseases of Brain, etc.: Dr. Lockhart Clarke (Win.) Aural Surgery: Mr. Dalby (Sum.)..Th., 3 | Experimental Philosophy: Dr. Stevenson and Mr. Davies-Colley (Win.)..W., 12 Hygiene: Dr. Fagge (Sum.)..Th. S., 12.15 Aural Surgery: Mr. Hinton (out-p.)..Tu. F., 12 | Divinity..F., 10.15 Principal's Lect..Daily, 1.15 Tutor's Class: (Win.)..M. W. F., 5; (Sum.) daily, exc. S., 9 Psycho-Med.: Dr. E. Sheppard |

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1871-72.

For further particulars regarding each Hospital and Medical School, see pp. 300 et seq.

| LONDON HOSPITAL. | ST. MARY'S HOSPITAL. | MIDDLESEX HOSPITAL. | ST. THOMAS'S HOSPITAL. | UNIVERSITY COLLEGE AND HOSPITAL. | WESTMINSTER HOSPITAL. |
|---|---|---|---|--|--|
| Dr. Fenwick and Dr. Woodman..M.W.Th., 4 Mr. Rivington..M.Tu.Th.F., 3 Mr. Adams, Mr. Tay, and Mr. McCarthy...10 to 3, exc. W. and S. aft. Dr. Letheby and Dr. Tidy..M.W.F., 10.30 Dr. H. Davies, Dr. Ramskill, and Dr. Down (before Chr.)..M.W.Th., 9.15; (after) Th., 9.15; Tu.F., 9 Mr. Hutchison..Tu.F.S., 9 Dr. Davies..Tu.F., 8.30 Dr. A. Clark..M.Th., 1.30 Dr. Ramskill..W.S., 1.30 Dr. Down..Tu., 1.30 Dr. H. Jackson..M.Th., 1.30 Dr. Head..Tu.F., 1.30 Dr. M. Mackenzie..W.S., 1.30 Dr. Sutton..M.Th., 1.30 Dr. Fenwick..Tu.F., 1.30 Dr. Woodman..Tu.F., 1.30 Dr. Palfrey (obs)..W.S., 1.30 Mr. Hutchinson..M.Th., 1.30 Mr. Maunders..Tu.F., 1.30 Mr. Couper..W.S., 1.30 Mr. Rivington..M.Th., 1.30 Mr. J. Adams..Tu.F., 1.30 Mr. Tay..M.Th., 1.30 Mr. McCarthy..M.Th., 1.30 Mr. Reeves..Tu.S., 1.30 Mr. J. Adams..S., 9; Mr. Tay..W., 9 Mr. Barrett..Tu., 10 Physicians in rotation twice weekly (Win.); Assistant-Physicians in rotation twice weekly (Sum.) The Surgeons Dr. Head (Win. & Sum.) 2nd F. each mo., 2.30; Dr. Palfrey..alt. Tu., 2.30 (Sum.) Wednesday, 2 Dr. Prosser James..Tu.Th.F., 4 Mr. Baker..M.W.F., 11 Dr. Head..M.W.Th.F., 3 Mr. Rodgers and Dr. Tidy..daily, exc. S., 10 Dr. Letheby..M.Th.S., 9 (Vacant) Dr. Fenwick and Dr. Woodman..M.W.Th., 4 Dr. Sutton (Win. & Sum.) Th., 12.30 Mr. Maunders (Sum.) Mr. Hutchinson (June)..Tu.F., 8 A.M. Mr. Barrett (March)..5 Mr. McCarthy..W., 9; Mr. Hutchinson (lect.) (Sum.) Asst. Obst. Phys. & Res. Acco. Diseases of Throat: Dr. M. Mackenzie (Sum.) Acoustics: Dr. Tidy Diseases of Ear: Mr. Rivington and Mr. Reeves (out-p.) S., 9.30 | Dr. Lawson..M.W.S., 4 Mr. Norton..M.Tu.Th.F., 2.45 Mr. E. Owen and Mr. A. P. Boon..daily, 9 to 5, exc. S., 10 to 1 Dr. Wright..M.Tu.Th.F., 10.15 Dr. Chambers and Dr. Broadbent..M.W.Th., 4 Mr. J. R. Lane and Mr. Gascogen..Tu.F., 4; W. 3 Dr. H. Jones..M.Tu., 1.15 Dr. Sieveking..Tu.F., 1.15 Dr. Broadbent..W.S., 1.15 Dr. Meadows..Tu.S., 9.30 Dr. Cheadle..Tu.F., 1 Dr. Lawson..W.S., 1 Dr. Nunneley..M.Th., 1 Mr. S. Smith..M.Th., 1.15 Mr. Walton..W.S., 1.15 Mr. J. R. Lane..Tu.F., 1.15 Mr. Gascogen..M.Th., 1 Mr. A. T. Norton..W.S., 1 Mr. E. Owen..Tu.F., 4 Mr. Walton..M.Th., 1.30 Mr. H. Hayward..Tu.Th.S., 9.30 Dr. H. Jones..M., after visit Dr. Sieveking..alt. F., after visit Dr. Broadbent..alt. S., after visit Mr. S. Smith..Th., after visit Mr. H. Walton..alt. S., after visit Mr. J. R. Lane..alt. Tu., after visit Dr. A. Meadows..alt. F. Wednesday, 1.30 Dr. Cheadle..Tu.W.F.S., 12 Dr. Trimen..M.W.F., 9 Dr. A. Meadows..daily, exc. S., 9 Dr. Randall..M.Tu.Th., 10 Dr. Wright..M.Th., 11.30; S., 9 A.M. Mr. St. G. Mivart (Summer) W.F., 10 Dr. Nunneley (Win.) Tu.W.F., 9 Dr. Cheadle (Win.) W.S., 10 Mr. Gascogen Mr. Walton (Sum.)..Th., 2.45 Mr. H. Hayward Dr. H. Jones & Dr. Cheadle..Th., 1.30; Dr. Cheadle..(lecture), Th., 3 (Sum.) Mr. Gerrans Diseases of Throat: Mr. Norton..W.S., 12.30 Aural Surgery: Mr. Allen....Tu.F., 2 (lecture) F., 3 | Mr. Lowne..M.W.F., 4 Dr. R. Liveing..M.W.Th.F., 10 Dr. R. Liveing..daily, 11 to 4 Mr. Heisch..M.Tu.F.S., 11 Dr. Greenhow..M.W.F., 9 Mr. De Morgan..Tu.Th.S., 9 Dr. Goodfellow..M.W.F., 1.30 Dr. H. Thompson..Tu.Th.S., 1 Dr. Greenhow..Tu.Th.S., 1 Dr. H. Davis (in-p.)..Tu.F., 1.30 P.M.; (out-p.) W.S., 1.30 Dr. R. Liveing..Th.S., 4 Dr. Cayley..M.W., 8.30 Dr. John Murray..Tu., 8.30; F., 4 Mr. De Morgan..M.Th., 1 Mr. Nunn..Tu.F., 1; (cancer, out-p.)..Th., 1.30 Mr. Hulke..M.Th., 1 Mr. Lawson..Th.S., 1 .. Mr. Hulke (out-p.)..Tu.F., 8.30; (in-p.) Tu.F., 1.30 Mr. Tomes and Mr. Turner..daily, 9 The Physicians..F., 3 The Surgeons..M., 3 Dr. Hall Davis..Tu., 10 Wednesday, 1 Dr. Brunton..M.W.F., 10 Dr. Cobbold..M.W.F., 4 Dr. Hall Davis..M.W.F., 9 Dr. Divers..Tu.Th.S., 9 Mr. Heisch..M.W.F., 11 Dr. Murie (Sum.)..Tu.Th., 4 Mr. Lowne (Summer) Dr. Cayley (Win.)..M.Th., 4 Mr. Hulke, Mr. Lawson, and Mr. Morris Mr. Hulke (clin.)..alt. Tu., 3 (Win. and Sum.) .. Dr. R. Liveing (Sum.)..Tu., 4 Dr. W. Pearce Laryngoscopic Demons.: Dr. J. Murray (Summer) Tu. 4 Practical Pharmacy and Dispensing: Mr. Lucas | Dr. Ord and Dr. J. Harley..M.Tu.F., 4 Mr. Mason and Mr. Wagstaffe..daily, exc. S., 3 Mr. Mason, Mr. Wagstaffe, Mr. Rainey, Mr. W. Anderson..daily, 9 to 3 Dr. Bernays..W.Th.F., 10 Dr. Peacock and Dr. Murchison..M.Th.S., 2 Mr. Le Gros Clark and Mr. S. Jones..M.W.F., 1 Dr. Peacock Dr. Bristowe Dr. Clapton Dr. Murchison Dr. Barnes Dr. Stone Dr. Ord Dr. J. Harley Dr. Payne Dr. Gervis (obst.)..S., 1 Mr. Le Gros Clark Mr. Simon Mr. S. Jones Mr. Croft Mr. Mac Cormac Mr. F. Mason Mr. H. Arnott Mr. Liebreich Mr. Elliott The Physicians, after or during visits The Surgeons, after or during visits Dr. Barnes..W., 4 Wednesday, 2 Dr. Clapton Dr. J. W. Hicks Dr. Barnes Dr. Stone and Dr. Gervis Dr. Bernays Mr. Stewart (Sum.) Mr. Rainey (Winter)..Tu., 12.30 Dr. Bristowe (lec.) (Win.) Th., 4; Dr. Lees (demon.) 9.30 Mr. Croft & Mr. Mac Cormac..Tu., 2 Mr. Liebreich (Sum.) Mental Diseases: Dr. W. R. Williams (Sum.) Physics and Natural Philosophy: Mr. Stone (Winter) ..M., 8 P.M. Geography of Disease: Mr. Haviland (Win.) | Dr. Sharpey..daily, exc. S., 10 Mr. Ellis..daily, 12 Mr. Ellis, Mr. G. D. Thane, and Mr. W. Price, M.B. Dr. Williamson..daily, exc. S., 11; (exerc.) Tu.W.Th.F., 9 Dr. Reynolds...daily, exc. M., 9 Mr. Marshall..Tu.W.F., 4 Sir W. Jenner, Bart. Dr. Reynolds Dr. Wilson Fox Dr. Ringer Dr. C. Bastian Dr. Tilbury Fox (skin.) S., 9 Dr. Graily Hewitt..Twice weekly Dr. F. T. Roberts Mr. Erichsen Mr. Marshall Sir H. Thompson Mr. Berkeley Hill Mr. C. Heath .. Mr. Wharton Jones..M.W.F., 1 Mr. Ibbetson..W., 10 Sir W. Jenner and Dr. Reynolds..M.Tu.Th.F., 1 to 3 Dr. W. Fox (Holme Professor)..twice weekly Mr. Marshall and Sir H. Thompson..M.W.S., 1 to 3, fortnightly or oftener Mr. Erichsen (Holme Prof.) weekly Dr. G. Hewitt..fortnightly Wednesday, 2 Dr. Ringer..daily, exc. M., 10 Mr. Oliver..daily, exc. S., 8 A.M. Dr. Graily Hewitt..Tu.W.F., 9 Dr. Maudsley..Tu.W.Th.F., 10 Dr. Williamson (elem.) Tu.W.Th.F., 11; (sen.) M.S., 10 Dr. Grant (Win.)..daily, exc. S., 3 Dr. Burdett Sanderson (dem.) daily, exc. S., 9; (lect.) S., 11; Laboratory, daily, 9 to 4 Mr. Beck (Surg.) Jan., Feb., Mar., M.Th., 4; Dr. Bastian (Sum.) M.W.F., 4 Mr. Hill (Oct. Nov. Dec.) M.Th., 4; Mr. Heath (Sum.) daily, 3 Mr. W. Jones (Sum.)..Tu.Th.; clin. lect. alt. weeks Mr. Ibbetson (Winter)..M.Th., 4; clin..W., 10 Dr. Tilbury Fox..fortnightly [Pearse Mr. G. L. Cooper or Mr. W. Mental Diseases: Dr. Sankey (Summer)..Tu.W.Th., 11; (clin.) Tu., 2 Hygiene and Public Health: Dr. Corfield (Sum.) Tu.F., 12 | Dr. Maclure..M.W.F., 4 Mr. Pearse..Tu.W.Th.F., 9 Mr. Pearse and Mr. Davy..daily, 10 to 1 Dr. Dupré..Tu.Th., 3; F., 3.30 Dr. Austie..M.Th.F., 3 Mr. Holthouse..Tu.W.Th., 3 Dr. Basham..M.Th., 1.30 Dr. Fincham..W.S., 1.30 Dr. Radcliffe..Tu.F., 1.30 Dr. F. Bird..Tu.F., 3 Dr. Anstie..M.Th., 1 Dr. Gibb..Tu.F., 1 Dr. Sturges..W.S., 1 Dr. Potter (obst.)..Tu.F., 1 Mr. Holt..M.Th., 1.30 Mr. Holthouse..W.S., 1.30 Mr. Pearse Mr. Cowell..Tu.F., 1 Mr. Davy..W.S., 1 Mr. T. Cooke .. Mr. Walker..W.S., 9.15 The Physicians..weekly The Surgeons..weekly Dr. Sturges..M.Th.F., 3 Mr. Bennett..M.W.F., 9.30 Dr. F. Bird..Tu.Th.F., 4 Dr. Gibb and Dr. Lee..Tu.W.F., 3 Dr. Dupré..Tu.Th., 10 Mr. Carter Blake (Sum.)..W.S., 11 Dr. Maclure (Win.)..Th., 12 Dr. Lee and Mr. Davy Mr. Davy (bandaging, etc. Sum.)..Tu.Th., 9 Mr. J. Walker .. Dr. W. Pearce Natural Philosophy: Mr. Brooke (Sum.)..Tu., 3 |

[Continued from page 297.]

examination in a limited course of the following subjects: 1. Law; 2. Engineering; 3. Pathology; 4. Vital and Sanitary Statistics; 5. Chemistry; 6. Meteorology; 7. Medical Jurisprudence.

QUEEN'S UNIVERSITY IN IRELAND.

THIS University grants the Degrees of Doctor in Medicine and Master in Surgery. It includes three Colleges—the Queen's Colleges of Belfast, Cork, and Galway—each of which possesses a Faculty of Medicine. The curriculum of medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Natural History, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above courses of lectures must be attended in some one of the Queen's Colleges; the remainder may be taken, at the option of the candidate, in any University, College, or School, recognised by the Senate of the Queen's University. Candidates are required before graduating to have also attended in one of the Colleges of the Queen's University Lectures on Experimental Physics and on one Modern Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised laboratory, and the practice during six months of a recognised Medico-Chirurgical Hospital, containing at least sixty beds, together with clinical lectures delivered therein; and to have attended, during the second period, a recognised Midwifery Hospital, with the clinical lectures therein delivered, for a period of three months; or a Midwifery Dispensary for the same period; or ten cases of labour, under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated; and eighteen months' practice of a recognised Medico-Chirurgical Hospital containing at least sixty beds, and in which clinical instruction is delivered.

There are two University examinations—one comprising the subjects of study in the first period, the other the subjects of the second period. The University examinations are held twice in each year, in June and September. Candidates who commence their medical studies elsewhere are admitted to the first University examination before proceeding to College. Further information will be found in the *Queen's University Calendar*; or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

THE ARMY AND NAVY MEDICAL SERVICES.

THE Regulations to be observed by candidates for admission to the medical Services of the Army or Navy are identical, with a few slight exceptions.

1. Every candidate desirous of presenting himself for admission to the Army or Navy Medical Service must be unmarried, and not under 21 nor over 28 years of age. He must produce a certificate from the district Registrar, in which the date of birth is stated; or if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character [from the parochial minister, if possible].*

2. The candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate.† He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. The candidate must be registered under the Medical Act of 1858 as licensed to practise Medicine and Surgery in Great Britain or Ireland.

4. Certificates of registration, character, and age, must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects: Anatomy and Physiology; Surgery; Medicine, including Therapeutics, the Diseases of Women and Children, Chemistry

* Army Regulations.

† His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. [A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed.—*Army.*] Every candidate must also be free from organic disease of other organs, and from constitutional weakness or other disability likely to unfit him for military or naval service in any climate.

and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Army or Navy Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica, and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.*

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley, on—1. Hygiene; 2. Clinical and [Naval and†] Military Medicine; 3. Clinical and [Naval and†] Military Surgery; 4. Pathology of Diseases and Injuries incident to [Naval and†] Military Service.

7. At its conclusion, the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of an Army or Naval Medical Officer, he will be eligible for a Commission as Assistant-Surgeon.

8. During the period of his residence at the Netley Medical School, each candidate will receive an allowance of 5s. *per diem* with quarters, or 7s. *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (*viz.*, the Regulation undress uniform of an Assistant-Surgeon, but without the sword).

9. All candidates will be required to conform to such rules of discipline as the Senate may, from time to time, enact.

[10. After completing three years' full-pay service, Assistant-Surgeons will be allowed to be examined for the rank of Surgeon, but no Assistant-Surgeon can be promoted to the rank of Surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.†]

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

IN addition to the Tables of the Classes, etc., and hours of attendance, given at pages 298 and 299, we subjoin Abstracts of the Programmes issued by the several Medical Schools. We have extracted those points of information which are of most interest to the student, in addition to those given in the tables. It will be seen, that many of the Schools make arrangements by which the course of instruction required by the Examining Boards for the general practitioner can be compounded for, by paying a sum either at once or in periodical instalments. For the information of those who may wish to attend separate classes in any school for one or more sessions, we give the respective fees demanded in each school. To avoid repetition, and save space, the titles of the classes are indicated by letters, thus:

| | |
|--------------------------------------|---------------------------------------|
| a. Anatomy and Physiology. | k. Forensic Medicine. |
| b. Descriptive and Surgical Anatomy. | l. Practical Chemistry. |
| c. Anatomical Demonstrations. | m. Comparative Anatomy. |
| d. Chemistry. | n. Pathology and Morbid Anatomy. |
| e. Medicine. | o. Dental Surgery. |
| f. Surgery. | p. Ophthalmic Surgery. |
| g. Materia Medica. | q. Operative Surgery. |
| h. Midwifery and Diseases of Women. | r. Practical Physiology or Histology. |
| i. Botany. | H.P. Hospital Practice. |

ST. BARTHOLOMEW'S HOSPITAL.—Aggregate Fee, £105, in three instalments of £36 15s. each in the first winter, first summer, and second winter.—For general subjects for students of Dental Surgery, £52 10s.; or, first winter, £26 5s.; first summer, £26 5s.—Separate Classes: a and b, single, £7 7s.; perpetual, £10 10s.; c, one course, £3 3s.; one session, £5 5s.; d, e, f, r, single, £5 5s.; perpetual, £7 7s.; g, h, single, £5 5s.; perpetual, £6 6s.; i, k, single, £3 3s.; perpetual, £4 4s.; l, single, £2 2s.; m, o, p, single, £2 2s.; perpetual, £3 3s. (the lectures on Dental and on Ophthalmic Surgery are free to students of the Hospital); q, one course, £4 4s. H.P., Medical—6 months, £12 12s.; 2 years, £18 18s.; unlimited, £26 5s. Surgical—6 months, £15 15s.; 12 months, £21; unlimited, £26 5s. House-Phy-

* [Marks will also be given to candidates who are willing to pass an examination in French or German.—*Army.*]

† Naval Medical Service.

sicianships and House-Surgeons, £26 5s. Dresserships—3 months, £12 12s.; 6 months, £18 18s.; 12 months, £26 5s.

The Anatomical Museum, and the Museum of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M.—The Reading Room is open every day; during winter, from 10 to 5; summer, 9 to 5; vacations, 10 to 2.30. Subscription to Library, one year, £1 1s.; 4 years, £2 2s.

College.—Students are admitted to residence in the College on the recommendation of a medical officer of the Hospital, which may be obtained on adducing satisfactory evidence of good moral character. The entrance-fee is £2 2s. All information regarding the College may be obtained on application to the Warden, Mr. W. Marrant Baker.

Exhibitions, Scholarships, and Prizes.—Jeaffreson Exhibition, founded 1868: £20 yearly, tenable for two years. Confined to students of less than six months' standing. Examination on October 18, 1871: Subjects, those of Preliminary Education appointed by the General Medical Council.—Seven Scholarships are awarded. Two senior scholarships, value £50 and £25, in Medicine, Surgery, and Midwifery. Two senior scholarships, of the same value, in Anatomy, Physiology, and Botany. Three junior scholarships, of the value of £50, £30, and £20, will be awarded after the general examinations at the end of the summer and winter sessions.—Wix Prize, for the best essay on "The Connexion between Revealed Religion and Physical Science."—Hichens Prize: subject of examination, Bishop Butler's *Analogy*.—Bentley Prize, for the best report of not less than twelve surgical cases occurring in the wards of the hospital during the previous year.—Foster Prize, for Practical Anatomy—Senior.—Treasurer's Prize, for Practical Anatomy—Junior.—The Kirkes Gold Medal for Clinical Medicine.—The conditions under which the exhibitions, scholarships, and prizes are awarded, will be found in the prospectus of the College.

Appointments.—Four House-Physicians and four House-Surgeons (who must be qualified to practise) are appointed annually. Fee, £26 5s. Each of these officers is provided with rooms, and receives a salary of £25. Two Midwifery Assistants are appointed every six months, and are provided with rooms.—Sixteen Dressers to the surgical in-patients and the surgical casualty department are selected each year from the students of the second year. Other dresserships may be obtained by payment of the usual fees.—The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheurs, are chosen from the most diligent students.—There are also Clerks to the Assistant-Physicians and the Assistant-Surgeons in the special departments.

All first year's students are arranged in classes, and are required to attend the surgical wards. Elementary practical instruction is given by the Assistant-Physician in the medical wards.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers and demonstrators.

CHARING CROSS HOSPITAL.—First year: *a, b*, £4 4s.; *c, g*, £3 3s.; *d*, £5 5s.; *i, l*, £2 2s.; H.P., £10 10s.; Matriculation, £2 2s.—total, £36 15s. Second year: *a, b, c, k, n*, £2 2s.; *e, f, h*, £3 3s.; H.P., £10 10s.—total, £31 10s. Third year: *e, f*, £2 2s.; H.P., £10 10s.—total, £14 14s. Matriculated students receive a deduction of eight per cent. H.P., matriculated students, for full period required by Examining Boards in London, £31 10s.; non-matriculated students, either medical or surgical, 3 months, £6 6s.; 6 months, £10 10s.; 12 months, £15 15s.; full period, £21; both, medical and surgical, 3 months, £10 10s.; 6 months, £15 15s.; 12 months, £21; full period, £31 10s. For a longer period, £5 5s. for each additional winter, and £3 3 for each additional summer session.

Gentlemen who enter for their entire medical education at Charing Cross Hospital (matriculated students) enjoy certain privileges.—Students who enter from other medical schools for the remainder of their education are allowed to matriculate. Students (non-matriculated) may enter for one or more separate courses, or to the Hospital Practice. Such students are admitted to the Library on terms proportioned to the period for which they enter.

Scholarships, Medals, and Prizes.—The Llewellyn Scholarship of £25, open to all matriculated students who have just completed their second year. Examination at the end of the second summer session, in Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery.—The Golding Scholarship of £15 a year, tenable for two years, open to all matriculated students who have just completed their first year. Examination at the end of the first summer session, in Descriptive Anatomy, Physiology, Materia Medica, and Chemistry.—The following Medals are awarded annually: The Gold Medal, for General Proficiency; the Governor's Clinical Silver Medal; Silver and Bronze Class Medals and Certificates of Honour in all the classes.—Free scholarships are awarded to sons of professional men of

reduced circumstances and position, or of gentlemen in a corresponding station of society. Two of the free scholarships are annually placed at the disposal of the authorities of the Royal Medical Medical Benevolent College.

Appointments.—The office of Medical and Surgical Registrar is opened to students of Charing Cross Hospital who are doubly qualified; salary, £50 a year, tenable for two years. The offices of House-Physician, House-Surgeon, and Resident Accoucheur, with six months' rooms and commons in the Hospital, are awarded to senior students (qualified men being preferred), after competitive examination.—Clinical Clerks and Dressers are appointed by competitive examination for three months.—The Physician-Accoucheur has two Clinical Clerks.—A Pathological Assistant is appointed for three months.

The Library contains the standard medical and surgical works and the current medical periodicals, and is furnished with a cabinet of Materia Medica and Osteological Preparations. It is open daily from 9.30 A.M. to 4.30 P.M.

ST. GEORGE'S HOSPITAL.—Perpetual Fee, £105,* or £115 10s. from those who have paid by instalments.—Aggregate Fees, £42 for first year, £42 for second year, and £10 10s. for each succeeding year.† Lectures and Hospital Practice for Diploma in Dental Surgery, £45 (none of these fees include Practical Chemistry).—Separate Classes—*a, b, e, f*, single, £6 6s.; perpetual, £7 7s.; *d*, single, £6 6s.; perpetual, £8 8s.; *g, k*, single, £4 4s.; perpetual, £5 5s.; *h*, single, £5 5s.; perpetual, £6 6s.; *i*, single, £3 3s.; perpetual, £4 4s.; *l*, single, £4 4s.; *n*, single, £5 5s. H. P.—Physicians', 6 months, £8 8s.; 3 years, £16 16s.; perpetual, £25 4s.; Surgeons', 6 months, £15 15s.; 3 years, £21; perpetual, £42.

Medical Tutor.—The studies of the pupils will be superintended by a medical tutor. Fee, £1 1s. per annum, and £5 5s. in addition for instruction in the special subjects required for each examination at the University of London.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House-Physician, and an Assistant House-Surgeon, half-yearly, from among the perpetual pupils. The House-Physicians and House-Surgeons hold office for twelve months, and reside and board in the hospital free of expense.—An Obstetric Assistant, who must be a legally qualified practitioner, is appointed annually. He resides and boards in the hospital, and receives a yearly salary of £100.—An Ophthalmic Assistant, an Orthopædic Assistant, a Curator of the Pathological Museum, a Medical and a Surgical Registrar, and a paid Demonstrator of Anatomy, are appointed annually from among the senior pupils. The Curators and Registrars each have a salary of £50. One of the pupils is appointed to assist the Curator in performing *post mortem* examinations.

Clinical Instruction.—The pupils of the hospital are divided into classes under the superintendence of the physicians and surgeons in rotation, and are placed in charge of cases as clerks and dressers.

The Library and Reading Room, and the Museum, are open daily. Annual subscription to Library, 10s. 6d.

Exhibitions and Prizes.—The William Brown Exhibition, for general fitness and moral conduct, £40 per annum, tenable for three years.—Sir Charles Clarke's Prize, interest of £200 annually, for good conduct.—The Thompson Silver Medal for the best clinical report (with observations) of medical and surgical cases (not more than twenty in each department) observed during the preceding year.—Sir Benjamin Brodie's Clinical Prize in Surgery, for the best report (with notes) of not more than twenty surgical cases in the hospital during the preceding twelve months.—Dr. Acland's Clinical Prize in Medicine, for the best record of not more than twelve cases of disease treated in the preceding twelve months.—The Henry Charles Johnson Memorial Prize, for Practical Anatomy.—General Proficiency Prizes, £10 10s. for students of each year.

GUY'S HOSPITAL.—First year, £40; second year, £40; each succeeding year, £10. Perpetual ticket, £105. Materials used in practical courses are charged extra. Separate courses: *a, b, c, d, e, f, h, g*, each course, £5 5s.; *g, i, k, l, m, r, s*, each course, £4 4s.; Natural Philosophy, £4 4s.; H. P., either medical or surgical, 3 months, £10 10s.; 6 months, £15 15s.; perpetual, £26 5s.

* Perpetual Pupils are entitled to admission to the practice of the Physicians and Surgeons, to all the Lectures (except Practical Chemistry), to compete for all Prizes and exhibitions, to hold the appointments of House-Physician, House-Surgeon, and Assistant House-Surgeon, and to become Clinical Clerks for two periods of three months each, and Dressers for two similar periods. This payment must in all cases be made at the time of entry.

† By payment of these Fees, a Pupil is entitled to hold the offices of Clinical Clerk and Dresser, but not to become House-Physician or House-Surgeon, or to compete for the "William Brown Exhibition" and the "Clinical" Prizes.

Prizes.—Voluntary examinations are held as follows. 1. At entrance, in Elementary Classics, Ancient and Modern History, and Mathematics. The first three of the successful candidates receive £25, £20, and £15. The entrance examination will commence on October 11th. 2. At end of first year, in Anatomy, Physiology, Chemistry, Materia Medica, and Botany. Three prizes of £30, £25, and £10 10s. 3. At end of second year, in Anatomy and Physiology, Medicine, Surgery, Midwifery, Chemistry, and Therapeutics. Two prizes of £35 and £30. 4. At end of third year, in Medicine and Surgery, Midwifery (theoretical and practical), and Medical Jurisprudence.—Two prizes of £40 and £35. Honorary certificates are given to those gentlemen who pass creditable examinations. Special certificates are given to gentlemen who have attended 100 cases of Midwifery.—Two Gold Medals given annually by the Treasurer to students who have completed the third and not exceeded the fourth year, for proficiency in Clinical Medicine and Clinical Surgery.

Clinical Instruction.—Two wards, containing together forty beds, are especially devoted to clinical teaching in Medicine. The Surgeons lecture upon selected cases during the winter, and the Assistant-Surgeons in the summer. The Obstetric Physicians, and the Ophthalmic, Dental, and Aural Surgeons, also give clinical and practical instruction.

Every facility and encouragement is given for clinical study and reporting. All students have opportunities of becoming Ward-Clerks to the Physicians and Surgeons.

Under the superintendence of the Registrars, accurate records are taken and preserved of all cases admitted.

Pupils' Appointments.—All these appointments are given according to the respective merits of the candidates, and without payment.

Four House-Physicians are appointed by the Treasurer in each year. They hold office for six months each—three months as junior, three as senior. Six House-Surgeons and two Obstetric Residents every year. Each holds office for four months—two as junior, and two as senior. The Senior House-Physician, House-Surgeon, and Obstetric Resident, reside in the hospital, and are boarded free of expense.—The Clinical Clerks are selected from those students who have been medical ward-clerks.—The Dressers are selected from those who have been surgical ward-clerks. They hold office for six months each. During their weeks of special duty, they reside in the hospital, and board free of expense.—The Dressers in the Eye-Wards hold office for four months each.—The Assistant-Surgeons' Dressers and Dressers in the Surgery are appointed for three months.—Dressers are appointed to the Dental and the Aural Surgeon respectively for two months.—The *Post Mortem* Clerks are selected from students who have completed their second year. They hold office for two months each.—Extern Obstetric Attendants are appointed monthly to attend the cases of Midwifery, in addition to the casual attendants.—The Reporters or Ward Clerks are chosen from those students who have been diligent in their earlier studies.—Clerks to the Assistant-Physicians and Assistant-Surgeons are also appointed.—A special honorary certificate is given to every gentleman who has diligently performed the duties of the various offices.

School Department.—There are two Lecture Theatres, Museums of Anatomy, Pathology, and Comparative Anatomy, Model-rooms, Dissecting-rooms, a Museum of Materia Medica, Chemical Laboratories, and a Library.—The Museum of Human Anatomy is divided into anatomical and pathological departments. The anatomical department contains about 2,000 preparations of the various organs and tissues. The pathological department is divided into twelve sections, and contains upwards of 5,000 specimens, with more than 2,000 drawings.—The Museum of Comparative Anatomy contains 2,000 specimens.—In the Physiological Laboratory, experiments are prepared for practically illustrating the lectures on Physiology.—The Museum of Materia Medica contains specimens of the drugs in general use.—A Laboratory is adjacent.—The Laboratory for Practical Chemistry is open during the summer months.—The Library contains upwards of 5,000 volumes, and is open to the students daily from 9 A.M. to 5 P.M.

The Pupils' Physical Society meets on alternate Saturdays, at seven in the evening. A prize of £10 from the funds of the Society is given at the end of the session to the member who sends in the best essay and report of cases. A second prize of £10 is given to the member who is judged to have read the best essay before the Society.

KING'S COLLEGE AND HOSPITAL.—Aggregate Fee for Matriculated Students, £105.* The payments may be made by payment of £100 on entrance; or £52 10s. on entrance, £42 at the beginning of the se-

* Students are recommended to add £2 2s. for a second course of Chemistry, and £3 3s. for Medical Tutor's fee. Attendance on the Medical Tutor is compulsory on resident students during their first year.

cond winter session, and £10 10s. at the beginning of the third winter session. For each additional year, £10 10s.—Separate Classes, *a, b, d*, single, £7 7s.; unlimited, £10 10s.; *e*, single or unlimited, £7 7s.; *f*, single, £6 6s.; perpetual, £7 7s.; *g, h, i, k*, single, £4 4s.; unlimited, £5 5s.; *l*, single, £4 4s.; perpetual, £7 7s.; *m*, single, £3 3s.; unlimited, £4 4s.; *n*, single, £2 2s.; unlimited, £3 3s.; *o*, single, £6 6s.; unlimited, £8 8s.; *p*, single, £3 3s. Tutor's Class, each session, £3 3s. H.P.—Perpetual for Matriculated Students, £31 10s.; non-matriculated, £42. Medical Practice—3 months, £6 6s.; 6 months, £10 10s.; 18 months, £15 15s.; perpetual, £21. Surgical Practice—3 months, £10 13s.; 6 months, £15 15s.; 12 or 21 months, £21; perpetual, £26 5s.

Clinical Instruction is given in the wards and by lectures in the medical and surgical departments; also in the Diseases of Women and Children, in Dental Surgery, in Diseases of the Eye, in Throat-Diseases, and in Skin-Diseases.—Demonstrations and practical instruction in Morbid Anatomy are given in the *Post Mortem* Theatre. Students may obtain practical instruction and certificates in Vaccination by the payment of a small fee.—Special instruction is given in Medical Chemistry and the Microscope by the Physicians.

The Museums of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4.

Resident Medical Officers, Clinical Clerks, and Dressers, are chosen by examination from matriculated students who are pupils at the hospital.

A permanent record of every case received into the hospital is kept by the Medical and Surgical Registrars.

Scholarships and Prizes.—Two Warneford Scholarships, £25 *per annum* for three years, for the encouragement of previous education; and one Warneford Scholarship of £25 *per annum*, for two years, for resident medical students.*—College scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, open to students of the second year; three for £20 for one year, open to students of the first year.—The Daniell Scholarship, £20 *per annum* for two years.—Sambrooke Registrarships, annual value £50, tenable for two years.—Leathes' Prizes: Interest of £300, applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated students.—Warneford Prizes: £40 in medals and books, to two matriculated students.—Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes.—Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and two Surgical Clinical Prizes of the same value.—Todd Medical Clinical Prize: Bronze Medal and Books to the value of £4 4s.—Jelf Medal, to the candidate of the senior scholarship examination who is second in order of merit.

Associates of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students. The cost of the academical year varies from £50 to £60. Some of the professors, etc., receive pupils into their houses. There is a dining hall in the College.

LONDON HOSPITAL.—Aggregate Fee, £90, payable in two instalments of £45 each, at the commencement of the first and second years. Perpetual fee for lectures alone, £50; for both lectures and Hospital Practice, £100, payable in two instalments of £50 each, or two of £45 each, and one of £10 10s. Composition fee for gentlemen who have spent their first year elsewhere, £70, payable in two equal instalments. Students who have paid the general aggregate fee can become perpetual

* Two Scholarships, of the value of £25 *per annum* each, to be held for three years, will be given in October 1871. Candidates must be matriculated students of the Medical Department, and also perpetual pupils of the hospital. Their first winter session must commence in October 1871. The examination will be in the following subjects. 1. Divinity: Old Testament History; The Acts of the Apostles in Greek; The Church Catechism, with explanations. 2. The Greek and Latin Classics: Homer, *Iliad*, book ix; Cicero, *Oratio II in Catilinam*. 3. English Language and History: Shakespeare, *Julius Caesar*; History of England to the end of the Seventeenth Century. 4. Mathematics: Arithmetic; Algebra, as far as and including Quadratic Equations; Euclid, book i; book ii, except props. 8, 9, 10; book iii. 5. Modern Languages: French, Corneille, *Horace*; German, Schiller, *Wilhelm Tell*. For further particulars, see the King's College Calendar. The days of Examination are September 27, 28, 29, and 30.—One Scholarship will be awarded at the close of July, 1872, of the value of £25 *per annum*, to be held for two years. The Examination for 1872 will be in the Book of Psalms, the Acts of the Apostles, the Epistles to the Thessalonians, Westcott's *Bible in the Church*. Candidates will be required, at the time of examination—1. To write from memory the particulars of four cases treated in the Hospital during the previous academical year. 2. To give, in writing, with the aid of notes taken by himself at the time, the substance of four Clinical Lectures delivered in the Hospital during the previous year. The Lectures to be selected by the Examiners. 3. To answer, either *visu voce* or in writing, four questions on cases in the Hospital in the current session.

at any time by paying the additional £10 10s. Extra fees: Library, £1 1s.; Practical Pharmacy, £4 4s. Separate classes: *a, h*, one session, £4 4s.; unlimited, £6 6s.; *b, c*, one session, £5 5s.; unlimited, £8 8s.; *d*, one session or unlimited, £7 7s.; *e, f*, one session, £5 5s.; unlimited, £6 6s.; *g, i, k, m, r*, one session, £3 3s.; unlimited, £4 4s.; *l*, one course to students of schools, £2 2s.; to others, £3 3s.; *n*, one year, £3 3s.; perpetual, £6 6s.; *o*, one course, £2 2s.; Diseases of Throat, and Diseases of Eye, each, one course, £2 2s.; unlimited, £3 3s.—H.P.—Medical: 6 months, £6 6s.; period required by Apothecaries' Hall, £12 12s.; unlimited, £21. Surgical: 6 months, including 3 months' dressership, £8 8s.; 12 months, including 6 months' dressership, £12 12s.; 18 months, including 12 months' dressership, £18 18s.; 3 years, including 12 months' dressership, £26 5s.; 3 years, including 2 years' dressership, £3 10s.; 12 months' dressership after the expiration of the above 3 years, £8 8s.

The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library, are open daily.

Scholarships and Prizes.—Seven scholarships will be offered for competition. 1 and 2. Two Buxton Scholarships, value £30 and £20, will be given in October, after examination in the subjects of preliminary education.* These scholarships are open to full students of less than three months' standing. 3. A scholarship in December 1871, value £20, to a first year's student: subject, Human Anatomy. 4. A scholarship, value £25, to a first or second year's student, at the end of the winter session: subjects, Anatomy, Physiology, and Chemistry. 5, 6, 7. Hospital Scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics.—The Duckworth Nelson Prize, value £10, at the end of the winter session, 1873, open to all students who have not completed their education: subjects, Practical Medicine and Surgery.—Money prizes to the value of £60 *per annum* to the most meritorious of the dressers in the out-patient rooms.—Special certificates to those gentlemen who have faithfully performed their duties in the hospital, and to those who have distinguished themselves at the examinations.

Appointments.—A Resident Medical Officer, qualified to practise Medicine, who receives £75, is appointed for twelve months. He is eligible for re-election, and then receives £100. A Junior Resident Medical Officer is appointed every six months. Four Medical Assistants, one for each Physician, are appointed every three months. Every student is expected to act as Clinical Clerk. A Resident Accoucheur is appointed for six months.—Four House-Surgeons are elected, usually, for six months.—Any student may enter his name on the list as a Dresser. Two Dressers reside and board in the hospital every week.—Two Clinical Assistants are appointed every three months for the medical and two for the surgical out-patients and patients in the special departments. They are eligible for re-election. Each receives £40 *per annum*.—A Medical Registrar and a Surgical Registrar are appointed annually; the former receives 25, the latter 35, guineas.—An Assistant-Dentist, *Post Mortem* Clerks, and two Prosectors of Anatomy, are also appointed.—Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, are eligible for all scholarships, prizes, and appointments.—Students who have commenced elsewhere, but who, at or before the beginning of the second winter session, become pupils of the hospital and college by paying the composition fee, will be eligible for the Dresserships, for three months as House-Surgeon, and for the offices of Ward-Clerk, *Post Mortem* Clerk, Maternity Pupil, Clinical Assistant, and Registrar.

All the appointments are open to students without fee. The holders of all resident appointments are provided with rooms and board free of expense.

Clinical Instruction.—Two medical wards, containing together thirty beds, have been set apart for clinical teaching. The Clinical Professor will meet his class twice a week. Bedside instruction will also be given by the physicians not on special clinical duty. Students requiring signatures for medical practice must attend the Clinical Professor.—Dr. Davies will hold in the summer a class for Practical Auscultation and Percussion.—In the out-patient department, the Physicians and Assistant-Physicians impart instruction each visit.—The Surgeons make clinical observations on their cases, and a clinical lecture is given once a week.

Special Departments.—There are departments for instruction in Obstetric Medicine and Surgery, Vaccination, Diseases of the Eye and the

Use of the Ophthalmoscope, Diseases of the Ear, Diseases of the Skin and of the Throat, Syphilis and Local Contagious Diseases, and Mental Diseases. Students desirous of obtaining a practical knowledge of Mental Diseases can attend, without additional fee, the practice of Dr. Millar at the Bethnal House Asylum.

ST. MARY'S HOSPITAL.—Aggregate Fee, £89 5s. in instalments, or £84 in one sum.—Fee for all lectures required for ordinary examinations, £52 10s.; for hospital practice, £36 15s.; for lectures and hospital practice, £89 5s.—Unlimited attendance on hospital practice and all lectures, £105 in instalments, or £99 15s. in one sum.—Separate classes, *a, i, k, r*, one course, £3 3s.; unlimited, £4 4s.; *b*, one course, £6 6s.; unlimited, £8 8s.; *c*, £1 15s. first and second sessions; *d*, one course, £5 5s.; unlimited, £7 7s.; *e, f, g, h*, one course, £4 4s.; perpetual, £6 6s.; *l*, one course, £3 3s.; *m*, one course, £2 2s.; unlimited, £3 3s.; *n, o, p*, and Aural Surgery, one course, £2 2s.—H.P.—Medical: 3 months, £5 5s.; 6 months, £7 7s.; 12 months, £12 12s.; 18 months, £15 15s.; unlimited, £21. Surgical: 3 months, £6 6s.; 6 months, £9 9s.; 12 months, or time required by College of Surgeons, £21; unlimited, £31. Practical Pharmacy: 3 months, £3 3s.; 6 months, £6 6s.; 12 months, £10 10s.—Vaccination, £1 1s.—Library fee, £1 1s.

Special Courses are given on Ophthalmic, Aural, and Dental Surgery; also clinical demonstrations on Diseases of the Skin and of the Throat.

Hospital Appointments are open to the pupils without additional fee. Three Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital.—A Resident Registrar is appointed, with a salary of £100 a year; he holds office for two years, and may be re-elected.—All general students must act as clinical clerks and dressers for six months during the last two years.

Clinical Lectures twice a week by the Physicians and Surgeons. The students are divided into three classes, each committed to the charge of a Physician and Surgeon for a definite period. The attendance of the students is noted at each visit.

Scholarships and Prizes.—A Scholarship in Natural Science, value £40, for three years, to be awarded at the beginning of the winter session; and an Exhibition of £20 for one year to the second candidate in order of merit.—A prize of £4 4s. in Anatomy and Physiology, and three of £2 2s. each in Chemistry, Practical Chemistry, and Materia Medica and Botany, to first year's students.—A Scholarship in Anatomy, value £20, for one year; and a prize of £2 2s. for Midwifery; to students of the second year.—Prizes of £3 3s. each in Medicine and in Surgery, and one of £2 2s. in Comparative Anatomy, for third year's students.—A prize of £4 4s. for Clinical Medicine and Clinical Surgery to students of the third and fourth years.—Scholarships in Pathological Anatomy, value £20, tenable for one year, to students who have completed the third winter session.—Two Prosectors are appointed annually, who each receive a certificate and £5.

The *Reading Room* and *Library* is open daily. A fee of £1 1s. (perpetual) is paid on entrance by each student.—The *Museum* is open daily to students.

MIDDLESEX HOSPITAL.—Aggregate Fee, £90 in one sum;* or in instalments of £35 at the beginning of the first and second sessions; £20 at the beginning of the third session; and £10 for each additional year, or separate fees for the hospital practice or lectures attended.—Aggregate Fee for hospital practice alone, £42.—Separate Classes—*a, c, d, e, f*, single, £6 6s.; unlimited, £8 8s.; *b*, single, £8 8s.; unlimited, £12 12s.; *g, h, i, k*, single, £4 4s.; unlimited, £5 5s.; *l, m*, single, £3 3s.; *n*, single, £3 3s.; unlimited, £4 4s.; *q*, single, £6 6s.; *r*, single, £4 4s.—H.P.—Unlimited, £26 5s.; or in instalments of £10 10s. each at commencement of first and second years, and £5 5s. for each subsequent year. Medical or surgical practice separately, one year, £8 8s.; three months, both, £7 7s.; either, £5 5s. Registration fee (occasional students), £1 6s.; Vaccination, £1 1s.; Dental practice (occasional students), £5 5s.; Pharmacy, without dispensing, 3 months, £4 4s.; with dispensing, 6 months, £5 5s.; 12 months, £8 8s.

Appointments, etc.—Two House-Surgeons are appointed annually. Candidates must be 21 years of age, and must have obtained certificates of proficiency as in-patient dressers. The Junior House-Surgeon succeeds to the office of Senior House-Surgeon only if he have performed his duties satisfactorily. Each House-Surgeon pays a fee of £21; if he have not been a surgical pupil of the hospital, he pays £31 10s. Three Resident Physicians'-Assistants are appointed annually. They must have a legal qualification. Each Resident Physician's-Assistant

* The subjects of examination will be:—1. The English Language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions. 3. Algebra, including Simple Equations. 4. Geometry—first Two Books of Euclid. 5. Latin—Cæsar, *De Bello Gallico*, Book II. 6. One of the following subjects at the discretion of the Candidate: (a) Greek—Xenophon's *Anabasis*, Book I; (b) French—X. B. Saintine's *Picciola*; (c) German—Schiller's *Wilhelm Tell*; (d) Natural Philosophy—Mechanics, Hydrostatics, Pneumatics.

* The aggregate fee admits to the Library, to one course of Practical Chemistry and two courses of Dissections, to all the lectures, and to the instruction of the tutor: it includes also all charges for Clinical Clerkships and Dresserships.

pays £10 10s. on appointment; he must either be a medical pupil of the hospital, or pay half the fee for twelve months' medical practice. A Resident Obstetric Assistant is appointed for six months. He pays £10 10s. Clinical Clerks and Dressers are appointed for six months. The appointments are so arranged that every student may take both a clerkship and a dressership at some period. Each student must be an out-patient clerk and out-patient dresser for six months respectively before being eligible to an in-patient clerkship or dressership.

The College Tutor assists all general students of the hospital, especially those who are preparing for examination.

Clinical Lectures are delivered regularly by the Physicians and Surgeons, and by the Physician-Accoucheur and the Ophthalmic Surgeon. Special instruction in Diseases of the Skin are given during the summer session.

Prizes.—Three chief prizes for competency in Clinical knowledge are annually awarded after competitive examination; viz.: the Governors' Prize, value £21, and two Prizes of £6 6s. and £4 4s. These are open to competition amongst students who have completed their second, and not exceeded their third, winter session.—Written periodical class examinations are held, and must be attended by all general students.—Class Prizes are given in each subject.—A Prize is also given for the best Dissection during the winter session.

The Museum is open to students daily from 9 to 5. It contains above 5000 specimens.—Admission to the Library and Reading Room is included in the fee paid by general students. Occasional students may use the Library on payment of £1 1s.

ST. THOMAS'S HOSPITAL.—Aggregate fee (giving unlimited admission), £105 in one sum; or £40 each for the first and second years; £20 for the third; and £10 for each succeeding year. Special entries may be made to any course of lectures or to the hospital practice.

Prizes.—The William Tite Scholarship, consisting of the interest of £1000 consols, awarded every third year and tenable for three years; and College Prizes for each year's students, of £20, £15, and £10 each winter, and £15, £10, and £5 each summer.—The Cheselden Medal, annually, for Surgery and Surgical Anatomy.—The Treasurer's Gold Medal, annually, for general proficiency and good conduct.—The Grainger Testimonial Prize, value £20, biennially, to third or fourth year's students, for a Physiological Essay.

Appointments.—Clinical Clerks and Dressers, and Obstetric Clerks, are selected according to merit; the Dressers and Obstetric Clerks are provided with rooms and commons free of expense. The House-Surgeons and Resident-Accoucheur are selected according to merit from gentlemen who have obtained their diplomas: the former hold office for six or twelve months; the latter for three or six. All are provided with rooms and commons.—A Medical and a Surgical Registrar are appointed from among gentlemen who have completed their studies in the school. Each Registrar, on completing his Annual Report to the satisfaction of the physicians or surgeons, receives £40. One Registrar, with a salary of £80, may be appointed.—Students have access to the Library and to the Museums of Anatomy and Pathology, and of Materia Medica and Pharmacy.—Laboratories under the direction of the Physiological and Chemical Lecturers are provided.—There are special departments, for Diseases of Women and Children, Diseases of the Eye, Skin, and Teeth, and for Vaccination.—A limited number of students can reside with some of the officers of the hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—Aggregate Fees £104 : 14; or first winter session, £36 5s.; first summer session, £11 11s.; second winter session, £31; second summer session, £7 7s.; third winter session, £11 4s.; third summer session, £7 7s. Separate Classes: *a*, session, £7 7s.; first half session, £4 4s.; second, £3 3s.; perpetual, £9 9s.; *b*, with *c*, entire session, £7 7s.; half session, £4 4s.; perpetual to Lectures, with three years' Practical Anatomy, £10 10s.; Practical Anatomy after the third year, every winter session, £1 1s.; Practical Anatomy without Lectures for three summer months, £2 2s.; *d*, *e*, whole course, £6 6s.; half course, £3 3s.; perpetual, £9 9s.; *f*, session, £5 5s.; half session, £3 3s.; perpetual, £6 6s.; *g*, *h*, *n*, single, £4 4s.; perpetual, £6 6s.; *i*, *k*, single, £3 3s.; perpetual, £4 4s.; *l*, elementary and senior courses, single (each), £4 4s.; perpetual (each), £7 7s.; summer matriculation course, £4 4s.; *m*, Comparative Anatomy, £4 4s.; Zoology, £4 4s.; perpetual to both, £9 9s.; *o*, *p*, single, £2 2s.; *q*, single, £4 4s.; *r*, session, £6 6s.; perpetual, £9 9s.; Palæo-Zoology, single, £1 1s.; Mental Diseases, £2 2s.; Organic Chemistry, £2 2s.; Use of Surgical Apparatus, single, £1 11s. 6d.; perpetual, £2 2s.; Hygiene and Public Health, single, £1 1s.; Physiological Laboratory, first month, £2 2s.; each succeeding month, £1 1s.—H.P.—Perpetual, £27; one year, £10; six months, £7. Practical

Pharmacy, six months, £5 5s.; three months', £3 3s.—Students may attend the practice of the Middlesex Hospital on paying a sum which, with their previous payments for hospital practice, will make up £30.

Scholarships, etc.—Three Entrance Exhibitions, value £30, £20, and £10 per annum, tenable for two years, to gentlemen who are about to commence their first winter's attendance.*—The Atkinson-Morley Surgical Scholarship, £45, tenable for three years, for proficiency in Surgery.—The Sharpey Physiological Scholarship, present value about £95.—The Filliter Exhibition of £30, annually in July, for Pathological Anatomy.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, with Certificates of Honour, at the end of each session.—The Liston Gold Medal, with Certificates of Honour, at the end of the session, for reports and observations on the Surgical Cases in the Hospital.—The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery.—The Cluff Memorial Prize, every second year, for Anatomy, Physiology, and Chemistry.—Gold and Silver Medals, or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes. Prizes to the value of £10 in the class of Hygiene.

Libraries and Museums.—The General Library, the Medical Library, the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, are open daily. There are also a Chemical and a Physiological Laboratory.

Clinical Instruction is given by the physicians and surgeons in the wards and in the out-patient department, and by lectures and examinations. Dr. Wilson Fox, the Holme Professor of Clinical Medicine, delivers Clinical Lectures, and trains the Pupils in the practical study of disease. Lectures are given twice a week by Mr. Erichsen, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Marshall and Sir Henry Thompson. Clinical Lectures on Midwifery and the Diseases of Women are delivered once a fortnight; also on Ophthalmic Surgery and on Diseases of the Skin. Arrangements are made for practical instruction in Vaccination.

Private Instruction.—Gentlemen may obtain assistance in their studies within the College, on application to the respective Professors.

Residence of Students.—Several gentlemen connected with the College receive students to reside with them; and in the office of the college there is kept a register of persons who receive boarders.

Offices.—Physicians' Assistants, House-Surgeons, Midwifery Assistants, Physicians' Clerks, Surgeons' Dressers, Ophthalmic Surgeons' Assistants and Ward-Clerks are selected from among the pupils without additional fees. The Physicians' Assistants, the Obstetric Assistant, and the House-Surgeons reside in the Hospital, paying for their board. Six Dresserships at the Royal Free Hospital have been placed at the disposal of the College.

WESTMINSTER HOSPITAL.—Aggregate Fee, £70; or in instalments of £35 at the commencement of the first year, £30 at the commencement of the second year, and £10 at the commencement of the third year.—Perpetual Fee to all Lectures and Hospital Practice, £75 on entry, or in instalments of £40 each at the commencement of the first and second years.—Lectures and Hospital Practice for any single year, £35.—Separate Classes:—*a*, *b*, *d*, *e*, *f*, single, £5; perpetual, £7; *c*, single, £2; perpetual, £3; *g*, *i*, *k*, single, £3; perpetual, £4; *h*, single, £4; perpetual, £5; *l*, *m*, single, £2; Natural Philosophy, single, £1.—Vaccination, £1 1s.—Practical Pharmacy, 3 months, £5; six months, £8.—H.P.—Period required by Colleges and Society of Apothecaries, £26; perpetual, £30. Medical or Surgical separately, each, six months, £8; twelve months, £12; eighteen months, £15; perpetual, £20. Students can attend, without additional fee, the practice of the Royal Westminster Ophthalmic Hospital and of the National Hospital for Paralysis.

There are separate departments for Diseases of the Eye and of the Skin, and for Diseases of Women.

The Anatomical Museum is constantly open to the student. There are also a Pathological Museum and a Materia Medica Museum.—The Reading Room is open daily.

Arrangements have been made for the residence of students.

Appointments.—House-Physicians and House-Surgeons are appointed by competition, without fee, and are provided with board and lodging free of expense.—An Assistant House-Surgeon is appointed without fee from among the senior students. He is provided with commons at the

* The subjects of examination are the following. Latin and Greek—Translation into English of passages from Cæsar and Xenophon; Translation of short English sentences into Latin. French or German—Translation into English of passages from Bossuet's *Discours sur l'Histoire Universelle*, or of passages from Schiller's *Geschichte des dreissigjährigen Krieges*. Mathematics and Natural Philosophy—the subjects required for the Matriculation Examination of the University of London, with the addition of Acoustics (Nature of Sound). The next examination will take place on September 28th and 29th, 1871.

hospital table.—Clinical Clerks and Dressers are appointed without fee, in rotation.—A Resident Obstetric Assistant is appointed.

Prizes.—A Prize of Books or Instruments and Certificates of Honour in each class—Prizes each £5 5s., first and second year's students, for General Proficiency.—Scholarship in Anatomy and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator). After the second year, prizes of £5 5s. each for Clinical Medicine and Clinical Surgery.—Chadwick Prize for General Proficiency, £21, to the most meritorious student or students of any year not exceeding the fifth.

NOTES CONCERNING THE PROVINCIAL AND SCOTCH HOSPITALS AND MEDICAL SCHOOLS.

BIRMINGHAM.—**QUEEN'S COLLEGE.**—Aggregate Fee for all lectures required, £52 10s., payable in two equal instalments at entrance and at commencement of second year.—Separate Classes: *a, b, e, f*, single, £5 5s.; perpetual, £8 8s.; *c, d, h*, single, £4 4s.; perpetual, £6 6s.; *g, i, k, l*, single, £3 3s.; perpetual, £5 5s.; *m, o, p*, single, £3 3s.; two courses, £5 5s.—Rooms and board, £50 *per annum*, payable in three instalments.—H.P.—*General Hospital*: Medical and Surgical Practice, 6 months, £10 10s.; a year, £15 15s.; perpetual, £31 10s.—*Queen's Hospital*: Fees the same as at the General Hospital; with £2 2s. for department of Midwifery and Diseases of Women.

Clinical Instruction.—Clinical Lectures and lectures in special departments are given at both Hospitals. At the Queen's Hospital, there are wards for Diseases of Children and Venereal Diseases.

Appointments.—*General Hospital*: Resident Medical Assistant, and Resident Surgical Assistant, each for 12 months; two Resident Dresserships, tenable 6 months: all after examination, and with board and lodging. *Queen's Hospital*: Resident Physician's Assistant and Resident Surgeon's Assistant, every six months after examination; board and lodging. No fee for clerkships or dresserships.

The Museums of Anatomy and Pathology, and the Library, are open to the students.

Prizes.—Two Warneford Scholarships, annually after examination.—The Sands Cox Prize, value £20, annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery.—Warden's Prize, £5 5s., to the most proficient student of the first year.—The Percy Prize, books of the value of £5 5s., for the best examination in German.—Silver Medals and Certificates of Honour, annually, in each class after examination.

Clinical Prizes.—*General Hospital*: Surgery, first year, two prizes of £3 3s. and £2 2s.; Surgery, second and third years, and Medicine, second and third years, one prize of £5 5s. in each subject, each year.—*Queen's Hospital*: second year, two prizes of £3 3s. and £2 2s. in Medicine, and the same in Surgery; third and fourth years, two prizes of £5 5s. and £3 3s. in Medicine, and the same in Surgery.

BRISTOL MEDICAL SCHOOL.—Perpetual Fees to Lectures (except Comparative Anatomy), £57 15s. Separate Classes: *a, b, e, f*, single, £5 5s.; perpetual, £8 8s.; *d*, single, £5 5s.; perpetual, £7 7s.; *g, h*, single, £4 4s.; perpetual, £6 6s.; *i, k, l*, single, £3 3s.; perpetual, £5 5s.; *m*, single, £4 4s.; *n*, single, £3 3s.; perpetual, £4 4s.—H.P.—*Royal Infirmary*. Surgeon's pupil, 1 year, £12 12s.; 2 years, £21; 3 years, £26 5s. Dresser (extra fee), 1 year, £12 12s.; 2 years, £21; 3 years, £26 5s. Physician's pupil, 6 months, £8; 1 year, £15; 18 months, £20; perpetual, £25. Entrance Fee, £5. Library, £1 *per annum*. Apprenticeship to House-Surgeon, including five years' residence, and attendance on Hospital Practice, £315.—*General Hospital*. Medical or Surgical Practice, 6 months, £6; 1 year, £10; perpetual, £20. Extra Fee for Clinical Clerk or Dresser, £5 5s. for six months. Library Fee, £1 1s. *per annum*. Resident pupils, £100 for the first year; £60 for each subsequent year; or 5 years, with apprenticeship, £260.

Clinical Instruction, etc.—Clinical Lectures are delivered at the Royal Infirmary and the General Hospital.

The Royal Infirmary and the General Hospital each contain a Library and a Museum.

Prizes.—Prizes and Certificates of Honour will be distributed at the end of the winter session, after examination in all the subjects of each year.—Prize and Certificates of Honour for Practical Anatomy.—*Royal Infirmary*. Suple's Medical Prize, and Suple's Surgical Prize; each a gold medal value £5 5s., and about £7 7s. in money. Clark's prize (interest of £500) to the prizeman of the third year in the medical school, if he have attended the Royal Infirmary.—*General Hospital*. Guthrie Medical Scholarship and Clarke Surgical Scholarship, each £15, annu-

ally. Sanders Scholarship (interest of £500) for proficiency in Medicine and Surgery.

LEEDS SCHOOL OF MEDICINE.—Aggregate Fee for Lectures required by examining bodies, £46 4s. Entrance Fee to Library and Reading-room, £1 1s. Separate Classes: *a* (including practical course), 1st session, £5 5s.; 2nd session, £5 5s.; *d, f*, 1st session, £4 4s.; 2nd session, £3 3s.; *b*, 1st session, £6 6s.; 2nd session, £5 5s.; *e*, 1st session, £5 5s.; 2nd session, £3 3s.; *g, h*, 1st session, £4 4s.; 2nd session, £2 2s.; *i, k*, 1st session, £3 3s.; 2nd session, £1 11s. 6d.; *l*, each course, £3 3s.; *m*, each course, £2 2s.—H.P.—Leeds Infirmary, Medical or Surgical, each—a winter session, £7 7s.; a summer session, £6 6s.; 12 months, £12 12s.; 18 months, £15 15s.; 3 years, £21.

Clinical Lectures are delivered by the physicians and surgeons of the Infirmary.—A special course of Practical Surgery is given.—Demonstrations of Skin Diseases, Ophthalmoscopic Demonstrations, and Demonstrations of Aural Diseases, are given.—Instruction in the Use of the Microscope is given weekly.—The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures will be given during the summer.—Students can also attend the practice of the Leeds Public Dispensary, and the Fever Hospital.—There are several Resident Appointments at these Institutions. The school buildings comprise Lecture-Rooms; Anatomical, Physiological, Pathological, Chemical, Botanical, and Materia Medica Museums; Laboratories; Dissecting Rooms; Library, etc. There is a large and well-fitted Chemical Laboratory, where instruction in Practical Chemistry is given. The fees are: 1 month, £4 4s.; 2 months, £7 7s.; 3 months, £10 10s.; 4 months, £13 13s.; 5 months, £15 15s.; 6 months, £17 17s.; 9 months, £21.

Hospital Appointments.—Every student in turn must pass through the offices of Clinical Clerk and Dresser. Four House-Surgeons are elected from among the senior students who have shown industry and skill as Dressers and Clinical Clerks.

Prizes.—At the close of each session, Silver and Bronze Medals, Books, and Certificates of Honour, are presented according to merit.—The Hardwicke Clinical Prize, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prize of £10, for the best reports of surgical cases, during the winter session.—The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session.—Two Chemical Scholarships are offered annually for proficiency in Chemistry.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Aggregate fee for lectures, £47 5s., or in two equal instalments. Separate classes (each course), *a, b, e, f, g, h*, £4 4s.; *c, i, k, l, n*, £3 3s.; *d*, £5 5s.; *m, o, p*, £2 2s. Vaccination, £1 1s. Practical Pharmacy, £2 2s. Dental Mechanics, £2 2s.—H.P.—*Royal Infirmary*, Medical or Surgical, each—6 months, £5 5s.; 12 months, £6 6s.; perpetual to both, £31 10s. Lock Hospital attached to the Infirmary: 6 months, £2 2s.; 12 months, £3 3s.—*Northern Hospital*: perpetual, £31 10s.; a year, £12 12s.; 6 months, £9 9s.; 3 months, £6 6s. For either the medical or the surgical practice separately, half the above fees.

Appointments. *Royal Infirmary*.—Six Dressers and Six Clinical Clerks are elected annually. Two *Post Mortem* Clerks are appointed for six months. Four Apprentices are admitted to reside and Board in the Infirmary.

Clinical lectures are given weekly at the Infirmary.

There are a Museum containing specimens of Morbid and Comparative Anatomy; a collection of Wax Models and a collection of Materia Medica; Library; and a Reading Room.

Exhibitions and Prizes.—*Royal Infirmary* Medical Scholarship, value £42, consisting of a Gold Medal, value £10 10s., and six months' free board and residence, with dressership and clerkship in the Royal Infirmary.—Four Exhibitions, value £31 10s. each, consisting of free board and residence in the Royal Infirmary for six months, with dressership.—Medals and Certificates of Honour in the various classes.—Clinical Prize in May 1872, £5 for the best report of twelve surgical cases in the Infirmary.

MANCHESTER ROYAL SCHOOL OF MEDICINE.—Aggregate fee for lectures, £42. Separate classes for one course, *a, b, d, e, f, g, h, k, l, n*, £4 4s.; *c, i*, £3 3s.; *p*, £2 2s. [In Practical Chemistry there is an additional charge of 10s. 6d. for chemicals.]—H.P., *Royal Infirmary*, composition fee, £42, or two instalments of £22 each; or Medical Practice, £18 18s.; Surgical, £31 10s.—*Practical Pharmacy*, 3 months, £3 3s.; 6 months, £5 5s.

Connected with the School are Museums of Human and Comparative Anatomy and of Materia Medica, and a Chemical Laboratory.

Appointments.—Each student is required to fill the offices of Dresser

GUIDE TO HOSPITALS AND MEDICAL SCHOOLS IN THE PROVINCES: 1871-72.

For further particulars regarding each Hospital and Medical School, see pp. 305 and 308.

| Lectures, etc. | BIRMINGHAM QUEEN'S COLLEGE. | BRISTOL MEDICAL SCHOOL. | LEEDS SCHOOL OF MEDICINE. | LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE. | MANCHESTER ROYAL SCHOOL OF MEDICINE. | SHEFFIELD MEDICAL SCHOOL. | UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE. |
|--|---|---|--|--|---|---|---|
| WINTER SESSION. | | | | | | | |
| ANATOMY AND PHYSIOLOGY..... | Dr. Norris and Mr. T. H. Bartleet.. M. Tu. 4 | Mr. Atchley and Mr. Steele.. M. W. F. S., 9.15 | Mr. Wright & Mr. Walker.. M. W., 10 to 12 | Dr. Waters.. M. W. F., 9.15 | Mr. W. Smith.. Tu. W. Th., 12 | Mr. T. Leeds and Mr. S. Morton.. M. W. F., 6 | Dr. W. Murray.. Twice weekly, 8.45 A.M. |
| ANATOMY, DESCRIPTIVE AND SURGICAL..... | Mr. C. J. Bracey.. M. Tu. Th. F., 1 | Mr. Lansdown and Mr. Board.. M. W. F. S., 10.15 | Mr. Seaton, Dr. R. T. Land, and Mr. J. A. Nunneley.... Tu. Th. F. S., 10 | Mr. W. M. Banks.. M. W. Th. F., 3 | Mr. Lund and Mr. Bradley.. Tu. W. Th. F., 8.45 A.M. | Dr. Neesham, Mr. L. Armstrong, and Mr. J. Russell.. Four days weekly, 8.45 A.M. | Dr. Neesham, Mr. L. Armstrong, and Mr. J. Russell.. Four days weekly, 8.45 A.M. |
| DEMONSTRATIONS AND DISSECTIONS | Mr. Thomas and Mr. Jolly.. M. Tu. Th. F., 12; W. S., 1 | Mr. Ludlow, Mr. Dobson, and Mr. Chute.. M. Tu. Th. F., 12 | Lecturers, with Mr. Oglesby, Mr. Richardson, and Mr. Horsfall.. Daily | Dr. Glynn and Mr. E. A. Browne.. Daily, 11 to 1 and 2 to 4 | Mr. S. M. Bradley.... Daily | Mr. Clarke, Mr. Pearce, and Mr. E. Skinner | Dr. Neesham and Mr. L. Armstrong.... Daily, from 10 to 2 |
| CHEMISTRY..... | Dr. Hill.. Tu. Th. F., 12 | Mr. Coomber.. M. Tu. W. Th., 8.15 | Mr. J. C. Wilson.. M. Tu. Th. F., 11 | Dr. J. C. Brown.. M. Tu. Th. F., 10.15 | Mr. D. Stone.. W. Th. F., 11 | Mr. Allen.. M. W. F., 11.30 | Mr. Freire Marreco.... Four days a week, 4 |
| MEDICINE..... | Dr. Russell and Dr. Foster.. Tu. W. F., 3 | Dr. Martyn and Dr. E. L. Fox.. M. W. F., 8.45 | Dr. Chadwick, Dr. Heaton, and Dr. Allbutt.. M. Tu. W. Th., 5 | Dr. Cameron.. Tu. Th. S., 8.45 A.M. | Dr. Roberts and Dr. Morgan.. M. Tu. Th., 1 | Dr. Frank-Smith.. Tu. W. F., 6 | Dr. Charlton and Dr. Embleton.. M. W. F., 5 |
| SURGERY..... | Mr. Pemberton and Mr. F. Jordan.. Tu. W. F., 4 | Mr. Coe and Mr. Tibbits.. Tu. Th. S., 8.15 A.M. | Mr. Wheelhouse, Mr. Teale, and Mr. Jessop.. M. W. F., 6 | Mr. R. Harrison.. M. W. F., 4 | Mr. G. Southam.... M. Tu. Th., 2 | Mr. W. F. Favell and Mr. Parker.... M. W. F., 8 P.M. | Dr. Heath.. M. W. F., 6 |
| HOSPITAL PRACTICE..... | GENERAL INFIRMARY (b) QUEEN'S HOSPITAL (c) Daily, 9 to 12 | ROYAL INFIRMARY (e) GENERAL HOSPITAL (f) Daily, 1 to 3 | LEEDS GENERAL INFIRMARY (h) Physicians of Infirmary (g) .. F., 5. Clinical Class: Dr. Allbutt.. Tu. S., 11.30 to 1 | LIVERPOOL ROYAL INFIRMARY (k) Physicians Royal Infirmary (l) .. Weekly | MANCHESTER ROYAL INFIRMARY (m) .. Daily, 10 to 12 | SHEFFIELD GENERAL INFIRMARY (o) Physicians of Infirmary (o) .. Tu., 8 P.M. | NEWCASTLE INFIRMARY (q) Physicians of Infirmary (q) |
| CLINICAL MEDICINE..... | Physicians of Hospitals (b, c) | General Hospital: Threedays weekly, 2.30 | Surgeons of Infirmary (g) .. Tu., 6 | Surgeons Royal Infirmary (k) .. Weekly | Surgeons Royal Infirmary (m) | Surgeons of Infirmary (o) .. Th., 8 P.M. | Surgeons of Infirmary (q) |
| CLINICAL SURGERY..... | Surgeons of Hospitals (b, c) | Royal Infirmary: F., 12 | Dr. Eddison.... M. Th. F., 11 | Dr. J. B. Nevins.. Tu. Th. S., 8.30 A.M. | Mr. Somers.. Tu. W. Th., 12; F., 12.30 | Dr. Young.. M. W. F., 8 A.M. | Dr. Humble and Dr. Arnison.. Daily, 4.45 |
| SUMMER SESSION. | | | | | | | |
| MATERIA MEDICA..... | Mr. Wilders and Dr. Mackey.. M. W. F., 4 | Dr. Burdard.. M. Tu. Th. F., 9 | Mr. W. Hall.... M. Tu. Th. F., 4 | Dr. Steele.. M. W. F., 8.30 A.M. | Dr. Thorburn.. Tu. W. Th. F., 9 | Dr. Keeling and Dr. Hime.. M. W. F., 8 P.M. | Dr. Gibson.. Daily, 8.30 A.M. |
| MIDWIFERY, ETC..... | Dr. W. Hinds.. M. W. F., 3 | Mr. Leipsner.. Daily, exc. S., 7 A.M. | Mr. E. Atkinson.. Tu. Th. F., 12; Th., 10 | Mr. W. Carter.. Tu. Th. S., 9.30 | Mr. Grindon.... Tu. Th., 10 | Mr. Birks.. Tu. Th., 8 A.M. | Mr. Thornhill.. M. W. F., 3.45 |
| BOTANY..... | Mr. Swain and Dr. Hill.. Tu. Th. F., 12 | Mr. Keall.. M. W. Th. F., 9 A.M. | Mr. Scattergood.... M. Tu. W. Th., 5 | Dr. E. Whittle and Dr. J. C. Brown.. M. W. F., 3 | Mr. G. M. Harrison.. M. W., 1; F., 1.30 | Mr. Baker and Mr. Harrison.. Tu. Th., 4 | Dr. Donkin.. M. Tu. Th. F., 11 |
| FORENSIC MEDICINE..... | Mr. Anderson.. Th. 1; F., 2 | Mr. Coomber.... Daily, exc. S., 8 A.M. | Mr. J. C. Wilson.. Tu. Th., 9.30 to 41 | Dr. J. C. Brown.. Tu. W. Th., 10.30 | Mr. D. Stone.. Tu. Th., 11 | Mr. Allen | Mr. Freire Marreco.... Daily, 10 to 5 |
| PRACTICAL CHEMISTRY..... | Dr. Savage.. Th., 3 | Mr. Atchley.. Daily, exc. S., 10 A.M. | Mr. Wheelhouse and Dr. Allbutt | Dr. Caton (twice weekly) | Mr. Bradley | Mr. W. Jackson.. F., 5 | Dr. Gibb and Dr. Philipson |
| COMPARATIVE ANATOMY..... | Mr. Rickards (at Gen. Hospital) | Dr. Martyn and Dr. E. L. Fox (Sum.) Tu. F., 9 | Mr. Teale, and Mr. Jessop | Dr. Davidson (Win.).. Th., 4 | Dr. Simpson (Win.).. F., 12; (Sum.).. M. Th., 12 | Mr. Hallam (Sum.) | Dr. Heath (Sum.) |
| PATHOLOGY..... | Mr. Solomon (Sum.... Tu., 4 | Mr. Coe and Mr. Tibbits (see above) | Mr. Seaton, & Dr. Land | Mr. Harrison (see above) | Mr. Hunt (Win.).. 8.45 A.M. | Mr. Favell and Mr. Parker (Sum.) | Dr. Gilchrist |
| OPERATIVE SURGERY..... | .. | .. | Mr. Holmes | (Sum.).. Tu. F., 3 | .. | .. | Psychological Medicine: Mr. T. O. Wood |
| OPHTHALMIC SURGERY AND THE OPHTHALMOSCOPE..... | Diseases of Women, etc.: Mr. Berry and Dr. R. C. Jordan (Sum.).. M., 12; Tu., 3 | .. | Skin Diseases: Dr. Allbutt.. F., 11.30 | Dr. Steele | .. | Dental Mechanics: Mr. G. Mosely (Win.) .. S., 1 | Dental Surgery: Mr. Merryweather (Sum.).. Th., 4 |
| VACCINATION..... | Dental Surgery: (Sum.).. Mr. Hawkins | .. | Aural Diseases: Mr. Nunneley.. F., 12 | Diseases of Children: Dr. Gee.. M. F., 10 | .. | .. | .. |
| MISCELLANEOUS..... | .. | .. | Mental Diseases: Mr. Nunneley.. F., 12 | Histology: Dr. Caton | .. | .. | .. |

(b) Physicians, Dr. Bell Fletcher, Dr. Russell, Dr. Wade, Dr. Foster. Surgeons, Mr. A. Baker, Mr. O. Pemberton, Mr. T. H. Bartleet, Mr. Goodall, Mr. R. Jolly. Operations, W., 12.

(c) Physicians, Dr. Fleming, Dr. Johnston, Dr. Heslop. Surgeons, Mr. West, Mr. Gamgee, Mr. F. Jordan, Mr. J. St. S. Wilders. Obstetric Surgeon, Mr. J. Clay. Dental Surgeon, Mr. S. A. Parker. Operations, S., 11.

(e) Physicians, Dr. Brittan, Dr. Fairbrother, Dr. E. L. Fox, Dr. Beddoe. Surgeons, Mr. C. Leonard, Mr. T. E. Clark, Mr. Tibbits, Mr. Steele. Assistant-Physician, Dr. E. Ludlow. Assistant-Surgeon, Mr. E. C. Board. Operations, Tu. F., 1.30.

(f) Physicians, Dr. Martyn, Dr. Burder, Dr. Frapp. Surgeons, Mr. Coe, Mr. F. P. Lansdown, Dr. Marshall, Mr. Atchley. Physician-Accoucheur, Dr. Swayns. Operations, Th., 1.30. Dental Surgeon, Mr. Parson.

(A) Physicians, Dr. Heaton, Dr. Clifford Allbutt, Dr. Eddison. Surgeons, Mr. S. Hey, Mr. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jessop. Surgeons to the Eye and Ear Department, Mr. J. A. Nunneley, Mr. J. Seaton, Dr. R. T. Land.

(k) Physicians, Dr. Vose, W. S., 12.15; Dr. Turnbull, M. Th., 12.15; Dr. Waters, Tu. F., 1. Surgeons, Mr. Stubbs, Tu. 12.30, F. 1; Mr. Bickersteth, M. Tu. Th. 1; Mr. Heakes, Tu. W. S. 1. Assistant-Surgeon, Mr. R. Harrison. Dental Surgeon, Mr. Snape. Pathologist, Mr. Banks. Operations, Tu. 1.

(m) Physicians, Dr. Eason Wilkison, Dr. Watts, Dr. Brown, Dr. W. Roberts, Dr. H. Simpson, Dr. J. E. Morgan. Surgeons, Mr. Beever, Mr. W. Smith, Mr. Southam, Mr. F. A. Heath, Mr. Lund, Mr. Rowing. (o) Physicians, Dr. de Bartolomé, Dr. Law, Dr. Frank-Smith. Surgeons, Mr. Barber, Mr. W. F. Favell, Mr. Parker.

(g) Physicians, Dr. Charlton, Dr. Embleton, Dr. Phillipson. Surgeons, Dr. Heath, Mr. Russell, Dr. Arnison, Mr. L. Armstrong. Assistant-Surgeons, Mr. A. Bell, Dr. Hume, Mr. J. Hawthorn, Mr. C. Jeaffreson.

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see p. 308. The letters (W.) and (S.) in this Table denote respectively Winter and Summer Courses.

| LECTURES, ETC. | ABERDEEN UNIVERSITY. | EDINBURGH UNIVERSITY. (d.) | ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDIN- BURGH. (g.) | GLASGOW UNIVERSITY. (l.) | GLASGOW, ANDERSON'S UNIVERSITY. (p.) |
|--|---|--|---|---|--|
| ANATOMY | Dr. Struthers, 11 (W.) | Mr. Turner, 1 (W.) | Dr. Handyside, 1 (W.) | Dr. A. Thomson, 11, (W. and S.) | Dr. G. Buchanan, 5 (W.) |
| ANATOMICAL DE- MONSTRATIONS... | Dr. Struthers, and De- monstrator, 9 (W.); 2 (S.) | Mr. Turner, 4 | Dr. Handyside, 4 (W.); 9 to 5 (S.) | Dr. Thomson and De- monstrator. Sen. 2; jun. 11 (W.); 11 (S.) | Dr. G. Buchanan, 1 (W.) q |
| DISSECTIONS | 9 to 4 (W. and S.) | Daily (W. and S.) | 9 to 4 (W.); 9 to 6 (S.) | 9 to 4 (W.); 7 to 2 (S.) | Daily (W. and S.) |
| PHYSIOLOGY OR INSTITUTES OF MEDICINE | Dr. Ogilvie, 4 (W.) | Dr. Bennett, 11 (W.) | Dr. A. Gamgee, 11 (W.) | Dr. Buchanan, 4 (W.) | Dr. E. Watson, 4 (W.) |
| CHEMISTRY | Mr. Brazier, 3 (W.) | Dr. Crum Brown, 10 (W.) | Dr. S. Macadam, 10 (W.) | Dr. Anderson, 10 (W.) | Dr. Thorpe, 12 (W.) |
| PRACTICAL CHE- MISTRY | Mr. Brazier, 10 A.M. (S.) | Dr. Crum Brown (W. and S.) | Dr. Macadam, 9 to 5 (W. and S.) | Dr. Anderson, 12 (W.); 10 (S.) m | Dr. Thorpe, 10 to 4 (S.) |
| MATERIA MEDICA | Dr. Harvey, 3 and 4 (S.) | Dr. Christison, 9 (W.) e | Dr. T. R. Fraser, 9 (S.) | Dr. Cowan, 11 (W.) | Dr. Morton, 3 (W.) |
| BOTANY | Dr. Dickie, 9 (S.) | Dr. Balfour (S.) | ... | Dr. Dickson, 12 (S.) n | Mr. Hennedy, 10 (S.) |
| NATURAL HISTORY | Mr. Nicol, 2 (W.); 11 (S.) a | Dr. W. Thomson, 2 (W.); also in Summer | ... | Dr. Young, Zoology, 2 (S.) | ... |
| MEDICINE | Dr. Macrobin, 3 (W.) | Dr. Laycock, 3 (W.) | Dr. R. Haldane, 3 (W.) | Dr. Gairdner, 12 (W.) | Dr. McCall Anderson, 12 (W.) |
| SURGERY | Dr. Pirrie, 10 (W.) | Mr. Spence, 10 (W.) Operative in Summer | Dr. P. H. Watson, Dr. J. Bell, and Mr. An- nandale, 10 (W.) h | Dr. G. H. B. Macleod, 1 (W.) | Dr. Dunlop, 11 (W.) |
| MIDWIFERY..... | Dr. Inglis, 2 (W.) | Dr. A. Simpson, 11 (W.) | Dr. Keiller, 10 (S); Dr. M. Duncan, 11 (W); Dr. A. Macdonald, 10 (S.) | Dr. Leishman, 3 (W.) | Dr. J. G. Wilson, 3 (S.) |
| FORENSIC MEDI- CINE | Dr. Ogston, 9 (W.) b | Dr. D. MacLagan (S.) | Dr. Littlejohn, 2 (W.); 11 (S.) | Dr. Rainy, 4 (W.) | Dr. P. A. Simpson, 11 (S.) |
| PRACTICAL PHY- SIOLOGY & HIS- TOLOGY..... | ... | Dr. Bennett (W. and S.) | Dr. A. Gamgee (S.) | Dr. J. Coats, 3 to 5 (S.) | ... |
| PATHOLOGY..... | Dr. Rodger | Dr. Sanders, 2 (W.); and in Summer | Dr. John Wyllie, 4 (W.); 9 (S.) | ... | ... |
| HOSPITAL PRAC- TICE | Royal Infirmary, c. Daily, 12 | Royal Infirmary | Royal Infirmary, i | Royal Infirmary, o 9 A.M. | Royal Infirmary, 9.30 A.M. |
| CLINICAL MEDI- CINE | Dr. Harvey, Dr. Smith, and Dr. Beveridge | Drs. Bennett, Laycock, MacLagan, & Sanders, Tu., F., 12 to 2 | Drs. R. Haldane, G. W. Balfour, and Grainger Stewart, 12 (W.); Tu. F., 12 (S.) k | Physicians of Royal In- firmary, M. Th. | Physicians of Royal Infirmary, twice weekly, 9 (W. and S.) |
| CLINICAL SURGERY | Dr. Pirrie, Dr. Kerr, and Dr. Fiddes | Mr. Lister, M. Th., 12 (W.); also in Sum. | Mr. Annendale, 12 (W.); M. Th., 12 (S.) | Surgeons of Infirmary, Tu. F. | Surgeons of Infirmary, twice weekly, 9 (W. and S.) |

a. Zoology with Comparative Anatomy.

b. With Medical Logic.

c. ROYAL INFIRMARY, ABERDEEN: Physicians—Dr. A. Harvey, Dr. J. W. F. Smith, Dr. Beveridge; Surgeons—Dr. Pirrie, Dr. D. Kerr, Dr. Fiddes; Junior Surgeon—Dr. A. Ogston; Ophthalmic Surgeon—Dr. Davidson; Dental Surgeon—Mr. Williamson.

d. Medical Psychology and Mental Diseases, with Practical Instruction, Dr. Laycock (S.)

e. With Dietetics.

g. Vaccination, six weeks' courses in Winter and Summer, Dr. Husband. Diseases of Children, Dr. Stephenson (S.) Diseases of the Eye, Dr. A. Robertson (S.)

h. Operative Surgery and Surgical Appliances, Drs. Watson, Miller, and J. Bell (S.); Orthopædic Surgery and Operative Surgery, Mr. Annendale (S.); Operative Surgery and Surgical Anatomy, Dr. Chiene (S.)

i. EDINBURGH ROYAL INFIRMARY: Physicians—Dr. Bennett, Dr. Laycock, Dr. MacLagan, Dr. J. M. Duncan, Dr. Sanders, Dr. R. Haldane, Dr. G. W. Balfour,

and Dr. T. Grainger Stewart; Assistant-Physicians—Dr. C. Muirhead and Dr. T. R. Fraser; Consulting Surgeon—Dr. J. Dunsmure; Surgeons—Mr. J. Spence, Dr. J. D. Gillespie, Dr. P. H. Watson, and Mr. Annendale; Ophthalmic Surgeons—Mr. Walker and Dr. D. A. Robertson; Assistant-Surgeons—Dr. J. Bell and Dr. John Duncan; Dental Surgeon—Dr. J. Smith; Pathologist—Dr. J. B. Pettigrew.

k. Dr. M. Duncan gives Clinical Lectures on Diseases of Women.

l. Operative Surgery, Dr. Macleod, 1 (S.); Lectures on Eye, Dr. T. Reid, 1 (S.)

m. Chemical Laboratory from 10 A.M. to 4 P.M. (W. and S.)

n. Demonstrations in the Botanical Garden, 6.30 P.M.

o. GLASGOW ROYAL INFIRMARY: Physicians—Dr. Gairdner, Dr. Steven, Dr. Perry, Dr. McCall Anderson, and Dr. Scott Orr; Surgeons—Dr. E. Watson, Dr. Dewar, Dr. Macleod, Dr. G. Buchanan, and Dr. Morton.

p. Ophthalmic Medicine and Surgery, Dr. J. R. Wolfe.

q. Surgical Anatomy, Dr. Buchanan, 12 (S.) Osteology for Beginners, Dr. Buchanan (S.)

and Clinical Clerk in the Royal Infirmary. Two House-Surgeons and four Physicians' Assistants are appointed annually, with board, residence, and salary.

Prizes.—In addition to three scholarships, value £20, £15, and £10, for perpetual students, prizes for General Proficiency, and Certificates of Honour for regularity of attendance and general good conduct, will be given at the end of each session.—Medical and Surgical Clinical Prizes, value of each £6 6s., are given for reports of cases.

SHEFFIELD MEDICAL SCHOOL.—Aggregate fee for lectures, £40. Separate classes: *a* and *b*, first course, £6 6s.; second course, £4 4s.; *d*, each course, £4 4s.; *e*, *f*, first course, £4 4s.; second course, £2 2s.; *g*, *h*, *i*, *k*, *l*, each course, £3 3s.—H.P., Sheffield General Infirmary, Medical or Surgical, 6 months, £6 6s.; 12 months, £10 10s.; Perpetual—Medical, £15 15s.; Surgical, £21.

Further opportunities for practice may be obtained at the Sheffield Public Hospital and Dispensary, and at the Sheffield Hospital for Diseases of Women.

The *Infirmary* contains a Museum of Pathology, a Library, and a *Post Mortem* Theatre, with Microscopes and all the appliances for clinical research.—The Library of the Medical School is open to students.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—Fee for all the lectures (except Practical Pharmacy): one payment, £46 4s.; two payments, each £25 4s.; three payments, each £18 11s. Single courses, £4 4s. each. Vaccination, £1 1s.—H.P., Newcastle Infirmary: 3 months, £4 4s.; 6 months, £5 5s.; 12 months, £7 7s. Perpetual fee, £17 17s.; or by instalments, first year, £7 7s.; second year, £6 6s.; third year, £5 5s.

Two Resident Clerks, and four Resident Dressers and four Non-resident Dressers, are elected half-yearly. They are provided with board and apartments free.

Midwifery can be attended at the Newcastle Lying-in Hospital, and Diseases of the Eye at the Eye Infirmary.—Lectures on Psychological Medicine will be given at the Dunston Lodge Asylum.—The Chemical Laboratories are open daily throughout the year, from 10 to 5 o'clock. Students can attend laboratory practice and receive instruction in analysis for—6 days weekly, £31 10s. *per annum*; 4 days, £21 *per annum*; shorter periods, by arrangement.—The Libraries and Museums are open daily.

Pharmacy.—Special arrangements have been made for instruction in Pharmacy. The curriculum will consist of courses of lectures in Botany, Materia Medica, Chemistry, and Pharmacy. Fee for curriculum, perpetual, £6 6s.; separate courses, each £4 4s.

Prizes.—A *Medical Scholarship*, annual value £25, for four years, in October 1871, to students who have been registered at Durham.—The Dickinson Memorial Scholarship, value £15 annually, after the first examination of a licensing board.—A Silver Medal and Certificates of Honour in each class.

UNIVERSITY OF ABERDEEN.—The fee to each class in the Faculty of Medicine is £3 3s., except Practical Anatomy and Demonstrations, for which the fee in each session is £2 2s. Matriculation fee, both sessions, £1; summer session alone, 10s.

ROYAL INFIRMARY, ABERDEEN.—Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 6s. Pathological Anatomy, £2 2s.—A three months' course of Practical Ophthalmology is given in summer by Dr. A. Ogston.—The General Dispensary and the Lying-in and Vaccine Institution, and the Eye Institution, are open daily.—Clinical instruction is given in the Royal Lunatic Asylum for three months in the year.

UNIVERSITY OF EDINBURGH.—Annual Fee for each subject required in the ordinary curricula, £4 4s.; except Anatomical Demonstrations, £1 1s.; Practical Pharmacy and Dispensary, each £2 2s.; Practical Anatomy and Practical Chemistry, each £3 3s.—Every Student, before entering with any Professor, must produce a matriculation ticket for the ensuing session, for which a fee of £1 is paid at the beginning of each winter session.—The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 o'clock.

EDINBURGH ROYAL INFIRMARY.—Fees: 6 months, £3 3s.; 1 year, £5 5s.; perpetual, £10 10s. Clinical Medicine and Clinical Surgery, each £4 4s. for the course.—No fees for any medical or surgical appointment. Four Resident Physicians and four Resident Surgeons are appointed; they live in the house for six months free of charge. Can-

didates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each surgeon appoints from four to nine Dressers for six months. Assistants in the Pathological Department are appointed by the Pathologist.—Instruction is given in special departments.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—The courses qualify for examination for various diplomas and licences, and for degrees in those years in which University residence is not required.

Fees.—For the first of each Winter Course of Lectures, £3 5s.; second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Second Course of Midwifery, £1 3s. Practical Chemistry and Practical Anatomy, £3 3s. Anatomical Demonstrations, £2 2s.; when taken along with Practical Anatomy, £1 1s.; perpetual, £4 4s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for the session of six months. Vaccination, £1 1s. Summer courses of Clinical Surgery, Clinical Medicine, Practical Anatomy, Operative Surgery, and Diseases of the Eye, each £2 2s.—The minimum fee for the education for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons of Edinburgh, including the examination fee, is £90 4s., payable by yearly instalments; for the single diploma of either Physician or Surgeon, including the examination fee, £80.

Practical Instruction.—Royal Infirmary, noon daily; perpetual, £10; annual, £5 5s.; separate payments for two years entitle the student to a perpetual ticket.—Sick Children's Hospital: three months, £1 1s.; perpetual, £2 2s.—Dispensary: Royal Public Dispensary and New Town Dispensary, each, first six months, £3 3s.; three months, £2 2s.; each subsequent three months, £1 1s.—Practical Midwifery: Royal Maternity Hospital, Royal Public Dispensary, £1 1s.; New Town Dispensary, £1 3s.—Diseases of the Eye, Ear, and Teeth: Dispensaries, and the Edinburgh Eye Infirmary.—Practical Pharmacy: Royal Public Dispensary, New Town Dispensary, six months, £3 3s.

UNIVERSITY OF GLASGOW.—Fees, each course, £3 3s.; except Lectures on the Eye, £1 1s.

GLASGOW ROYAL INFIRMARY.—Fees, 1st and 2nd year, each £3 3s.; 3rd year, and perpetual, £1 1s.; 6 months, £2 2s.; 3 months, £1 11s. 6d. Vaccination, £1 1s.; Practical Pharmacy (6 months), £3 3s. Clinical Lectures in Medicine or Surgery: 1st and 2nd winter course, each £3 3s.; 3rd course, £1 1s.; summer course, £1 11s. 6d.

GLASGOW EYE INFIRMARY.—Fee, 6 months, £2 2s.; to students who are attending or have attended the Lectures on the Eye in the University, £1 1s.

Instruction may also be obtained at the Glasgow University Lying-in Hospital and Dispensary for Diseases of Women and Children; and at the Dispensaries for Diseases of the Skin and Ear; and the Royal Lunatic Asylum, Gartnavel, is open to students on payment of a small fee.

GLASGOW—ANDERSON'S UNIVERSITY.—Fees for all the Lectures and Hospital Practice required for the Diplomas of Physician and Surgeon, £45. Class Fees for each Course of Lectures: 1st session, £2 2s.; 2nd session, £1 1s.; afterwards free. Anatomy Class Fees, for Lectures and Demonstrations: 1st session, £4 4s.; 2nd session, £4 4s.; perpetual, £8 8s. The Dissecting-room is free for two sessions to those who attend both courses of Anatomy. After the second year, the fee for admission to the Dissecting-room is £1 1s. per session. There is a Matriculation Fee of £1 1s. at the beginning of each Winter Session.

THE MIDDLESEX HOSPITAL.—The annual dinner of the past and present students and friends of the Middlesex Hospital will take place on Monday, October 2nd; Thomas Taylor, Esq., in the chair.

BEQUESTS, DONATIONS, ETC.—Mr. Giles Loder bequeathed £5,000 to the Salisbury Infirmary.—Sir Arthur Guinness has given £500 towards the erection of a new building for infectious diseases, etc., adjoining the Coombe Lying-in-Hospital, Dublin.—The Leicester Infirmary has received £300 under the will of Mr. H. R. Hurst.—“A Generous Lady” has given £200 to the Infirmary for Epilepsy and Paralysis, Charles Street, Portman Square.—The General Hospital, Birmingham, has received £100 for the Accident Fund; under the will of Miss Alston.—“A Lady” has given £100 to the Royal Infirmary for Children and Women, Waterloo Road.—Mr. Thomas Williamson, of Lixmount, bequeathed £20,000 to the Leith Hospital.—The Essex Hall Asylum for Idiots, Colchester, has received £250 “in memory of the late Mr. John Crabtree, of Halesworth.”

PROFESSOR LISTER has been summoned to Balmoral to open a small gathering on Her Majesty's arm.

WE are requested to state that St. Thomas's Hospital, Albert Embankment, is now open for the reception of patients.

THE Honorary Financial Secretary to the British Medical Benevolent Fund has received from E. Parke, Esq., of West Derby, Liverpool, a donation of £20 for the purposes of the Fund.

WE regret to hear that Dr. Page of Kirkby Lonsdale has met with a severe fall from a horse; from which he is, however, recovering under the care of Dr. Longmore and Dr. Bickersteth of Liverpool.

OUR readers will be glad to learn that the revision of the *Lectures* of Sir Thomas Watson by their author has been completed. We hear that the last pages are in the hands of the printer, and that the publication of the new edition may be looked for at an early date.

WE regret to learn from Mr. J. Wickham Barnes that the President of the Poor-law Medical Officers' Association, Dr. Joseph Rogers, has been obliged to relinquish for a short time all duties connected with the Association, and his own practice, owing to a local disorder requiring surgical treatment.

THE Duchess Dowager of Northumberland, accompanied by the Duchess of Northumberland, visited the Prudhoe Memorial Convalescent Home at Whitby on the 5th of September. Their graces were received and conducted over the institution and grounds by Dr. Philipson, one of the Honorary Secretaries.

THE EPIDEMIC OF TYPHUS IN VIENNA.

THE epidemic of typhus which has recently prevailed in Vienna is now considered to have come to an end; and consequently the authorities of the suburbs have been released from the obligation to provide fever hospitals, and the restriction against receiving fever-patients into the general hospitals has been removed. The epidemic has lasted twenty-one weeks, during which time 1766 typhus patients, of whom 366 died, were received into the three great hospitals of Vienna.

JENNER AND HIS TEACHINGS.

DR. A. B. STEELE of Liverpool, a well-known authority on Vaccination, wishes to correct a misapprehension into which Dr. Davey has fallen in reference to Jenner's views as to the degeneration of lymph by mere lapse of time. A reference to the tenth chapter (p. 177 et seq.) of Dr. Seaton's Handbook of Vaccination, will show that "the hypothesis dates from a very early period of the history of vaccination, and applications for lymph were made to Jenner within two or three years from the promulgation of his discovery. He thought it of no importance whatever to comply with the exact terms of such requests, for he was well satisfied, from his experience at that time, that no such deterioration had then taken place. Further experience—a careful watching of vaccination for upwards of twenty years more, during which lymph, successively transferred from subject to subject, had undergone no change whatever in its qualities—fully satisfied him that the hypothesis was groundless." So much for Jenner's opinion. Marson, Ceely, and others, whose experience is very great, have proved, so far as such matters admit of proof, that, as the National Vaccine Board stated in 1854, "vaccine lymph does not lose any of its prophylactic power by a continued transit through successive subjects." When lymph degenerates in transmission, it is invariably due either to want of proper care in the selection of subjects, or to inattention to certain details essential to successful vaccination. As to grease in the horse as the source of cowpock, it is quite true that Jenner at first confounded "grease" with the true "variola equina"; but subsequently he discovered his mistake. That cowpock does originate, and can be produced, quite independently of any source from the horse, is well known to all who are acquainted with the literature of the subject.

THE ADDRESS IN MEDICINE.

DR. GEORGE JOHNSON writes (August 21st), in reply to Dr. Wade:—"In reply to Dr. Wade's letter, I beg to say that, if I have misinterpreted the quotation from his lecture, I sincerely regret it; let me add, however, that if his intention was not to call in question the doctrine of the elimination of morbid poisons, it is difficult to understand the meaning and object of the passage. In referring to lead-colic, small-pox, and scarlet fever, my object was not to call in question Dr. Wade's belief with regard to these particular diseases; but, on the contrary, by pointing to illustrations about which dispute is scarcely possible, to indicate the distinction between a disease and a morbid cause."

FAILURE OF CONDURANGO.

ALL that we hear of the results of the trials given to the Condurango bark furnished by our Government to the Middlesex and St. Bartholomew's Hospitals, through the College of Physicians, confirms the fear that any hope which might have been entertained, of a confirmation of the statement of its utility as a remedy in cancer, must be entirely dismissed. Physiologically, it appears to be practically inert, and its therapeutic effects in the treatment of cancer to be *nil*. It furnishes a slightly bitter extract of feeble characters. A detailed therapeutical report will be made by Mr. Hulke, and a careful examination of its physiological action by Dr. Brunton, but this mainly in deference rather to the official sources from which this small supply has been furnished, and to set at rest the excitement caused by the somewhat scandalous claims which have been set up in its favour.

HUMOURS OF THE AMBULANCES.

A feuilletonist of the *Gazette Médicale de Strasbourg* discusses the humours of the ambulances, which sometimes chequered the sad scenes that prevailed there. The Bavarian soldiers, struck, as are all foreigners, with the ubiquity of clyster-pumps and vaginal syringes in French establishments, large and small, began to utilise them after their fashion. In the ambulances of Dr. Rupprecht they used the long uterine-tubes, as cigar- or pipe-tubes, their flexibility rendering them very convenient and in the clyster-pumps they prepared, *horribile dictu!* soda-water with the effervescing powders they found in the abandoned pharmacies. Said a poor fellow wounded at Nuits, after receiving the sacrament, "C'est donc fini; on m'a ciré les bottes." A Pomeranian, whose leg had been shattered and then amputated, called, on waking from the chloroform, for his trousers, and began mending his purse and replacing the scattered money in it—*un obole pour Charon*.

FOUNDLINGS AT ST. PETERSBURG.

THE mortality of the great foundling hospitals of Europe was by no means exaggerated in the evidence given before the late Committee of the House of Commons on the Protection of Life. The Committee found some difficulty at first in accepting the statements laid before them as to the inevitable mortality attending aggregation of infants, no matter how carefully superintended, and the futility of any other system than that which should contemplate the dispersion of infants in individual homes, where each infant is under the care of a nurse or mother. M. de Valcourt, who is on a medical tour in Russia, describes the superb foundling hospital of Moscow, which receives something like ten thousand infants annually, and on which the utmost care and large state subventions are lavished. The melancholy result is a mortality of eighty per cent. in the first year of life.

HOW CHOLERA MAY COME.

IN the evidence on quarantine given by Mr. Arthur Helps, clerk to the Privy Council, in March last, before the Royal Sanitary Commission, he observed: "I do not think that it is possible to carry out quarantine with such a thing as cholera, without producing such a check upon the movement of the world in reference to transit, that it would be impossible. There must be quarantine between Dover and Calais to prevent cholera from coming." Mr. Tom Taylor, not less pointedly, observed with regard to quarantine: "It seems to me rather a political

than a sanitary question: it is a concession to the opinion of foreign countries." Now, we entirely concur in the efforts that are being made to enforce a cholera-quarantine against vessels coming from Baltic and other ports known to be infected; but we pointed out last week that the measures at present taken are extremely ineffectual, and capable of affording only an unreal sense of security. Of this, a circumstance which occurred at Sunderland on Saturday last affords an example. The schooner *Marshall* arrived, the captain having died on board of cholera on August 15th. The ship was allowed, owing to the pilot not reporting it, to moor at the North Quay before inspection. Dr. Douglas, the medical officer, lays stress upon what we have already urged, that it is of comparatively little use to stop and disinfect ships, when the crew cannot be prevented from going on shore and disseminating whatever infectious influence they may bring with them. Let us, by all means, endeavour to secure a really efficient quarantine. To hide our heads in the quarantine-bush, and expose more vulnerable parts, is a purely ostrich-like proceeding.

PARASITES IN FOOD.

THE extremely interesting Cantor Lectures delivered by Dr. Cobbold, F.R.S., before the Society of Arts, on Food-producing Ruminants and the Parasites which reside in them, have been reprinted from the *Journal of the Society of Arts* in a separate form. They are worthy of an extended circulation, and are particularly interesting to medical men and officers of health. His observations on tapeworms in beef have an immediate practical value in relation to India, and a possible importance, which cannot be overlooked, as to the effects of sewage-irrigation in this country.

THE HARVEIAN ORATION, 1871.

THE writings of Dr. T. K. Chambers have always found peculiar acceptance with our brethren across the Atlantic; and no other contemporary medical writer is more highly esteemed by them, or more generally read. His Harveian Oration of 1871 was laid before our readers at the time of its delivery. It now reaches us in a separate form, with two sequels, bearing the imprint of an American publisher (Lea of Philadelphia), and with the following preface.

"For upwards of two centuries the London College of Physicians complied with the letter of Harvey's wishes, as expressed in his Deed of Gift, by causing an annual oration to be delivered in Latin. But during the last few years there has been a growing conviction that, in this pedantic adherence to the words, we were departing from the spirit, of the founder of the ceremony, the object of which is to stir up the audience to a diligent study of physiology and to professional *esprit de corps*. An 'exhortation to mutual love and affection', as Harvey words it, was fitly enough of old couched in a language more familiar than all besides their own to the brotherhood of science in various countries. Is it too hurried an anticipation of nature to look upon English as now the most appropriate medium for circulating such exhortations among physicians in Europe? At all events, across the Atlantic and Pacific there are bands of relatives, whom we are much prouder to claim, and to exhort to mutual love and affection in a tongue that recalls the fact of blood being thicker than water. This year the oration, though delivered in England, shall be printed and published in America first. The offering is a poor one—then let it be repaid by a richer. No one can be more sensible than I am of the superficial manner in which several important questions are handled; but that very fact may lead others to more profound reflections. A judicious critic remarks that, in the sequels especially, the colouring is very local. True—otherwise it would be unnatural. And Americans have not the same troubles as we have. But they may have them soon. Let them listen kindly to the outpourings of our griefs, and we will promise to sympathise with theirs when they tell them."

We do not doubt that our American brethren will receive with pleasure this somewhat eccentric but by no means ungraceful act of fraternity from the Harveian orator. Occurring almost simultaneously with the appearance of Dr. Lewis Sayre's lecture in our pages, it probably, and we hope immediately, foreshadows a closer and more frequent interchange of personal and scientific courtesies amongst the medical thinkers of the two great Anglo-Saxon communities. The sequels, which exceed in length the oration, are colloquies between

imaginary personages, of whom Orator represents the author, on restorative medicine; the use, abuse, and prohibition of alcohol; female practitioners; empiricism; *et quædam alia*.

THE CHOLERA.

CHOLERA ON THE CONTINENT.

WE referred lately to the importance of ascertaining whether the present epidemic is due to a fresh importation from Persia (as is the opinion at Constantinople), or the recrudescence of the epidemic of 1865, which was imported from the ports of the Mediterranean into those of the Black Sea. A careful analysis of the official documents has since satisfied M. Pelikan, the director of the out-medical service in Russia, that we have to deal with the tail of the epidemic of 1865, which shows a great tenacity, and seems to have found in Russia the conditions favourable to its acclimatisation. Our own present danger is chiefly in the probability of importation from the Baltic ports. It is extremely unsatisfactory to read of the carelessness of quarantine regulations at the Helder (Nieuwe Diep), which might easily become the intermediary of cholera importation into this country; and we trust that our Government, warned of the danger, will redouble its own vigilance, and, if necessary, remonstrate with the Dutch authorities.

A correspondent of the *Pall Mall Gazette* at the Hague writes: "It is officially stated that at the Helder (Nieuwe Diep) a case of Asiatic cholera has occurred with a fatal result. The carelessness of our Government is most scandalous. Steamers and other vessels coming from Königsberg were allowed to enter the port without undergoing quarantine, and thence to proceed to Amsterdam. The steamer *Orion*, from Königsberg, was even allowed to enter the Amsterdam docks, although the master was obliged to stay at Elsinore in consequence of being attacked by cholera. There is a general shipping trade between Nieuwe Diep and London."

The Prussian correspondent of the *Times* devotes his letter of the 31st August to the progress of the cholera. Berlin, as yet free from the scourge, was fast being drawn within its deadly shadow. During the last few days fatal cholera cases had occurred at Dantsic, Elbing, Altona, Coblenz, Leipsic, and Vienna. In other words, the shores of the Baltic and the North Sea, the banks of the Rhine and the Danube, and the centre of Germany, have been simultaneously visited. The scourge continued to rage at Königsberg and in the neighbouring districts of East Prussia. At Königsberg about 140 persons were seized daily, of whom one-third succumbed. The intelligence from Russia concerning the progress of the epidemic is still very melancholy. At Moscow, according to the official report, 479 persons were suffering from the disease on August 21. Of these, 30 recovered on that day, and 23 died, leaving 426 under medical treatment. On the 22nd, there were 23 fresh cases, 22 recoveries, and 18 deaths. On the 23rd, the fresh cases amounted to 32, recoveries to 18, deaths to 19, those under treatment being 404. On August 26, the sum total of all those in Moscow seized since the beginning of the epidemic (March 13) was 5052. Of these, 2340 had recovered, and 2354 were dead. From the interior of Russia we have only fragmentary intelligence, which, however, is but too well calculated to reveal the immense extent of this year's epidemic. To begin with St. Petersburg, the total of those having the disease averages between 190 and 200 per day. There are daily twenty fresh cases, about as many recoveries, and twelve or fifteen deaths. Nor do the western and southern regions show any improvement. In Smolensk whole villages are said to be dying out.

The *Wiener Medizinische Zeitung* of August 29th, in giving a report of the progress of cholera, states that up to August 25th there had been four cases—all fatal—in Berlin. Three cholera hospitals have been prepared by the local authorities; and the small-pox hospital in Belle Alliance Place has been appropriated to cases of cholera occurring in the garrison. The Minister of Commerce has issued instructions to the directors of the railways to take prompt measures for the effectual disinfection of the *lieux d'aisance* at the stations. The Minister of War has issued a circular to the commanders of troops, recommending the adoption of such measures to prevent the spread of cholera in the army as were employed in 1864 and 1866. These measures comprised regulations as to diet, clothing, medicine, etc. In the case of an outbreak of the disease in the army, it is in contemplation to use as hospitals the barracks employed for the reception of prisoners and wounded in the late war.

In Lithuania, says the *Wiener Medizinische Wochenschrift* of Sept. 2nd, cholera has spread with undiminished intensity; and has, it is said, proved fatal in more than half of the cases. In Wilna, the disease has

caused many deaths among the well-to-do classes, including the wife of Governor-General Polapow. Its greatest devastations have, however, taken place among the crowded Jewish population, and among those of the native inhabitants who are addicted to intemperance in drink.—The first case of cholera was reported to have occurred in Hamburg on August 28.

The *Wiener Medizinische Zeitung* of August 29th states that the report that several cases of Asiatic cholera had occurred in Vienna, was incorrect.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETING.

THE next meeting of the members of the above District will be held at the Church Institute, Cavendish Street, Ramsgate, on Thursday, Sept. 14th, 1871, at 2 o'clock: JOS. AUSTEN, Esq., R.N., in the Chair.

Dinner will be provided at the Granville Hotel at a quarter to five o'clock precisely. Charge 5s., exclusive of wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

Notices have been received of the following communications to be read at the meeting:—1. Selection of Surgical Cases: with Remarks. By R. Hicks, Esq.—2. Case of Abdominal Aneurism, with Gangrene of Right Leg. By S. Woodman, Esq.—3. Case of Laceration of Vagina from Fracture of Glass Injection-Syringe. By C. Parsons, M.D.

Gentlemen who intend to be present at the dinner, are particularly requested to inform me on or before Tuesday, the 12th instant.

CHARLES PARSONS, M.D., *Honorary Secretary*.

2, St. James's Street, Dover, Sept. 5th, 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

A MEETING of the members of the above District will be held at Hastings, in the afternoon of Wednesday, the 27th instant.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

As the District Honorary Secretary, Mr. Mudd (being about to leave Uckfield), will resign, it will be necessary to appoint his successor at this meeting.

Gentlemen who wish to make communications to the meeting, are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

G. F. HODGSON, *Hon. Sec. of the South Eastern Branch*.

52, Montpellier Road, Brighton, Sept. 6th, 1871.

THE ANNUAL MEETING, 1872.

A SPECIAL general meeting of the Birmingham and Midland Counties Branch was held at the Midland Institute on August 31st; Oliver Pemberton, Esq., President, in the chair. A General Committee of members of the Branch was appointed to make the necessary arrangements for the reception of the British Medical Association at their annual meeting in 1872. Mr. S. A. Bindley and Mr. Thomas Taylor were elected Treasurers of the Special Donation Fund. Mr. T. H. Bartleet, Dr. B. W. Foster, and Mr. J. F. West, were elected Secretaries. Mr. Bartleet stated that the donations already promised amounted to more than £500.

EXCURSION TO TORQUAY.

AMONG the most pleasant and enjoyable of the holiday events of the recent annual meeting was the excursion to Torquay, organised in favour of those who responded to the invitation from the practitioners of Torquay, inserted in the JOURNAL for a fortnight preceding the meeting. No formal notice of it has reached us from those concerned in organising it, or from any other source; but we hear from many quarters how cordial, thoughtful, and liberal, was the reception; how ample the arrangements for pleasure and comfort; and how much the numerous party who visited Torquay are indebted to their brethren there. We hear from the Rev. Dr. Haughton of Dublin, who, with Dr. Beatty and Mr. Macnamara, was an honoured and welcome guest, a follows. "As one of the sixty or seventy visitors who partook of the hospitality of the profession in Torquay, I wish to record my gratitude. It was one of the pleasantest meetings I have ever assisted at; and was admirably presided over by the venerable Dr. Evanson. The civilities

received by us were not conferred by the members of the profession only; and none of us will readily forget Mr. Pengelly's lecture among the celebrated bone beds of Kent's Cavern."

MEDICAL NEWS.

UNIVERSITY OF LONDON.—First M.B. Examination, 1871. Examination for Honours.—Anatomy.

First Class.

Schafer, Edward Albert (Exhibition and Gold Medal), University College
Branfoot, Henry Seymour (Gold Medal), Guy's Hospital

Second Class.

Rayne, Charles Alfred, University College
Skerritt, Edward Markham, B.A., University College

Physiology, Histology, and Comparative Anatomy.

First Class.

Schafer, Edward Albert (Exhibition and Gold Medal), University College
Skerritt, Edward Markham (Gold Medal), University College

Organic Chemistry and Materia Medica and Pharmaceutical Chemistry.

First Class.

Branfoot, Henry Seymour (Exhibition and Gold Medal), Guy's Hospital
Firth, Charles (Gold Medal), St. Bartholomew's Hospital
Buchanan, Arthur, Guy's Hospital

Second Class.

Rayne, Charles Alfred, University College
Dodson, Andrew, Queen's College, Birmingham
Smith, George Francis Kirby, Guy's Hospital
Schafer, Edward Albert, University College
Skerritt, Edward Markham, University College

First B.Sc. and Preliminary M.B. conjointly. Examination for Honours.—Chemistry.

First Class.

Elwes, John Wm., Prel. Sci. (Exhibition), University College

Second Class.

Richmond, James, First B.Sc., Manchester Grammar School
Atkinson, R. W., First B.Sc., University College, and Royal School of Mines.

Third Class.

Titmas, Samuel David, Prel. Sci., University College
Verco, Joseph Cooke, Prel. Sci., St. Bartholomew's Hospital
Carnelly, Thomas, First B.Sc. and Prel. Sci., Owens College
Ferrand, Edward, Prel. Sci., St. Bartholomew's Hospital
Jones, Cyril Lloyd, Prel. Sci., Guy's Hospital
Langley, John Geoffrey, Prel. Sci., University College

Zoology.

First Class.

Saunders, John Chas., Prel. Sci. (Exhibition), Downing College, Cambridge

Second Class.

Harrison, Chas. Edward, Prel. Sci., St. Bartholomew's Hospital
De Watteville, Baron A., M.A., First B.Sc. and Prel. Sci., University College

Third Class.

Jones, Cyril Lloyd, Prel. Sci., Guy's Hospital
Edwardes, Edward Joshua, Prel. Sci., Private study

Experimental Physics.

Second Class.

Poynting, John Henry, First B.Sc., Owens College
Atkinson, R. W., First B.Sc., University College, and Royal School of Mines.

Third Class.

Richmond, James, First B.Sc., Manchester Grammar School

Botany.

First Class.

Moore, Spencer Le Marchant, Prel. Sci. (Exhibition), University College

Third Class.

Pepper, Augustus Joseph, Prel. Sci., University College

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, August 31st, 1871.

Blok, Moses, New Burlington Street, W.
Day, Gordon Cleghorn, Bridport
Jessopp, John, Felix Pelham, Herts
Turner, Horace, Middlesex Hospital

The following gentlemen also on the same day passed their first professional examination.

Bradbury, John Batley, Leeds School of Medicine
Eminson, Luther, University College
Greaves, Frank, Middlesex Hospital
Palmer, Montagu H. C., St. Thomas's Hospital
Ward, Joseph, Queen's College, Birmingham

MEDICAL VACANCIES.

THE following vacancies are announced:—

ATCHAM UNION, Salop—Medical Officers for the St. Chad's and St. Mary's Districts.

BATTLE UNION, Sussex—Medical Officers for the Mountfield and Brightling Districts.

BETHLEM HOSPITAL—Two Medical Students.

BRISTOL LUNATIC ASYLUM, Stapleton—Assistant Resident Medical Superintendent.

BRISTOL POLICE—Surgeon.
 CLOUGH UNION, co. Tyrone—Medical Officer for the Augnacloy Dispensary District.
 CORK—Medical Officer of Health.
 COURT STAR OF ROSELAND, 4066, St. Mawes, Cornwall—Medical Officer.
 DOVER HOSPITAL AND DISPENSARY—House-Surgeon.
 GORT UNION, co. Galway—Apothecary for the Workhouse and the Gort Dispensary.
 GAINSBOROUGH DISPENSARY—House-Surgeon.
 GOWER UNION—Medical Officer and Public Vaccinator for the Western District.
 ISLINGTON—Medical Officer of Health and Analyst.
 KENT AND CANTERBURY HOSPITAL—Assistant House Surgeon and Dispenser.
 LIVERPOOL, Parish of—District Medical Officer.
 MIDDLESEX HOSPITAL—Resident Physician's Assistant.
 NARBERTH UNION, Pembrokeshire—Medical Officer and Public Vaccinator for District No. 3.
 NORTHERN HOSPITAL, Liverpool—Physician.
 NORTH RIDING INFIRMARY, Middlesborough-on-Tees—Honorary Medical Officer.
 REETH UNION, Yorkshire—Medical Officer and Public Vaccinator for the Muker District.
 ST. SAVIOUR'S UNION, Surrey—Medical Officer for District No. 3.
 SOUTHAMPTON UNION—Medical Officer for District No. 2.
 TENTERDEN UNION, Kent—Medical Officer for the Biddenden District.
 WEST LONDON HOSPITAL—House-Surgeon.
 WESTMEATH COUNTY INFIRMARY, Mullingar—Surgeon.
 WORKSOP DISPENSARY—Resident Surgeon.
 YORK UNION—Medical Officer and Public Vaccinator for District No. 4.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

HARSTON, A. D., Esq., appointed Medical Officer of the Northern District Post Office, Islington, *vice* W. G. Tiley, Esq., resigned.
 MACK, John Steele, L.R.C.S. Edin., appointed Medical Officer and Public Vaccinator for Lochgoilhead and Kilmorich, Argyshire.
 MADIGAN, John Francis, L.R.C.P. Edin., appointed Medical Officer, etc., for the Feenagh Dispensary District of the Newcastle Union, co. Limerick.
 MAY, Dr. James, appointed Parochial Medical Officer and Public Vaccinator for Aberfoyle, Perthshire.
 ORWIN, Arthur W., Esq., appointed Resident Obstetrical Officer to the Charing Cross Hospital, *vice* S. S. Noakes, Esq., resigned.
 POPHAM, Thomas, L.K.Q.C.P.I., appointed Medical Officer, Public Vaccinator and Registrar of Births, to the Cliffove Dispensary, co. Sligo.
 RUTHERFORD, David J., M.D. Edin., elected Medical Officer for the Eastern Division of the Omagh Dispensary District of the Omagh Union, co. Tyrone.
 WOODWARD, Edwin, Esq., appointed Admiralty Surgeon and Agent for King's Lynn, *vice* *T. M. Kendall, F.R.C.S., deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

EDYE.—On August 24th, at Exeter, the wife of *Stonard Edey, Esq., Surgeon, of a son.
 MORIARTY.—On August 22nd, at the Central Barracks, Woolwich, the wife of *T. B. Moriarty, M.D., of a daughter.
 THOMPSON.—On September 3rd, the wife of *John Thompson, L.R.C.P. Ed., Oakley Square, Camden Town, of a daughter.
 TOMKINS.—At Binswood Crescent, Leamington, on September 3rd, the wife of *A. Wellesley Tomkins, M.D., of a son.

MARRIAGE.

RHODES, T. Wemyss, Esq., of Manchester, to Emma, second daughter of James Russen, Esq., of Rusholme, Manchester, on August 29th.

DEATH.

BIRT, Joseph, M.B., at Leamington, aged 29, on August 27th.

BOOKS, ETC., RECEIVED.

The Annual Report on the Health of the Parish of St. Marylebone, 1870. By John Whitmore, M.D. London: 1871.
 Lisdoonvarna Spas and Sea-side Places of Clare. By E. D. Mapother, M.D. London and Dublin: 1871.
 The Second Annual Report of the South Western Dispensary and Lying-in Charity. London: 1871.
 The Irish Poor-Law Medical System by Dispensaries. Dublin: 1870.
 On Syphilitic Epilepsy. By Reuben A. Vance, M.D. New York: 1871.
 A Manual of the Laws affecting Medical Men. By Robert George Glenn, LL.B. London: 1871.
 Report of the Hygienic Condition of the Mercantile Marine in the Port of London. By Harry Leach, Esq. London: 1871.
 A Digest of Facts relating to the Treatment and Utilisation of Sewage. By W. H. Corfield, M.A., M.B. Oxon. Second Edition, corrected and enlarged. London and New York: 1871.
 Preliminary Medical Education in Provincial Hospitals. By W. P. Swain, F.R.C.S. London and Plymouth: 1871.
 Restorative Medicine: an Harveian Annual Oration delivered at the Royal College of Physicians of London, on June 21st, 1871. By T. K. Chambers, M.D. Philadelphia: 1871.
 Report of the Operations of the British National Society for Aid to the Sick and Wounded in War during the Franco-German War (1870-1871), together with a Statement of Receipts and Expenditure, and Maps, Reports, and Correspondence. London: 1871.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.
 WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.
 FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
 SATURDAY St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. GREENWAY (Plymouth).—The plan, etc., can accompany the full text of the paper.

DR. JAMES DANIEL'S (Haslar Hospital) wish shall be attended to.

HOSPITAL APPLIANCES.

WE have before us a correspondence addressed by Messrs. Masters and Sons of New Kent Road to the secretary of a metropolitan hospital, suggesting that, for the supply of instruments and appliances, it would be desirable that hospitals should go more directly to the makers—trusses from truss-makers, limbs from limb-makers—instead of issuing orders through intermediate persons, who add to the prices, and interfere with the ultimate fitness of the articles. This is a matter for individual consideration, with which we do not feel called upon to interfere, further than by directing attention to the suggestion.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, Sept. 2nd; The New York Medical Record, August 25th; The Boston Medical and Surgical Journal, August 25th; The Madras Mail, June 24th; The Shield, September 2nd; The Philadelphia Medical Times, July 17th; The Philadelphia Medical Independent, August 19th; The Birmingham Morning News, Sept. 1st; The Irish Times and Daily Advertiser, August 30th; The Western Times, Sept. 1st; The Western Morning News, Sept. 1st; The Freeman's Journal, Sept. 6th; The Norwich Argus, Sept. 2nd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Wallace, Liverpool; Mr. O. Penfold, Sandhurst, Victoria; Dr. G. Johnston, Dublin; Dr. Robert Perry, Glasgow; Dr. Gairdner, Glasgow; Our Dublin Correspondent; Dr. J. I. Mackenzie, Sidmouth; Mr. G. Birt, Leamington; Mr. H. Kerbey, London; Dr. Nicol, Bradford; Dr. G. Johnson, London; Mr. Benson Baker, London; Dr. E. J. Cooke, Worksop; Mr. T. H. Bartleet, Birmingham; Mr. Townshend, Weston-super-Mare; Mr. Wickham Barnes, London; Mr. S. Barnett, Leominster; Mr. A. G. Chattaway, Leominster; Dr. Steele, Liverpool; Dr. Robert Barnes, London; Mr. H. Palmer, King's Lynn; Mr. Stonard Edey, Exeter; Mr. E. Lloyd, London; Mr. James Haworth, Filey; Our Manchester Correspondent; Mr. Blair, Worcester; Mr. Aspden, Preston; Mr. C. S. Webber, London; Dr. Greenhow, London; Dr. J. G. Macbeth, Lucknow; Mr. Bruce, London; Dr. Woodman, London; Dr. R. Simpson, Plymouth; Dr. Hughes Bennett, Edinburgh; Mr. Andrew Davies, Swansea; Dr. J. Burdon Sanderson, London; Mr. Arthur Norton, London; Mr. Sewill, London; Mr. Owen, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. A. H. Martin, Evesham; Mr. W. J. Pank, London; Dr. Nankivell, Torquay; Mr. W. H. Griffiths, Oldcastle; Messrs. Oliver and Boyd, Edinburgh; Mr. Greenway, Plymouth; Mr. Popham, Sligo; Dr. Philipson, Newcastle-on-Tyne; Mr. Hodgson, Brighton; Dr. Tilt, London; Dr. Parsons, Dover; Dr. A. W. Tomkins, Leamington; Dr. Heaton, Leeds; Dr. Russell Reynolds, London; Dr. Maunsell, Dublin; Mr. G. S. Elliston, Ipswich; Mr. P. H. Holland, London; Dr. J. Thompson, London; Dr. Jagielski, London; Dr. T. W. Rhodes, Manchester; etc.

REMARKS

ON THE

PRUSSIAN SIEGE OF PARIS

IN SOME OF ITS RELATIONS TO HYGIENE AND SURGERY.*

By DEFUTY INSPECTOR-GENERAL C. A. GORDON, M.D., C.B., etc.,
Late on Special Service with the French Army.

ON the outbreak of war between France and Prussia in 1870, I had the honour of being accredited to the French army as Commissioner,† charged with the duty of inquiring into and reporting upon the systems of sanitary and medical administration followed in that service, and investigating such matters of surgical interest as should present themselves.

On my arrival in Paris on the 2nd September, to obtain from the authorities the necessary credentials to enable me to join the army under Marshal Macmahon, rumours were already in circulation in reference to the critical position of that force and its commander, and on the following day the news of the disaster at Sedan was publicly known throughout the capital.

On the 4th, the all but bloodless revolution took place, resulting in the deposition of the Imperial, and the declaration of a Provisional Government. Then followed rumours that negotiations were in progress and the war about to end—rumours which were speedily shown to be groundless—and the rapid progress of events sufficiently clearly indicated that Paris must prepare for a siege. That event, which early in September was a probable contingency, has now passed into history.

The steady approach of the Prussian army; the hurried accumulation of such stores of food within the city as were obtainable; the *levée en masse* of the population for purposes of defence; the enormous exertions made to strengthen the lines of fortifications immediately around and at a little distance from the capital; the endeavours made to provide the effectives with clothing, arms, accoutrements, and to obtain suitable accommodation for troops and contingents; and the gigantic scale upon which arrangements were made for sick and wounded, have all been more or less completely described, although mere description would fail to convey the actual impression of the whole, such as could alone be obtained by an eye-witness.

It would be impossible in a paper of the length to which the present must be restricted, to do more than enter very briefly into some matters connected with the points just enumerated; nor do I omit to observe that, while all of them come more or less directly within the province of the army medical officer, only two or three have reference to the great mass of the profession as represented by its members in civil life. Yet I trust the further observations I am about to offer in regard to the experiences of the siege of Paris may present some points of interest to both classes of my professional brethren; namely, to those in the public service and to those in private life. For the sake of convenience, I shall allude to the topics to be glanced at in the following order.

1. *Physique of the Troops and Contingents.*—Great exertions were undoubtedly made to bring under arms every man capable of military service. Persons of all social conditions were drafted into the ranks; the grey-headed man of fifty-five stood along-side the youth of eighteen, or even less, if we could judge from the appearance of many; nor were the lame and the misshapen exempt from the general obligation to serve in the great emergency which threatened. A *corps d'armée*, consisting of the regular soldiers of the line, entered Paris soon after the Provisional Government was declared; new battalions were quickly formed, raising the nominal strength of the line troops in the capital to upwards of 50,000; the Gardes Nationaux and Mobiles making a strength upon paper estimated at about 475,000, upon whom the defence of Paris rested. Of the contingent forces, a considerable number brought in the early days of the war from the provinces of France consisted for the most part of strong athletic men, although even among them there were many whose *physique* appeared but ill suited to the requirements of severe service during winter. The young men drafted into reserve battalions of the line were, in a large proportion of instances, undeveloped lads. The civic forces themselves contained, with some excellent

materials as soldiers, very much that was utterly unsuited in bodily strength for the hardships of a campaign. Nor can I omit to allude to two other points, which, although not strictly medical in their bearings, have, nevertheless, a very suggestive bearing, if applied to our own military institutions. These drafts were hurriedly brought together; they were imperfectly drilled; they had not time to learn, practically, how much each could perform; self-reliance was still absent; nor were they able to acquire that mutual confidence in each other and in their officers which in reality distinguishes the old soldier from the mere recruit. The officers in many instances, even when the armies of the enemy were steadily closing in around Paris, and after the state of siege had been established, were oftener to be seen pursuing their own gratification than drilling their men. Among the civic forces the officers were elected by the men whom they commanded; and to these combined causes we may, I think, fairly attribute much of the disasters, in a military sense, which happened to the Parisian army in its various collisions with the more powerful, better trained, and self-reliant enemy, as well as the severe losses in killed and wounded which occurred on those occasions.

2. *Clothing of the Troops.*—In the hurry which necessarily attended the formation of the army of the defence, considerable difficulty evidently existed in the process of supplying the whole with suitable and sufficient clothing. The result was that, as the intensity of the winter of 1870 came on, the requirements of the troops were in these respects undoubtedly defective.

Great exertions were undoubtedly made to supply their wants; and, considering all things, it is a matter of wonder how so much clothing as was furnished could have been so quickly obtained. Subscriptions and donations by individuals and societies, moreover, came to the aid of the troops in this as in other respects; yet the fact must, I fear, be admitted, that much suffering and considerable mortality resulted during winter from deficient clothing of the troops when employed in the advanced posts and bivouacking upon and near the fields of battle.

3. *Food.*—Among all the trials to which the occupants of Paris, whether soldiers or civilians, were subject during the protracted siege, the gradually diminishing supply of food was undoubtedly the greatest. Notwithstanding the exertions made to provide ample stores before the investment of the city was complete, and the careful scrutiny that was made of the quantity of food in store, not more than a supply for two months' consumption was estimated to exist; yet the siege really continued for more than double that time. Little by little the supply of various articles was lessened. A careful census of the population was made; and food, whether in the shape of meat or bread, issued in accordance with official cards issued by the different *mairies*.

During the second half of the siege, the public health undoubtedly suffered in consequence of the insufficient and inappropriate food issued; and the effects experienced by us all, in greater or less degree, deserve, I think, to be alluded to here. The insufficient supply of animal food, superadded as it was to the want of fuel, rendered us little capable of withstanding the unusual intensity of cold which prevailed in Paris as elsewhere during the winter of 1870-71. However much clothing we put on, the result was not satisfactory. Our sensation of cold was never absent; yet, with the exception of those, especially the soldiers, who were directly exposed to the hardships of the field, chest-affections and attacks of rheumatism were by no means so prevalent as might have been expected. Cases of frost-bite among the military, especially those who had to bivouack, were both numerous and severe; the liability to be thus affected being increased by insufficient food added to insufficient clothing.

Scurvy in one form or other occurred, and prevailed to a considerable extent among the various classes of persons besieged. Some of the troops, especially those occupying Forts Vanvres and Issy, suffered from the affection in its pronounced form; they having suffered not only from insufficiency of food, but also from the fatigue, exposure, and mental strain incidental to the heavy and continuous bombardment to which for many weeks those forts were subjected by the Prussian batteries on the heights beyond.

Among the ordinary residents in the city the diathesis was readily detected. In some, the condition of the gums at once indicated its existence; in others, it manifested itself in purpurous patches on the surface. Some suffered from hæmorrhages; and all suffered more or less from inactivity and impaired power of undergoing much exertion—a state in part owing, no doubt, to deficient food, but also, in a measure, to inappropriate diet.

On the subject of preserved meat as an article of food, a few remarks are here demanded. Considerable stores of meat, prepared and preserved in tins, existed throughout Paris in the early part of the siege; and as the supplies of fresh meat became exhausted, many persons had to fall back partially or entirely upon the preserved. For a time every

* Read before the Surgical Section at the Annual Meeting of the British Medical Association, in Plymouth, August 1871.

† Surgeon-Major Wyatt of the Coldstream Guards was my able coadjutor on the occasion.

confidence was entertained that the tinned meat was in all respects a complete substitute for the fresh. Nor did doubt for some little time arise on the subject; and, with the aid of condiments of various kinds, and the exercise of a little ingenuity, the besieged were able to indulge in savoury, if not very extensive or varied, meals. But it began to be felt that, somehow or other, the meals ceased to satisfy; there was a constant desire for food experienced; and, as already observed, the power of resisting cold and withstanding fatigue gradually diminished; diarrhoea became prevalent; dyspepsia and acidity were very generally complained of; and emaciation took place so that the clothing of all hung loosely upon them.

I am quite aware of the great importance which attaches to the question now glanced at, and to the great interests connected with its investigation. This consciousness induces me to avoid speculation and adhere simply to facts within my own knowledge, leaving the hearers or readers of this paper to draw their own conclusions, in regard to how far it may be desirable to trust to stores of preserved meat alone on long voyages or in campaigns.

4. *Accommodation for Troops.*—The troops of the regular army who occupied Paris were accommodated in the ordinary barracks throughout the city, in huts erected for their reception in the open spaces and along the principal thoroughfares, and in tents of various kinds issued temporarily for their use. The National Mobile Guards brought up from the provinces found quarters in hotels, private houses, and some also in huts; the National Guards raised in the capital being for the most part permitted to reside at their own houses, except when the turn came for the battalions to which they belonged to go to the front. The Garde Mobile Sédentaire, consisting for the most part of men who, on account of age or family considerations, were not required to go beyond the ramparts, went from their own houses on duty, and when that was over returned to their homes; yet the sight of the entire manhood of a city in uniform was a remarkable one: attendants in shops, cafés, and restaurants, the hairdressers, even the very porters in the streets, were in uniform; and, for the time being, the little boys played at soldiers, carried toy-knapsacks, and drilled with their toy-chassepots.

The question of accommodation has a very important bearing upon health. It had during the siege, and thus demands some remark here. The system of *casernement* of soldiers in France, although in theory perfect, is, in regard to principles of sanitation, extremely faulty. In a barrack the troops are arranged by *squads* and by *sections*; one large compartment of a building being set apart for the accommodation of thirty-two men, each floor of a barrack-building for six such sections, or, in other words, three companies. An apartment of the kind is divided in the middle transversely by a wooden screen about six feet and a half high; the bedsteads being arranged four and four from the walls at each end, and from the screen in such a manner that each side of the central passage through the rooms contains eight men—that is, a corporal and seven men, who are in a manner isolated from the others, and in some degree complete in themselves as a body. The disadvantage in the arrangement, however, is that, the men's beds being placed so as to extend from the transverse instead of the longitudinal walls, free perfusion of air can never be so complete as it is in English barracks, and hence all the usual effects of insufficient ventilation occur.

The huts erected were for the most part extremely flimsy in their nature; their occupants were unprovided with other bedding than a quantity of straw upon the long guard-beds upon which they slept, and their own blanket and greatcoat. Means of cooking were sufficient, but other requirements and outhouses were wanting. *Tentes abri* were only made use of to a small extent, and when employed were of little real use as a protection against the weather. In fact, it is more than questionable whether, during the Franco-Prussian war, any little advantage that might have arisen from their employment was not far more than counterbalanced by the evils arising from their weight, not to speak of the time required to pitch and fold them up again.

5. *Provision for Sick and Wounded.*—Great as were the exertions made to render the defences of Paris effective against a siege, scarcely less in their nature were those undertaken by the Intendance and by various philanthropic associations for the accommodation and care of expected sick and wounded. It was felt that the duty was imperative of making the arrangements for preserving the life of friends as efficient in their way as those for the destruction of enemies were in theirs; and it may be truly asserted that, on this occasion, expense on the part of societies and individuals was considered altogether secondary to the great mission of imparting to sick and wounded the greatest amount of comfort, attention, and attendance, possible. There is, unfortunately, difficulty in obtaining definite information as to the precise extent of accommodation provided in hospitals, appropriated buildings, private houses, huts, tents, etc., for sick and wounded. After a time a considerable

amount of what had, in the first instance, been taken for the purpose, was for various reasons abandoned; a regular system of supervision was also organised; the different temporary hospitals or ambulances were annexed to the large military and civil hospitals; and the whole were arranged under ten great divisions, the number of beds inspected being 25,754, or in the ratio of about five per cent. of effectives, if we accept the strength at 475,000 men under arms within Paris.

It must be observed, however, that many of the wounded were, during the siege, treated in their own homes. The exigencies of the time, unfortunately, left little room for choice in the situation of buildings to be occupied by sick and wounded. Military requirements, as is often the case, superseded hygienic principles; and the result which frequently occurred must, therefore, in a great measure, be looked upon as inseparable from the conditions of a siege. No doubt great differences existed in the degree of suitability of the various buildings; some, and these by no means few, being altogether unsuited for the purpose. As a rule, the larger and more pretentious in appearance was the building, other than those originally instituted as hospitals, the less was its suitability for the purpose; the simpler the arrangement of apartments within, the more readily and satisfactorily was its transformation to its new purpose effected. Churches were, of all kinds of buildings, the most difficult to arrange as hospitals, and the least suitable for the purpose. Buildings, the inner apartments of which communicated directly or indirectly with each other, were unsuitable; and still more were those in which, in addition, a central passage separated opposite ranges of such apartments. In fact, the impression left upon the minds of many men of experience, as well as upon my own, was, that in no permanent buildings, whether originally erected as a hospital or not, were the chances of recovery among the wounded nearly so great as they were in huts, tents, and other temporary erections. This fact is, no doubt, important in itself, and is completely in accord with what has over and over again been said upon the same subject. There is one material consideration, however, which ought never to be passed over in connection with it; namely, that in a siege neither can huts be always obtained in sufficient numbers to meet all requirements, nor space be always available whereon to erect them, nor will workmen be disposable to saw the wood required and put them up when, as was the case in Paris, the male population are under arms. Here, then, is another important point in which hygiene and war are antagonistic to each other.

6. *Infirmiers.*—Under this general term I desire to include all attendants upon the sick and wounded other than surgeons and physicians; among them female attendants, whether as sisters, ladies, or paid women-nurses; as also male attendants or orderlies, whether gentlemen volunteers, members of religious bodies, untrained men hired for the occasion, or the regular *infirmiers*, such as were to be met with in the wards of hospitals, military and civil. I most willingly accord all praise and honour to the ladies, lay and religious, who devoted their time and labour upon the sick and wounded in Paris; yet I venture to remark that there are numerous circumstances in connection with a state of war which indicate very clearly the existence of an urgent necessity that military hospital organisation should be complete, and consist entirely of persons capable of withstanding the discomforts and fatigue inseparable from war. In this as in some other respects, it becomes necessary to guard against considering arrangements adopted or suitable during the siege of Paris as appropriate for the ordinary purposes of a campaign; for experience showed that in many respects they were not so. For military purposes, then, and for all departments connected with an army on active service, we require *men*. For the many duties connected with transport, care and attendance on the wounded, men trained, of good character and position, are quite as much needed as, and in several respects much more so than, in other positions connected with a force; and yet experience on the present occasion has confirmed what has been described in regard to other wars, that, neither in personal character, knowledge, or social standing, do the ordinary run of male *infirmiers* come up to the very important duties which often devolve upon them.

In my official report on my late mission, I enter more fully into the consideration of this matter than I can do here. I must, however, observe that the duty of attending upon the sick and wounded, if not an agreeable one, is one of vast importance, involving as it often does the issues of life and death; and that, therefore, so long as the life of an individual holds that importance to himself and to society which our civilisation accords to it, the necessity is paramount of obtaining the best security possible against its loss. This is indeed generally accepted in regard to surgeons and physicians; it is so in regard to trained female nurses; yet an equal necessity has not apparently been recognised in regard to *infirmiers*. Throughout the siege many circumstances indicated the great comfort enjoyed by the wounded, the attendants upon whom were well educated and intelligent men as contrasted with

those under *infirmiers* of the more common class. The success of surgical and medical treatment was more considerable in the one case than in the other, for the reason that the one class comprehended the importance of the duties which devolved upon them, and carried out with discretion the orders which they received, whereas the very opposite was the case in regard to the other. If, therefore, one lesson more than another was to be learnt from the experience of *infirmiers*, it pointed to the great importance of establishing for all hospitals, whether military or civil, a corps of steady, respectable, and tolerably well educated men as ward-attendants. Let sufficient inducement be offered, and we cannot doubt that men of the class alluded to will be obtained to enter upon the occupation as a regular business. In the words of a distinguished member of the French Intendance, "*Infirmiers*, as they at present exist, are a mistake; they are without interest in their cases; they are without discipline; they have imperfect knowledge. The system in regard to them must be altered."

7. *Societies under the Geneva Convention*.—Various societies under the "Red Cross" were formed in Paris in the early part of the Franco-Prussian war; and it is beyond question that they have been the means of conferring an immense amount of benefit upon the wounded in battle. Of those in Paris, the Société de Secours aux Blessés was the principal; next to it were those of the Press, the American, the Evangelical, etc. Some seventeen or more organisations of similar kind, but upon a smaller scale, were in operation.

In the month of August, 1870, the Société de Secours had despatched various ambulances to the front; the chief part of its operations, however, was confined to the capital. In order to indicate the large scale upon which its general operations were carried on throughout the war, I would transcribe the totals of *personnel* employed, maintained, and paid, by it. This included 16 principal surgeons, 58 surgeons, 101 assistant-surgeons, 139 subassistant-surgeons, 13 principal purveyors, 30 assistant-purveyors, 8 quartermasters, 40 chaplains, 29 *infirmiers* major, 48 corporal *infirmiers*, 546 *infirmiers*, 55 coachmen and drivers, 124 horses, and 40 carriages and waggons.

In the different hospitals working under or affiliated to the Société, the supplies of all kinds were liberal in quantity and excellent in quality; expense was altogether a matter of secondary consideration, the well-being of the sick or wounded being alone taken into account.

8. *Points of Surgical Interest*.—I scarcely know by what means to condense my remarks on this branch of my subject, so as to give on the present occasion even a bare epitome of a few of the most important points. Even in my official report, my observations were more brief than I could have desired, and now they must be still more curtailed. Considering the nature of the arms used in modern war, the character of wounds inflicted by their missiles proved an important object of inquiry; and, contrasting the injuries now seen with those observed in former campaigns, the following peculiarities of those sustained during the siege of Paris may be noted: 1. A large proportion of severe injuries in comparison to slight ones; 2. Frequency of multiple wounds in the same person; 3. The large number of wounds of the upper and lower extremities as compared with those of the trunk of the body (attributable, no doubt, to the increased penetrating power of modern arms and the increased mortality in the field of battle arising from wounds of the chest and abdomen); and 4. The absence of wounds caused by sword or bayonet. The occurrence of a state of "shock" after severe injuries, although in several instances manifest, did not appear to be by any means so numerous as it seemed to be among British soldiers in other wars—as, for example, the Indian mutiny; nor did the condition, when it did occur, command the degree of consideration described in works of the older surgeons of this country. The peculiarity may be attributable to "race", perhaps to other conditions, the investigation of which would have a scientific importance. As a rule, the dressing of wounded upon the field of battle was confined to merely what the urgency of individual cases required to allow the subject of injury to be conveyed in safety to the nearest hospital in the city. In a large proportion of instances, dressings of this nature were performed by the regimental medical officers of the French army under heavy fire—a fact which I take leave to mention specially in this place, as it has not, I think, hitherto obtained that degree of prominence which it deserves. A very large number of the wounded received their first dressings at the hands of surgeons working under the Red Cross; and it may be safely said that the whole of the transport of wounded, in so far as it was efficient or suitable, was performed by societies under the Geneva Convention. Three methods of treating wounds of the limbs appeared to be adopted in Paris. The first consisted in the use of apparatus and applications of the greatest possible simplicity; in the second they were more complicated, although in many respects extremely ingenious; in a third, the performance of a capital operation appeared to be a chief object in view. Each of these had its special recommendations. The two former were adopted in view

to the conservation of injured members; but, as we shall presently see, they were severally suitable only under particular conditions.

Among the methods under the second category, may be enumerated the *apneumatic* plan introduced and followed by M. Guérin. The author of the method having observed the rapidity with which union took place in cases of orthopædic surgery, was first led to treat wounds communicating with the surface by the exclusion of *air*; he accordingly invented a pneumatic apparatus by which this object might be attained, and, as a result, the occurrence of suppuration prevented. The apparatus consists of India-rubber cases, forcing pumps and air-reservoirs, too complicated for description here; but as a detailed account of it by M. Guérin, containing illustrations, has been transmitted to Netley, full particulars will no doubt be given by some of the eminent professors of that establishment. Wounds of all degrees of severity, if on the limbs, were treated by its means, even to those of a grave nature penetrating the large joints, and with a large measure of success. What is deemed of most importance in this place in connection with it, is, however, the circumstance, stated to be a fact, that the patients thus treated by the exclusion of air escaped pyæmia, although that form of hospital disease prevailed extensively among the wounded treated according to ordinary methods in the same building. It is right to mention that considerable difference of opinion existed in Paris in regard to the efficiency or otherwise of the system as compared to the ordinary methods; the requisite apparatus is, moreover, so extensive and cumbersome as to be quite unsuited for employment in field army hospitals, but it deserves careful trial in stationary establishments; and with this view I solicit attention to it on the present occasion.

A large variety of applications in cases of wounds and operations were used by different surgeons. The various preparations of carbolic acid were extensively used, and no doubt advantageously so, inasmuch as its employment on patients in a ward seemed to greatly lessen, if, indeed, it did not altogether prevent, the occurrence of hospital disease. Solutions of permanganate of potass was used very effectively to foul wounds and to those extending far among the tissues, with or without fracture of the bones, or in which the missile remained imbedded. Nitric acid lotion was another excellent application under similar conditions; and among others used were tincture of arnica diluted, diluted alcohol, tincture of perchloride of iron, glycerine in various forms, simple and other cerates, and various disinfectant powders. In some ambulances, poultices were extensively used, but, in the greater number, fomentations, protected by oiled silk, were employed; drainage-tubes were used to an extent altogether beyond what we in England are accustomed to see; irrigation was in some few places used, but the arrangements necessary were inconvenient, and the process kept the bed of the patient and adjoining floor in an undesirable state of sloppiness. Bandages were, as a rule, applied with great neatness; but the quantity of cloth, charpie, and articles of dressing of various kinds beneath the bandages, not only confined the discharges in the wounds, but maintained an injurious degree of heat in the adjoining parts. Sponges were used far more extensively than they are in our war hospitals; and I cannot help thinking that considerable injury to the wounded in the mass occurred in consequence.

Oakum was first used in the American ambulance as a dressing for wounds, and as padding for limbs fractured by gunshot wounds; after a short time, its numerous advantages obtained for it extensive adoption in several other hospitals; these advantages consisting in its deodorising properties, in the readiness with which it absorbed offensive discharges, and in the excellent support which, by reason of its elasticity, it affords to injured limbs. The kind most generally used was the very coarsest; such, in fact, as is usually obtained under the name of "oakum"; and I am inclined to consider that, for the purposes indicated, it was superior to the finer descriptions of the same material.

A large variety of apparatus were employed for the support of limbs injured by gunshot wounds. Among the most convenient, the *Appareil Bonnet* deserves the first mention. It consists of a strong framework of iron bars well padded, and of a shape and size sufficient to accommodate both the lower limbs, and extend along the back to the shoulders, so that an injured person may lie comfortably in it, the wounded limb secured and padded as may be necessary, and the apparatus itself so arranged by a mechanist as to admit of dressings being readily applied wherever needed. The anterior suspended iron splint, first introduced by Dr. Smith, and improved by Dr. Shrimpton, had a somewhat extensive trial in the Ambulance du Corps Legislatif. It was found useful in some cases of wounds of the lower extremity, but requires much time and labour to ensure its proper application. Gypsum cases placed over suitably arranged splints, or padded so as to avoid pressure upon subjacent parts, were also used, and very successfully; motion in cases of compound fractures being by this means completely prevented; and, lastly, no other support was in some cases applied to wounded in-

ferior limbs than carefully laying the member upon and between properly protected cushions, it being kept in position merely by means of a triangular piece of wood of suitable length placed under the pad on either side. In all these cases, means were of course taken to ensure the absorption of discharges by means of suitable dressings to the wound itself.

The terrible extent to which hospital disease prevailed in the hospitals and ambulances during the siege of Paris is now well known. At the time, it furnished one of the principal causes of anxiety to the surgeons, producing a great part of the mortality which prevailed among the wounded and those subjected to operations. Several conditions combined to produce the various forms in which these affections manifested themselves. As already observed, some of the buildings occupied by the wounded were altogether unsuited for the purpose. Others were overcrowded, others insufficiently ventilated; in some, ventilation was chiefly from one occupied room to another—as, for example, the Grand Hotel; while in others, a central passage received the emanations from the wards on each side of it, but was itself without the means of complete perfusion. It is to be feared that, in some of the hospitals, soiled clothing and bedding were not removed from the rooms occupied by the wounded as quickly as was desirable, and that this defect in sanitary arrangements was altogether beyond the power of the surgeons to remedy. In addition to all these conditions, many of the men had suffered from insufficiency of food for a lengthened time before receiving their injuries, and while under hospital treatment were, from a stress of circumstances, unable to be provided with the amount of nourishment in food and wine that their condition actually needed. In fact, it may be questioned if the same liberal scale of diet and “comforts” which is allowed in ours, is ever given in French hospitals. We give plenty of beef and porter; they give “Vin de Bordeaux” and a little “confiture.”

On taking into account the different kinds of treatment followed for gunshot injuries, the different conditions under which wounded in Paris were placed, and the different results which followed injuries of similar degrees of severity, the importance presented itself of devising certain rules by which treatment under such varying circumstances should be followed. This important point received the attention of many of the eminent men who bestowed their services in the great emergency of the siege; but the result did not indicate more than an approximate arrival at the desired conclusions. These conclusions seemed to be that, as regards amputation, that operation was more suited than excision or resection when its subject had to be carried on with an army; that excision and resection was much more likely to be successful when practised in the upper than the lower extremity; that excision of the knee as a substitute for amputation in cases of gunshot wounds of that articulation, has sadly failed, although it has succeeded in cases of disease occurring in civil life.

The practice of conservative surgery has also proved itself to require the application of definite rules, even in stationary hospitals provided with extensive apparatus, mechanism of all kinds, trained and intelligent attendants, and so on; and its success under such circumstances furnishes no criterion of its suitability in movable hospitals with an active army. Its requirements involve very great attention and physical fatigue on the part of the surgeons; such, indeed, as can alone be fully carried out when there are comparatively few cases of considerable severity to be attended to; there is always great risk of the patient suffering from some form of hospital-disease, and in many cases the limbs saved are of relatively little use. There are exceptions to this, but such is the rule. In tents and huts, patients thus treated have undoubtedly a better chance of recovery than those in houses; but even in them the risk of hospital-disease is by no means absent.

These notes represent very imperfectly some of the valuable professional lessons which were to be learnt in Paris during the siege, and contain no more than a bare summary of some of the subjects, on the consideration of which I have entered more at length in the official report which I have had the honour to submit to the authorities. In that report, I have availed myself of the opportunity afforded to acknowledge the great amount of consideration and personal kindness which I received from members of the profession and others with whom I came into contact in the course of the important events connected with the Siege of Paris, and have mentioned by name those to whom I am in more especial manner indebted. I believe that the courtesy shown me by the members of the medical profession in Paris was, in my person and that of my coadjutor, shown to the profession in this country. In this spirit we received it; and in this spirit I now allude to the circumstance, believing, as I do, that whatever rivalries may unfortunately happen to interrupt the good understanding of nations, we of the medical profession have no rivalry with our brethren of other countries, other than that of a desire to advance our science and extend its benefits for the good of the masses.

ABSTRACT OF A CLINICAL LECTURE ON VARICOCELE AND ITS TREATMENT:

Delivered at King's College Hospital, June 9th, 1871.

By JOHN WOOD, F.R.S.,

Surgeon to the Hospital, and Professor of Surgery in King's College.

GENTLEMEN,—We have had lately in the Hospital many cases of *varicocele*, and you have had the opportunity of comparing several methods of treatment which have been followed. In its general pathology, *varicocele* resembles the diseased conditions of the veins which are found in other parts of the body, and known by the name of *varix*, and the common forms of *hæmorrhoids* or piles. In all these, the coats of the veins are the seat of the disease, which consists essentially in dilatation of their calibre and hypertrophy of their walls, with consequent loss of the function of the valves, which aid circulation of the blood through them. But in each of these different regions of the body where *varix* is found, there are peculiarities which modify the pathological cause, and require peculiarities of treatment to meet their several exigencies. In true *varicocele*, the veins of the spermatic cord which convey the blood from the testicle are the vessels solely affected; and it must not be confounded with *varix* of the superficial veins of the scrotum, which occasionally occurs. The circulation of the blood through the testicle is probably normally slow, corresponding by the intricacy of its channels with the very tortuous and complex system of tubes which elaborate and transmit the secretion when formed. The return of the blood through the spermatic veins is retarded (1) by the intervention of an elaborate plexus, the *plexus pampiniformis*; (2) by their passage through the fibrous inguinal rings and canal, and the muscular cremaster and internal oblique, which closely invest the cord as it hangs over Poupart's ligament; and (3) by the length of the column of blood within them, reaching from the testis to the renal or caval veins high up in the abdomen.

Now, in a perfectly normal condition, the elastic resiliency of the coats of these veins is such that the retardation is effectively controlled and modified.

But slight imperfections are extremely common, and are evidenced in most individuals as an increase in the size of the left spermatic cord. In the surgery of the schools, this is commonly attributed to the fact of the left testicle being placed lower in the scrotum than the right, and to the opening of the left spermatic into the renal vein at right angles to the current of blood in the latter, and not, as on the right side, at an acute angle, with a course more parallel to the current in the inferior cava, and more adapted to the efficiency of the valve-action at the acute side of the angle. But a difference in length of column of about half or three quarters of an inch, or in the angle of junction to the extent of a right angle, do not, in normal conditions and in other situations (where they are common enough), produce undue dilatation of the veins. The other predisposing cause commonly assigned for this greater frequency on the left side, is, in my opinion, a much more powerful one; and that is the position of the sigmoid flexure of the colon across the front of the left spermatic plexus. The sigmoid flexure is the temporary receptacle of the fully formed fecal mass, until the habitual or convenient time for its expulsion has arrived. In civilised society, there are frequent and unavoidable conventional causes for delay or neglect of Nature's indications; and constipation and consolidation of the feces is a common accompaniment of artificial modes of living. We have thus greater habitual pressure upon the left spermatic plexus.

But along with these predisposing causes must coexist some other condition lying in the coats of the veins themselves, otherwise the same anatomical, mechanical, and conventional causes would operate alike in all individuals, which is notoriously not the case. Now, in a healthy vein, the middle coat is found under the microscope to contain abundantly muscular fibres of the same kind as those in the arteries. They are arranged both longitudinally and circularly in several successive layers, intermixed freely with white connective tissue, and with a smaller proportion of elastic fibres. In the larger veins, of the abdomen especially, the outer coat also contains, according to Remak, a considerable proportion of non-striated muscular fibres; and this peculiarity extends to a great extent into the spermatic veins. The veins of the lower extremity have thicker coats than those of the upper, and the superficial veins thicker than the deep ones.

If you take a portion of the coats of a vein in a varicose condition,

and place it under the microscope, you will find that the hypertrophy depends chiefly upon the development of white connective tissue in the outer coat, while the muscular and elastic fibres are proportionately much less developed. The mechanical stress upon the vessels has promoted the development of the merely resisting material, and has atrophied by over-tension the contractile and resilient elements. In some cases, also, I have found a certain amount of amyloid or fatty degeneration of the muscular fibres. At a certain point of the lateral distension, the valves cease to be effective in closing up the tube against regurgitation, and they become finally shrivelled and atrophied from disuse. This promotes the stasis and accumulation of the blood within the vessel, and, longitudinal hypertrophy commencing, results in the coils and serpentine folds which are so characteristic of an advanced stage of varicose veins. We have, in fact, in varicose veins, a condition, *mutatis mutandis*, resembling, in the thickening of the outer coat and the diseased condition of the middle coat, that of true aneurism in the arteries. There can be no doubt that this predisposition of the venous system is, like so many other diseases, the result of hereditary transmission.

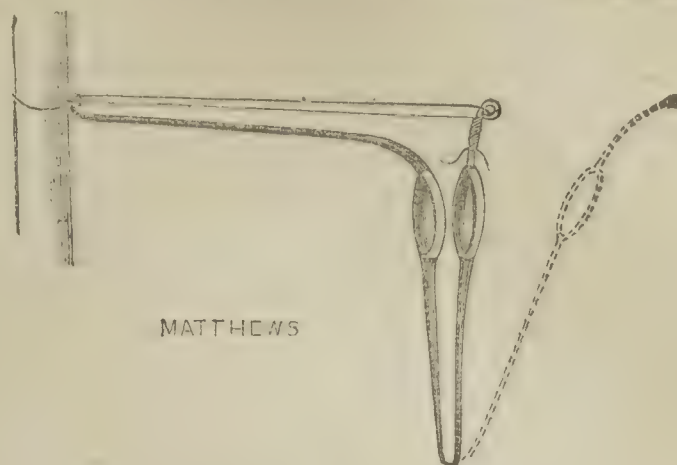
Into the various points of the differential diagnosis of varicocele, I have scarcely time on this occasion to enter. I may, however, mention that the condition which is most difficult to distinguish from varicocele is the presence, in a narrow hernial sac, of an elongated portion of irreducible or adherent omentum, dragged out in the curious and perplexing way in which we sometimes see it, simulating a thickened spermatic cord, or a cyst, or even a testicle, almost perfect in shape. The most certain way of distinguishing them is to mark the effects of position in the recumbent posture, maintained for a length of time sufficient to empty the varicose vessels. Upon an adherent omentum, this has, of course, little or no effect. But the coats of varicose veins are occasionally so thick in themselves that a considerable tumefaction remains, even after the blood has passed almost entirely out of them. In such cases, the only resource is in the *tactus eruditus*, which cannot be conveyed by words—the peculiar centrifugal dilating impulse which the cough impresses upon the varicocele, and which is different from the communicated impulse of an omental hernia. When the omental hernia is reducible, no difficulty should arise. The means of distinction given in books is to reduce the swelling while the patient is in a recumbent posture, and then placing the finger firmly upon the superficial ring, to let the patient assume the erect posture. If it be a hernia, the swelling does not return; but if it be a varicocele, it does so in a short time, but gradually. Fatty developments in the cord are usually persistent under any position; and, like omental hernia, doughy and inelastic to the feel, and, unless confined to so high a position in the inguinal canal as to contraindicate varicocele entirely, have not usually a cough-impulse.

Varicocele is often attended by an amount of pain totally disproportional to the size of the tumour. It is probable that this proceeds from pressure or tension, during the initiative stages of the disease, upon the spermatic plexus which surrounds and embraces the veins, and supplies branches to their coats. The pain usually affects, also, the groin of the same side, and sometimes reaches the lumbar region, by an effect upon the renal plexus, from which part of the spermatic plexus is derived.

In many cases, also, there is a morbid fixity of the attention of the patient to his condition, which is sometimes indicative of serious mental derangement. Atrophy of the testicle may be coexistent with varicocele, and in most cases is the result of the impaired nutrition consequent upon the continued congestion which results from the varicocele, as in the condition called varicose eczema in the legs. In most cases, an operation, if applied early enough, will prevent this atrophy; but sometimes the wasting goes on, and may even be considered by the patient as the effect of the operation. He should always, therefore, be informed beforehand of this possible result.

The treatment that you have seen lately carried out by me, gentlemen, is an application of the principle of metallic wire-pressure, applied subcutaneously, and with very little disturbance of the parts, by means of a new instrument which I have devised and carried out, with the help of Mr. Matthews, for the application of a continually acting spring traction. The very ingenious apparatus of M. Ricord was previously the most successful attempt to effect the same results; but it acted upon a silk or hempen ligature, applied in a peculiar manner round the vein, and had not the advantages of metallic pressure. This apparatus is ponderous, unwieldy, and requires screwing up afterwards. I have made many attempts, gentlemen, as you know, to obtain the advantages of continuous and unintermitting wire-pressure, so applied and self-acting that no subsequent interference by the surgeon or any screwing up of the apparatus, should put the patient to all or more of the pain of repeating again and again the original operation; so arranged that the wire could be at any time disengaged and removed with little or no pain to the patient, or disturbance of the parts; and so simple as to be easily managed by anybody, easily cleaned, and not liable to get out of

gear. Well, the outcome of so many trials seems simple enough when you look at it, as did the celebrated egg-trick of Columbus. It is a strong, steel, highly tempered spring, acting like the spring of a pair of dissecting forceps. One limb carries at the end a thin round steel shaft,



about an inch and a half long, which ends in a transversely oval and obliquely placed eye, for transmitting the wire snare or loop which encircles the vein. The other limb terminates in an arm or hook, round which the ends of the wire are twisted and fastened. The rings upon the two arms are for the purpose of giving a firm hold to the finger and thumb while compressing and closing the spring (as shown at the middle of the figure), till the ends of the wire are fastened upon the upper limb. The dotted lines at the outer part of the figure show the upper arm when at the extent of its action; and its distance from the closed arm shows the extent of transit of the wire to be more than is necessary to drag it clean through the enclosed vein. The steel shaft which carries the wire is pressed down close upon the vein through the puncture, at which the ends of the wire emerge. The puncture is left uncovered for the escape of any discharge which may form, for which the shaft of the instrument and the wire form a direct conductor. I have found it better, also, so to arrange the punctures that the one through which the instrument passes shall be the most depending point in the track of the wire, so that no accumulation of discharge is possible within the wound. This is a point of much importance to obviate any subsequent trouble. It is also important, as I have proved experimentally, to provide that no pressure or obstruction be placed at the puncture through which the wire emerges; but that allowance be made for any swelling of the parts around which may occur. This is effectively provided for by the length of the steel shaft, and the elevation of the counterpressure from the surface of the wound. Any instrument which covers over, obstructs, and presses upon the puncture in the skin, is objectionable for this reason. In large cases, of course, a larger instrument and a stronger spring may be required. In small cases, a spring of twisted steel wire, somewhat like that of a mousetrap, has been found sufficient. Such an instrument I have found to act admirably in cases of varicose saphena.

The wire used is the best and toughest iron wire, as thin as may be judged strong enough to bear the tension of the spring. It is first dipped in carbolic oil, and passed by means of a long needle in the ordinary subcutaneous way, first under the veins, and then back again over the veins, between them and the skin, entering, re-entering, and emerging through the same cutaneous apertures. The ends are then drawn as taut as possible; the loop sinks through its puncture into the tissues out of sight; and the spring-tractor is finally fixed by passing both ends of the wire through the oval eye, pressing down the spring firmly between the left thumb and forefinger, winding the wire tightly round the hook, and fixing it there.

In most of the cases lately in the hospital, all of them men under the age of forty years, the spring-tractor was kept on for a week or ten days; but in one case, which is now in hospital under treatment, we had to deal with a very large varicocele, reaching down behind and below the testicle. In this instance, a pair of tractors and wire ligatures were applied, one above, and the other below and behind the testicle, and kept on for fourteen days. In none of these cases have the patients complained of any pain worth speaking of; there has been little or no discharge, and no formation of pus; and they have been discharged cured a few days after the removal of the wires. In the last-mentioned case, some time after the instruments and wires were withdrawn, we had a very small superficial abscess, but it occurred in a different part of the scrotum, towards the opposite side, and resulted, apparently, from the pressure of the cross strapping used to sustain the scrotum. It was opened by the house-surgeon, and gave thenceforth no more trouble.

In all the cases, we have had a very great amount of thickening from fibroid deposit in the track of the wire ligature, producing a great amount of lateral support to the weakened vessels, and persistent for a considerable time, as you may have seen by the patients who have returned for inspection, at a period of many months subsequent to their discharge from the hospital. In patients whom I have seen years after a precisely similar operation, effected by means of an instrument acting with wire in the same manner, but upon a different principle, which I then employed, the veins have remained quite impervious, with a hard, firm, constricted portion, or indurated ring, at the site of the operation. In most of the cases, I have withdrawn the wire before it has quite cut through all the included tissues, and the results have been equally good as in those in which the loop has cut its way clean through. I believe, therefore, that it is not always necessary to prolong the cure by waiting for this result, inasmuch as a great deal of fibrous tissue, not forming part of the venous channels, is necessarily included in the ligature, and often prolongs the process of separation after the veins have been entirely occluded. A dense, hard, and resisting ring of fibroid tissue is formed around the veins by the action of the ligature, which resists the pressure of the blood outwards, and prevents redistension. And not the least of the advantages of the apparatus I have described is the power that it gives us of withdrawing the ligature without pain or disturbance, when it is evident that the desired result has been arrived at, as ascertained by the deposit of fibrine and the small length of the wire yet remaining engaged in the tissues.

In this method, gentlemen, it appears to me that we have all the advantages of subcutaneous treatment and thin metallic pressure, combined with a continuous and equable traction, by which we obtain a division of the diseased veins without danger of hæmorrhage, with little or no pain to the patient, without the repetition of a most excruciating process of tightening or screwing up the ligature upon the inflamed tissues; and we get, in a short course of treatment, complete division or occlusion of the veins, no open sore (which, in such cases, is very often very slow to heal), and no suppuration which may endanger the entrance of pus into the veins. And this is combined with the power of disengaging the wire compress; with little pain and no disturbance of the parts, which might set up the process of disintegration of the clot or suppuration of the vein; and with a simplicity of construction and ease of manipulation which leaves little to be desired in the way of improvement.

THE PROVISION OF MEDICAL ATTENDANCE ON THE INDEPENDENT POOR BY PROVIDENT DISPENSARIES.*

By C. B. NANKIVELL, M.D., Torquay.

MR. PRESIDENT AND GENTLEMEN,—It may perhaps be thought that the subject which I am about to bring before your notice is not altogether appropriate to this Section of the Association, which has for its more especial object the prevention rather than the cure of disease. But if we consider the very large number of poor persons placed between the class of paupers on the one hand, and those capable of procuring medical advice for themselves on the other; and if we further reflect how entirely these poor people rely on their daily labour for the supply of all the necessities of life, and how much their ability to labour, and consequent means of subsistence, depend on their maintenance of health; we shall at once see how necessary it is for the early arrest, if not for the prevention, of disease, that this large class of the population should have placed within its reach prompt and efficient medical attendance.

Early medical advice in the diseases of the poor is likewise most important, in a sanitary point of view, to the whole community; for it is in the crowded habitations of the most crowded parts of large towns, occupied, as they are, by their most indigent inhabitants, that severe and fatal epidemics usually make their first appearance, and from these localities they extend to other classes of society. On these grounds, it may surely be considered that all associations and institutions which bring ready medical help to those who cannot individually command it for themselves, are essentially of an hygienic character. Their claims on the ground of benevolence, and their importance as a part of sound

political economy, need not be enforced before a meeting of the British Medical Association.

If, then, the preservation of health and the prevention and early cure of disease amongst this class of the industrious poor is so serious and desirable an object, it becomes a question of great moment to ascertain by what means, and to what extent, and with what effect, this object is at present accomplished. The result of this inquiry is already known to the members of this Association. It is well known to be unsatisfactory in the extreme. It is notorious that the system of gratuitous medical charity—the prevailing system in this country—is very defective in its operation, and fraught with evils of great magnitude. There can be no doubt whatever of the great benefits conferred upon the poor by hospitals in various parts of the United Kingdom. These valuable institutions afford to the poorest man the highest medical skill, constant medical supervision, and all the comforts and appliances in sickness which even the most affluent can scarcely more fully obtain. But when we come to the out-patient department of these establishments, and their allies in the same mode of medical provision—the dispensaries existing in all large towns—we find a lamentable deficiency and many faults in carrying out their intentions.

It has been clearly pointed out by Dr. Heslop of Birmingham, and by many others, that the ordinary support of medical charities by privileged subscribers is a financial and sanitary failure. It must, almost of necessity, be inadequate to the purposes for which these institutions were designed, for it is found that the supply of gratuitous medical charity invariably increases its demand. In Manchester, as shown by Sir James Kay Shuttleworth many years ago, the increase of medical charities augmented, in six years, the recipients of such charity from one-eleventh to one-seventh of the population. In Liverpool, Leeds, Birmingham, and other large towns, similar results have been observed. In the course of time the supply becomes unequal to the demand, and many of the suffering expectants of relief are doomed to disappointment, and at a time, perhaps, when such relief is most urgently required. The supply, too, of this charitable bounty, almost always attended with some delay and loss of time to those who seek it, is generally fitful and intermittent, profuse when tickets of recommendation are first given out to the subscribers, scarce, and perhaps exhausted, a few weeks afterwards; and it seems to be everywhere complained, that these recommendations are seldom given to those by whom they are most needed, but to the *protégés*, the servants, and adherents of the subscribers, or to the most active applicants who go about in search of them. And whilst these institutions, so constituted, fail in the supply of prompt and certain medical aid to the great bulk of the proper objects of medical charity, they, and all other modes of gratuitous advice to out-patients, are often attended with much hardship and injustice to the members of our profession. Their unpaid and overworked medical officers are, in many instances, placed in the invidious alternative of wasting much valuable time in attending on trivial and unimportant cases, or of adopting a hasty and routine practice, far from beneficial to the patients or advantageous to medical science, and most mischievous in medical teaching.

A large number also of the out-patients are quite above the necessity of any charitable assistance, and are well able, either separately and individually, or conjointly and by co-operation, to procure medical attendance for themselves. So great injury is done in this way to many struggling medical men, and to the younger members of the profession, that they avoid the neighbourhood of large institutions of this kind as being barren and unprofitable ground. Great, however, as these evils are, physically to the poor, and as opposed to the just interests of the profession, they are trifling in comparison with the injury caused to the working classes by the demoralisation which always attends the profuse and injudicious administration of gratuitous medical charities. This is one of the consequences of these institutions which has not yet been sufficiently brought before the public. Their supporters seem to assume that, as the necessities of sickness are not amongst the daily natural wants of mankind, no care or forethought can be expected on the part of the poor in providing against them. No fallacy in social science can be greater or more mischievous than this. It was shown many years ago, and of late years it has been still more clearly proved, that sickness and various moral causes are the most fertile sources of pauperism. Dr. Wallis and Dr. Rogers have estimated sickness, as at present unprovided for, at 72 per cent. among the causes of this, the lowest grade of poverty. The industrious working man, as long as he is in good health, is generally independent of all extraneous aid. It is only when illness, unprovided for, assails him, that he is led to seek the help of charity in the form of gratuitous medical attendance. He thus takes the first step towards reliance on others instead of on his own exertions. The necessity of frugality, forethought, self-reliance, and self-provision is sapped and undermined; and the gate of eleemosynary assistance having been opened by the reception of medical charity, he is allured to become a

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

mendicant to other charitable institutions, and is ultimately driven, by his loss of industry and spirit of independence, and the attendant vices of such a state, to the dire necessity of parochial relief. It is scarcely possible to overestimate the injury—the moral and physical degeneration—thus thoughtlessly inflicted on that large stratum of society between the pauper and those capable of individually supplying their own material wants.

It is true that the industrious classes have themselves made most laudable efforts to meet all the exigencies of sickness amongst a limited number of their class, by the establishment of sick clubs; and most valuable have been some of the results of these societies; but their provision for medical attendance has the defect of excluding the women and children of their families, and it has almost invariably been found that these self-supported and self-managed associations beat down the terms of contract with their medical officers to the lowest possible point, whilst they admit amongst their members, without any limit or restriction, many who, from their pecuniary circumstances, should be included in the lists of the private patients of the medical men in their neighbourhood. It is obvious that no department of any society deserves encouragement, which is so unjust to the members of a profession whose generous and philanthropic instincts and traditions have long placed them in the van of every measure which has had for its objects the health and welfare of the public.

Having now described, as briefly as possible, some of the faults and sad consequences of the present provision for medical attendance on the unpauperised poor, it becomes my more agreeable duty to direct your attention to what appears to be the best means of reforming this department of Public Medicine.

In 1829, I became acquainted with Mr. Smith, of Southam, and spent the following winter and spring under his roof, in professional attendance on the patients of his self-supporting dispensary, and of a small hospital which he had established at Southam, also on the plan of partial self-support. To Mr. Smith is due all the credit of first applying the provident principle to this form of medical charity, to the promotion of which he zealously devoted himself by institutions under the title of self-supporting charitable and parochial dispensaries, including an admission of the three classes of patients which this title indicates. During my abode at Southam, I visited all the places in the Midland Counties at which these dispensaries had been established, with a view to ascertain the several causes of their success or failure. On my return, it was agreed by Mr. Smith and myself that it would be better to limit all future efforts to the promotion of the provident principle only; and we drew up some rules for the first dispensary thus formed at Burton-on-Trent.

In 1831, I was urged to settle at Coventry, as the medical officer of a dispensary about to be established there, for the purpose of carrying out the principle of which I had become a warm advocate. I was anxious that the Coventry Provident Dispensary, as I suggested its being called, should serve as a model for dispensaries in other places which might follow our example. We therefore conducted it tentatively for the first two years before finally deciding on its constitution and code of laws; and I can now congratulate those who cordially acted with me on that occasion, that these laws have formed the plan of all subsequent successful institutions of the kind. The Coventry Provident Dispensary still prospers. It has about five thousand free members, from whom it annually receives about £800, and pays to its three acting medical officers about £180 a year each. I mention these facts to show that I am not advocating this system on mere speculative theory, but on the ground of experience and practical knowledge of its successful operation during many years.

The Derby Provident Dispensary, which in 1844 commenced the exclusion of all but provident patients, had, at its last report, more than five thousand free members, from whom it received nearly £1,000 during the year.

The Provident Dispensary at Northampton, a smaller town than Derby or Coventry, received last year from its free members, paying the same rate of subscription as at Coventry and Derby, the extraordinary sum of £1,881, and divided amongst its three medical officers £1,503. The reason of the greater number of free members and larger amount of receipts at Northampton is obvious and instructive. In Northampton, the working-classes have not been demoralised by gratuitous medical charity. Its noble county hospital, though near the town, does not give medical attendance to out-patients at their own homes.

Besides these, there are more than twenty other provident dispensaries, all more or less successful, existing in several parts of England; and here, at Devonport, we have a most satisfactory example of the application of the provident principle to the out-patient department of the Royal Albert Hospital. It seems satisfactory in every respect, except that it applies too large a portion of the free members' payments to the

expenses of the hospital, and gives too little to the medical officers for their work amongst the out-patients.

The success of these several institutions shows how much may be done by the poor to help themselves and to help one another, with a little encouragement and assistance from their more educated and richer neighbours; and the remarkable success of the Northampton Dispensary especially proves how much more may be done, where the working classes have not been spoilt and degenerated by habits of reliance on eleemosynary assistance. Surely, too, from these examples, we may hope and infer that, by a careful and wise co-operation between our profession and the enlightened benevolence of the truly charitable, it would not be difficult to supersede the necessity of entirely gratuitous medical charity, except in the general hospitals of the country. A firm combination of the profession and the public would thus at once bring about a most complete and judicious "reform of out-patient administration."

The effect of such a change of system would be an immense advantage to the poor, whilst it would conduce to the honour and interests of our profession. To every poor man and his family, between the pauper and those capable of paying individually for medical advice, it would offer and supply an easy provision of prompt and efficient medical attendance; prompt, because the small payments of the free member of a provident dispensary would entitle him to medical advice whenever he required it; and efficient, for the Committee would take care that its medical officers were qualified members of the profession. To the medical profession it would hold out an honourable office, in which the duties of the officers would not be the less zealously performed because the value of their services was acknowledged by some pecuniary remuneration. I feel also assured that all the members of my profession would eventually rejoice in the adoption of a system which, instead of humiliating and lowering the character of their poorer patients, would tend to raise them in their social position and moral tone.

In the construction of provident dispensaries, there are some conditions essential to their success, which those who wish to establish them should carefully observe. And I am the more especially anxious to direct your attention to these fundamental conditions, because I have invariably found that it has been the neglect of or departure from them, which has caused the failure of several endeavours to establish institutions of this kind. To bring these leading conditions before your notice has, indeed, been my principal object in writing this paper. As an essential principle, it should always be borne in mind that for the success of this system it must invariably be in accordance with the wants and welfare of the working classes, and with the interests of the members of the medical profession, who form its active and indispensable agents. If conducive to the just interests of both these parties, it can scarcely fail of success.

In the first place, a sufficient contribution should be raised amongst honorary donors and subscribers to pay for the outfit of the dispensary. This sum would vary with the probable number of patients. An adequate annual subscription from honorary subscribers should also be calculated upon, to meet all the expenses of the establishment above the cost of medicine and the payment for medical attendance. This annual sum required would of course also vary with circumstances, but would be less than in an eleemosynary dispensary, on account of the cost of medicines being chiefly defrayed from the payments of the free members.

The free members' weekly payments should be as small as possible, to prevent the exclusion of any poor person above the actual position of a pauper. A penny a week from all adults, and half that amount for each child under the age of remunerative labour, allowing all beyond a certain number of children to be admitted free of payment, are generally found sufficient.

From the sum thus raised from these benefiting members, a certain proportion should be deducted towards, but not more than sufficient to defray, the cost of medicine. The rest should be divided amongst the acting medical officers. The patient thus has the satisfaction of paying for his medicine and medical attendance; and the medical officers are exempted from any direct interest in the quantity or quality of the medicines which they prescribe.

On the admission of a member, and periodically afterwards, he should have the choice of enrolling himself as a patient of the medical officer he may wish to attend him when required; and the payments to the medical officers should be in proportion to the numbers enrolled on their respective lists.

The number of the medical attendants of a provident dispensary should be proportionate to the number of members. One medical officer to every thousand members would probably be a desirable proportion; and, to prevent unfair monopoly in the district of the institution, the appointment of the medical officers should be periodically re-

newed, and reappointments should not take place if there were other eligible and desirable candidates. Periods of five years, as adopted in the Provident Dispensary at Leamington, would probably be found expedient. To protect the interests of the dispensary and the profession from the admission of ineligible free members, it is important that the medical officers should be *ex-officio* members of the Committee.

I have a very strong conviction that it is an indispensable element of success in these institutions, that their control and government should be in the hands of the honorary subscribers. I should be extremely sorry to see provident dispensaries lapse into the form and state of sick clubs, with a spirit of antagonism between the medical officers and their managing patients, and power in the hands of the latter of advertising for medical attendants on the lowest terms; and also with the power of admitting amongst the benefiting members and patients a wealthier class, whose admission might be desirable for the club, but very adverse to the just interests of the profession.

I have seen, with much regret, that my friends at Coventry, on the fortieth anniversary of their Dispensary, as the first material alteration of their original laws, have decided to admit every adult free member to equal rights of government in the Institution with the honorary subscribers. Thus, as the honorary subscribers are not more than forty, whilst the free members amount to several thousands, they have obviously placed the property and government of the Dispensary in the power of the benefited members. They have also, but perhaps unintentionally, adopted the advanced form of government by universal suffrage, with female franchise and vote by ballot. I have great confidence in the governors and free members of the Coventry Dispensary; and as the Committee is fairly formed, I have great hope that the Institution may not suffer from this dangerous experiment, and be left, as suggested by some of the advocates of this change in the plan of provident dispensaries, to the entire support and management of the poor members.

It is surely most important, in the effort now so widely making to extend the system of these dispensaries, not to lose sight of the leading principles and conditions upon which they have been successfully conducted for nearly forty years. It is certainly desirable to see the intelligent and well-conducted of the working classes actively assist in promoting all social measures for their own benefit; but it should be remembered that the object of these dispensaries is not to aid the skilled artisan and higher class of workmen, receiving rewards of their labour adequate to the supply of all their own wants, but to meet a great necessity of a poorer class, some of them, perhaps, on the verge of pauperism, and to prevent their sinking still lower in the scale of poverty. Surely it is not desirable or judicious to leave the support of institutions for such objects to the hard-working poor themselves. Is it not rather a duty, and for the welfare of all classes, that the more affluent should apply a portion of their means, their time, their cultivated intelligence, and their trained and judicious benevolence, to objects of this kind in aid of their poorer neighbours?

I cannot conclude these very incomplete observations on the important effects which would accrue from the general adoption of provident dispensaries without alluding to the advantages which they might supply in the present mode of medical education. We hear continually, not only amongst intelligent and experienced members of the profession, but amongst medical students as well, very general complaints that the annihilation of apprenticeships has deprived the student of the present day of the opportunities which his predecessor enjoyed of acquiring the tact and practical aptitude so necessary in the practice of the profession. I know of no public means which could be so easily and well adapted to this purpose as a dispensary or out-patient department of a hospital conducted on this system, under the direction of skilled medical officers. The advanced student would thus be introduced to the observation and treatment of disease in the way he would have to meet it in after practice; and, from the permanent association of the patient with the institution, he would see every variety of disease at its commencement, throughout its whole course, to its termination, and under any sequelæ or recurrence of the malady which had been brought under his notice. Nor would the medical officers find this kind of attendance troublesome and oppressive. The poor patient who has had the forethought and prudence to provide himself with medical advice is generally grateful for the benefits he receives, and thoughtful for those who confer them.

Since my thirteen years passed at Coventry, I have lived under brighter skies, and in a more picturesque part of my own country; but I still look back to the hours thus employed, not only as the most useful, but as amongst the most agreeable of my life.*

* For further details and information, apply to Mr. Fairlie Clarke, Secretary to the Medical Subcommittee of the "Charity Organisation Society"; and consult the pamphlets of Mr. Becke, Northampton, and Dr. Ford Anderson, Hampstead.

AN ANALYSIS OF STATISTICS OF LATERAL LITHOTOMY.*

By the late WILLIAM KEITH, M.D., M.R.C.S.E.,
Senior Surgeon to the Royal Infirmary, Aberdeen;
Lecturer on Clinical Surgery; etc.

[BETWEEN the time when Dr. Keith published his previous paper on this subject and his death, he operated on *thirteen* additional cases by lithotomy, thus raising the total number to 221. Of these last 13 cases, *two* died, making the total number of deaths 45, or a total mortality of 1 in 4.91 or 20.36 per cent.

The principal details of the last thirteen cases may be given, in order to complete the former detailed statistical account.

Case 209, aged 4½ years; weight of stone, 3½ drachms; dismissed cured 29 days after operation.

Case 210, aged 59 years; weight of stone, 7 drachms; dismissed cured 51 days after operation.

Case 211, aged 64 years; weight of stone, 5 drachms; dismissed cured 73 days after operation.

Case 212, aged 8 years; weight of stone, 4 drachms; dismissed cured 26 days after operation.

Case 213, aged 53 years; weight of stone, 3¼ drachms; dismissed cured 51 days after operation.

Case 214, aged 63 years; weight of stone, 1¾ ounces; dismissed cured 36 days after operation.

Case 215, aged 65 years; weight of stone, 1 ounce 4½ drachms; dismissed cured 35 days after operation.

Case 216, aged 67 years; weight of stone, 1 ounce; died 11 days after operation.

Case 217, aged 51 years; 5 stones: gross weight, 1 ounce 7 drachms; dismissed cured 27 days after operation.

Case 218, aged 55 years; 2 stones: gross weight, 1 ounce 4½ drachms; dismissed cured 31 days after operation.

Case 219, aged 78 years; weight of stone, (?); died 2 days after operation.

Case 220, aged 63 years; weight of stone, (?); dismissed cured 26 days after operation.

Case 221, aged 70 years; weight of stone, (?); dismissed cured.

The following account of the fatal cases was drawn up and revised by Dr. Keith a considerable time previous to his death, and is given in the state in which it was left by him.]

Notes of Cases of Lithotomy in which Death followed.

As we and others often derive most instruction from our failures, I shall, therefore, briefly give the leading points connected with the fatal cases in my lithotomy experience.

CASE V.—Alexander Allan, aged 74, a farmer, was admitted into the Aberdeen Infirmary on October 24th, 1839, suffering from the usual symptoms of stone in the bladder. A calculus having been detected after he had been in the house for a time, he was operated on, November 20th, and a stone, weighing 1 ounce 3 drachms, and measuring 2 inches by 1 inch by 1½ inches, was removed. He continued quite well, with a pulse not above 80, and urine flowing freely, till late on the evening of the 22nd, when he got out of bed and sat up for two hours. In dancing to show how well he was, the tube escaped from the wound, and the night-nurse, in trying to introduce it, inflicted such injury that fatal inflammation resulted, and he died on the 23rd, three days after the operation. *Post mortem* examination revealed the fact that the nurse had thrust the tube up between the pubes and bladder, allowing urinary infiltration into the abdomen; the man dying from extensive peritonitis, the evidence of which was manifest throughout the abdomen.

CASE XIV.—William Kennedy, aged 4, was admitted on the 8th February, 1842, and operated on the 5th March, when a stone, weighing 1 ounce 1½ drachms, and measuring 1½ inches by 1 inch by 1½ inches, was removed, as was also a second small calculus. He went on well enough till the evening of the 6th, when he complained of pain in his belly. Six leeches were applied over the region of the bladder; and the night-nurse stupidly encouraged the bleeding all night by hot poultices, so that he lost a great quantity of blood. He never rallied from

* We have to acknowledge our indebtedness to Dr. Angus Fraser, of Aberdeen, for the details of Dr. Keith's practice which have previously appeared in the pages of the JOURNAL, and also for the additional particulars which we commence this week. Dr. Fraser collected and arranged the notes of the cases at a time when Dr. Keith's failing health rendered such a task too irksome for his usually energetic mind. Dr. Keith was, however, able to revise part at least of the valuable experiences which we now publish.

the exhaustion thus produced, and died at 8 P.M. on the evening of the 8th March.

CASE XVII.—George Davidson, aged 69, a farmer, came under treatment on the 10th April, 1842, and was operated on the 16th April. The stone weighed 2 ounces $3\frac{1}{2}$ drachms, and measured $2\frac{3}{8}$ inches by $1\frac{1}{4}$ inches by $1\frac{1}{8}$ inches. The operation was performed at his own home, forty miles distant from town, and an assistant remained with him until the morning of the third day after the operation. When he left the urine was clear and copious; the pulse 78, natural; the tongue clean and moist; in short, to all appearance the patient was out of danger. A surgeon in the neighbourhood took charge of the case then, and what happened subsequently has never been ascertained, except that a bottle of brandy was emptied by the patient on the third night, and that he died on the 20th April.

CASE XXVI.—Alexander Cavendish, aged 72, weaver, was admitted 29th June, 1843, and operated on on the 15th July, when a stone, weighing 3 ounces 7 drachms, and measuring $2\frac{3}{8}$ inches by $1\frac{1}{2}$ inches by $1\frac{3}{8}$ inches, was removed. He went on tolerably well for some time, the wound very nearly healed, and he was able to be out in the garden. He had, however, been long subject to dyspepsia; the irritation of the stone had reduced his strength much; and, in spite of every care and treatment, it was found impossible to rally his strength. The stomach became very irritable, and he died of exhaustion on the 6th September, fifty-three days after the operation. The body, examined ten hours after death, was very emaciated. There was not the least trace of inflammatory action about the belly or pelvis. The kidneys were both studded with vesicles, like hydatids, and were granular. The viscera and chest were healthy. The head was not examined.

CASE XXIX.—John Abel, aged 77, farmer, was admitted on the 31st August, 1843, suffering from stone in the bladder, and was operated on at noon on the 16th September, when a stone, weighing $3\frac{1}{2}$ ounces, and measuring $2\frac{3}{8}$ inches by $1\frac{3}{8}$ inches by $1\frac{1}{2}$ inches, was removed. The depth of the perinæum, and the unyielding state of the bladder, coupled with the size of the stone, made the operation (nineteen minutes and a half) both tedious and severe. The soft parts were considerably bruised; and a constant oozing from the surface of the wound required the tube to be enveloped in lint, and then twisted into the wound and bladder. About half-an-hour after the operation he fell rather suddenly into a state of collapse; brandy was administered, and he recovered in some degree, but the skin remained cold, the pulse feeble, and he continued in a low and drowsy state till 6 P.M. At 3 o'clock, he expressed a desire to pass urine; a catheter was therefore introduced by the urethra, and a quantity of warm water injected through it into the bladder escaped readily, untinged by blood, through the flexible tube in the wound. By 7 P.M. the pulse had become firm; the skin was still cold, and he was disposed to sleep. Arrowroot and brandy were administered. On September 17th, at 7 A.M., reaction was completely established. The heat of the body was perfect; the pulse firm. Urine had begun to flow clear, but in no great quantity. The skin was warm and moist; tongue dry; pulse 100, full. The belly was rather tense and tender. He was ordered warm diluents and poultices to the abdomen. During the day he became somewhat confused, and the belly became more tumid; he became very restless; his breathing became oppressed; and, after vomiting a dark-coloured fluid, he expired at 2 A.M. on the morning of the 18th. On a *post mortem* examination, the omentum was found adhering to the parietes by recently effused lymph; there was some bloody effusion behind the symphysis pubis; the small intestine, and also the sigmoid flexure, were of a deep crimson colour. There was bloody effusion round the whole of the bladder, especially at its neck; and the coats of the bladder were much thickened and indurated. The ureters were widely dilated, and the kidneys much disorganised.

CASE XXXII.—David Imray, aged 68, a farmer, was admitted into the Infirmary on the 14th December, 1843, and was operated on on the 17th February, 1844. The stone removed weighed 3 ounces 6 drachms, and measured $2\frac{1}{2}$ inches by $1\frac{1}{8}$ inches by $1\frac{1}{8}$ inches. About thirty-six hours after the operation he became somewhat confused, but this confusion disappeared in the course of a few hours; it however returned again several times without any other very marked symptoms, till twelve days after the operation, when the bowels became loose; and, though this looseness was restrained by remedies, he gradually became weaker, and died on the morning of the 6th March, eighteen days after the operation. A *post mortem* examination was refused.

CASE XXXIX.—Robert Johnson, aged 74, a farmer, was admitted on the 16th April, 1844, and was operated on the 20th April. The stone removed weighed 13 drachms, and measured $1\frac{1}{8}$ inches by 1 inch by $1\frac{1}{2}$ inches. The night after the operation he complained much of flatulence and pain over the right kidney, both which symptoms were relieved by hot cataplasms. The following night he slept well, but the tongue became dry, and he was very weak; and, notwithstanding the

free administration of nourishment and stimulants, he gradually sank, and expired at half past 4 on the afternoon of the 23rd April. No *post mortem* examination was allowed.

CASE XLII.—Alexander Duncan, aged 63, a shoemaker, was admitted on the 28th May, 1844. On the 26th June, a stone, weighing $2\frac{1}{2}$ ounces, and measuring $2\frac{1}{8}$ inches by $1\frac{1}{8}$ inches by $1\frac{1}{8}$ inches, was removed. He went on well till the morning of the 29th, when the urine not coming by the wound, a catheter was introduced, and twelve ounces of urine were drawn off *per urethram*. He could not bear the presence of the catheter, which was left in, and it had to be removed in the evening, the urine then coming in occasional gushes by the wound. The urine became scanty, he gradually grew weaker, and died on the 3rd July, seven days after the operation. No *post mortem* examination was allowed.

CASE XLVI.—Adam Florence, aged 67, farmer, was admitted into hospital on the 27th March, 1845. He was a pale, weakly looking man, with a wasted worn-out body, a large scrotal hernia on the right side, and a dislocated patella on the same side. Animal food and wine improved him somewhat, and he was operated on the 19th April. The stone removed weighed 1 ounce 2 drachms, and measured $1\frac{1}{8}$ inches by $\frac{7}{8}$ inch by $1\frac{1}{8}$ inches. He gradually became weaker, and expired on the 6th May without any other apparent cause than sheer feebleness of constitution. On examining the body, the contents of the abdomen were found quite healthy; the intestines were contracted to a small calibre throughout; the bladder was quite contracted and dark on its inner surface, with phosphate of lime in specks over it; the external wound was grey, soft, and ununited, no action having ever actively begun in it; the surface was coated with phosphate of lime; the kidneys were enlarged and diseased.

CASE LVI.—Thomas Imbree, aged 67, was operated on the 23rd August, 1845, when a stone, weighing 5 ounces, and measuring $2\frac{1}{2}$ inches by $1\frac{1}{2}$ inches by $2\frac{1}{4}$ inches, was removed. He died on the 15th September of sheer debility. No *post mortem* examination was allowed.

CASE LXIII.—Peter Emslie, aged 65, farmer, was admitted on the 18th November, 1845, and was operated on the 22nd of the same month. The stone weighed 1 ounce 6 drachms, and measured 2 inches by $1\frac{1}{4}$ inches by $1\frac{1}{8}$ inches. The transverse perineal artery was of great size, and required a ligature. On the sixth day after the operation, when all danger seemed past, the nurse, on washing him, rudely detached the ligature, and, before she observed the occurrence, he had lost so much blood that he never rallied, and died on the 28th, twenty-three hours after the accident. No *post mortem* examination was allowed. A great mistake was made in not cutting both ends of the ligature short.

CASE LVIII.—George Peter, aged 78, a salmon-carter, was admitted on the 28th February, 1846, and was operated on the 25th March. There were three stones, weighing $7\frac{1}{2}$ drachms, and the largest measuring $1\frac{3}{8}$ inches by $\frac{1}{2}$ inch by 1 inch. He went on well enough till the evening of the 27th, when there was slight tenderness on pressure over the belly, and the urine was not flowing so freely as before. Leeches were applied to the abdomen, but the pain became worse, the urine very scanty, the pulse feeble and frequent, and the breathing oppressed. He died at 9.30 A.M. on the 29th. On examining the body, the viscera of the abdomen were found very generally inflamed, the intestines glued together by recent lymph, patches of pus visible under the peritoneum, covering the rectum and sigmoid flexure. The kidneys were red, and partly in a state of fatty degeneration; there was no urine in the pelvis of the kidneys, ureters, or bladder. The bladder was thickened, but healthy to appearance; the wound in the prostate was of the usual limited size. On the right psoas muscle some bloody infiltration was noticed. There was no serous effusion whatever in the abdomen.

CASE LXI.—W. Finlay, aged 60, a farmer, was admitted on the 19th May, 1846, and was operated on the 27th June following. Two calculi were removed, weighing an ounce, and each measuring 1 inch by $\frac{3}{8}$ inch by $\frac{7}{8}$ inch. He went on well till the evening of the 9th July, when he became somewhat confused, his skin hot, pulse full and bounding, and 120; his breathing was hurried; there was no tenderness of the belly; the only appearance of local action was slight general fulness of the left leg and foot. He was bled to 30 ounces, and had 3 grains of calomel every two hours. On the 10th he was nowise improved; the breathing became more and more oppressed; and he died at $7\frac{1}{2}$ P.M. On inspecting the body, the contents of the abdomen and pelvis were found perfectly healthy; the brain was congested, and there was large serous effusion between the membranes in both lateral ventricles and in the vertebral canal. The membrane lining the anterior surface of the left ventricle and auricle of the heart, and along the aorta, showed evidence of recent inflammation. It was afterwards discovered that he

had got eight ounces of port wine surreptitiously, and drunk it the night before the commencement of the unfavourable symptoms.

CASE LXVII.—John M'Intyre, aged 63, a pensioner, was admitted on February 17th, 1847; and on April 17th, a stone, weighing 2 ounces, and measuring $2\frac{3}{8}$ inches by $1\frac{3}{8}$ inches by $1\frac{7}{8}$ inches, was removed. He went on for a few days very well; but after that time a troublesome cough came on, the result of chronic pulmonary disease, and he gradually became weaker, and died on the morning of May 14th. At the *post mortem* examination, the viscera of the belly and pelvis were found quite healthy. The right pleural cavity contained a large quantity of purulent effusion, and numerous vomicae were found in both lungs.

CASE LXX.—Isaac Routledge, manufacturer, aged 73, came under treatment on May 22nd, 1847, and was operated on June 5th. Five calculi, weighing $1\frac{1}{2}$ ounces, and the largest measuring $1\frac{3}{8}$ inches by $\frac{3}{4}$ inch by $1\frac{1}{8}$ inches, were removed. He died exhausted on June 28th from no very evident cause, the powers of life gradually failing under despondency. No *post mortem* examination was allowed.

CASE LXXI.—Alexander Davidson, aged 52, farmer, was admitted on October 9th, 1847, and on the 30th was operated on, when a stone, weighing $6\frac{1}{2}$ drachms, and measuring $1\frac{3}{4}$ inches by $\frac{3}{4}$ inch by $1\frac{1}{2}$ inches, was removed. A pendulous polypous tumour was felt within the neck of the bladder, and on withdrawing the stone the excrescence came away in the angle of the blades. For some time after the operation the urine was bloody and mixed with coagula. In the evening the tube was removed, and, after being enveloped in lint soaked with tincture of matico, was reintroduced. On the morning of the 31st, the urine was more clear and copious; the wine which he had been getting during the night was continued; in the evening the pulse was 100, as it had been since the operation; the urine was less copious, and the belly somewhat tumid. He passed a restless night, became confused, his pulse rose in frequency and became more feeble, and he died at 11 A.M. on November 1st. No *post mortem* examination was allowed.

CASE LXXIII.—John Topp, aged 63, crofter, was admitted on December 15th, 1847, and operated on December 25th, when two stones, weighing $3\frac{1}{4}$ ounces, were removed. The larger measured $2\frac{3}{8}$ inches by $1\frac{1}{4}$ inches by $1\frac{1}{8}$ inches. He went on well for twenty-four hours, but after that the urine became less and less in quantity, the pulse quick and weak, and the tongue dry, and he died on the 27th at half-past seven in the evening. At the *post mortem* examination there was not the least trace of inflammatory action in the abdomen or pelvis. The right kidney had numerous cysts on its surface, and Bright's disease had made some progress throughout the gland; the left kidney was atrophied, with the pelvis remaining like a bladder.

CASE LXXVI.—Peter Pirie, aged 45, farmer, was admitted on March 10th, 1848, and was operated on April 15th. The stone weighed 3 drachms, and measured $1\frac{1}{2}$ inches by $\frac{5}{8}$ inch by 1 inch. He went on very well, and the wound had entirely closed; when he was attacked by erysipelas of the head and neck, then prevalent in the hospital, and died on April 29th.

CASE LXXVIII.—William Ross, aged 67, weaver, was admitted on August 22nd, 1848, and operated on September 2nd. Two stones, weighing 2 ounces 6 drachms, were removed, the larger measuring $1\frac{7}{8}$ inches by 1 inch by $1\frac{3}{8}$ inches. He went on tolerably well for ten days; the only unfavourable feature being a dry and a loaded tongue; after that time he began to get weak, became restless and confused, the pulse became feeble, and he died on the evening of the 18th. After death, the general aspect of the intestines was healthy; one kidney was much enlarged and diseased, and the ureter equal in diameter to a thumb; the other kidney was absorbed, its pelvis, like a bladder, only remaining. The left side of the pelvis contained a large quantity of thick pus. The prostate was much enlarged. The bladder was thick and rugous.

CASE XCIII.—James Abercrombie, aged 70, farmer, came under treatment on December 14th, 1850, and was operated on January 3rd, 1851. The stone weighed 5 ounces, and measured $2\frac{1}{2}$ inches by $1\frac{1}{2}$ inches by $2\frac{3}{8}$ inches. The third lobe of the prostate came away before the stone; it weighed 9 drachms. Bilateral section of the prostate was required to let the stone out. Purulent phlebitis in the posterior tibial vein and in the deep veins of the left leg came on, and he died on January 13th. Pus was also found in the external iliac vein. He was operated on under the influence of chloroform; his wrists and ankles were secured by broad tapes during the operation; he struggled so violently in the course of the operation that phlebitis resulted in the saphena minor vein, running up as far as the common iliac, and was the cause of death.

CASE XCIV.—James Thom, aged 71, farmer, was admitted on January 5th, 1851, and was operated on the 25th of the same month. The stone weighed 3 drachms, and measured $1\frac{1}{4}$ inches by $\frac{3}{4}$ inch by 1 inch. The urethra was torn previously to the operation by the assistant, in an

unsuccessful attempt to introduce the staff, followed by such hæmorrhage as to lead to the belief that the artery of the bulb had been torn. Great infiltration of blood took place into the penis and scrotum, and sphacelus of the latter speedily followed, under which he sank. Dissection showed the laceration in the bulb nearly an inch in front of the urethral incision for lithotomy.

[To be continued.]

CUTANEOUS NEUROSIS.

By STANLEY HAYNES, M.D., Malvern Link, Worcestershire.

S. M., a strong, active, healthy, and intelligent girl of four years, complained on Tuesday, May 2nd, about midday, of feeling ill, but seemed so well that her mother, a kind and anxious parent, thought she was pretending. The child was unusually quiet, lay down all the remainder of the day, and was without appetite. No shivering was noticed. The following morning, instead of waking and getting up at six as usual, she slept soundly and uninterruptedly until twelve, when she appeared poorly, and was as on the previous day. In the evening, the child was lame and in pain; and her left great toe was found cold, blue, and swollen. On the 4th, I found the left foot and ankle blue, cold, swollen, and painful. The posterior tibial and dorsal arteries pulsated naturally, and no obstruction to the venous circulation was noticeable. The left hand was somewhat swollen, and there was some lividity about the finger-nails. This hand and the lower half of the forearm, and the right foot and ankle, had been in similar conditions to those in which the left foot was at the time of my visit; and all three had been very painful. The eyelids on both sides were rather and equally oedematous; and the face was swollen; the lids had been affected in the same manner as the other parts. Neither the right hand or arm nor the ears had been involved. The feet had been bathed in hot water with mustard. I directed the limbs to be wrapped in cotton wadding, and prescribed a mixture with aromatic spirit of ammonia and spirit of chloroform. The child had seen a funeral on the 2nd, but did not appear to have been frightened in any way. She was as intelligent as usual; seemed quite free from vertigo and nausea and any evidences of ergotism; her expression was rather anxious; she had taken little food; and the bowels had acted in the morning. The state of the urine had not been observed. The cardiac sounds were normal; the pulse 82. At bedtime, after some slight reaction—local pain and redness, but no sweating—the various parts had resumed their natural appearances.

The child continued well until the following morning (May 5th) at eight, when both feet became affected as before, continuing so until late at night. The patient was very poorly all day; had anorexia and thirst; her face (only) perspired copiously; and her pulse in the evening was 140. The urine was non-albuminous, loaded with magnesian phosphates.

In May 1870, a playmate thrust a piece of velvet into the child's left nostril. Her mother attempted to remove it, but pushed it beyond reach and sight. Soon afterwards, some foetid discharge came away; and, at various times during the summer, threads were expelled; none were noticed for some months; but the ozæna continued, and became so bad that the child could not be received at school. A month ago, I chloroformed the patient (as she was much frightened by any attempt to examine her nose), and endeavoured—in vain—to find and wash out any remains of the velvet. The discharge (for which a solution of carbolic acid had been used for three months) continued as before until this illness. On May 5th, there was not any discharge or bad odour. On the 6th, the child seemed pretty well; there was not any unnatural appearance, and the ozæna returned in the afternoon. The 7th passed without anything abnormal, and it was hoped the child had recovered; but on the 8th the left foot again became affected as before, the condition extending into the calf, and ending gradually. The ozæna continued. Both feet were very much attacked on the 9th. The little patient was as ill as on the 5th, with profuse sweating of the forehead; and the ozæna was arrested. An ounce of the following mixture was now given four times daily.

R Potassæ chloratis, gr. xxv; tinct. ferri perchlor., spir. chloroform., ana ℥lxxx; syrapi simpl. ʒij; aquæ dest. ad ʒviij. The feet were kept in cotton-wadding, and in the evening were restored to their natural condition. On the following day (10th), the only abnormal state was coldness and some lividity of the posterior aspect of the lower half of the right arm; this lasted two or three hours during the middle of the day. Between ten and eleven in the morning of the 11th, both feet became much affected and very painful, with sharply defined straight lines of demarcation, until about 3 P.M., when they resumed

their natural appearance in about an hour. The patient appeared well until the succeeding evening (12th), when the left hand was attacked up to the carpo-metacarpal articulations, corresponding with which was a distinct boundary line. On the 13th, the right hand was slightly affected in the morning. In the middle of the day, the wrist also was very much involved, and was bounded from the arm by a distinct line. The parts were almost quite restored in the evening. The ozæna was profuse. When the child was undressed on the 14th, her parents observed a dark yellow coloration, extending the entire length of the spine, about an inch in breadth. During that day, the only other symptom noticed was, that the left elbow was decidedly colder than the right. On the 15th and 17th, the child was quite free from all abnormalities excepting the ozæna.

These attacks came on suddenly, the various parts affected having been seen to change from their natural condition to blue-black lividity, œdema, coldness, and hyperæsthesia, in the course of a few minutes—in some instances, five minutes sufficing for the alteration. The recoveries were less rapid, but sometimes occupied some minutes only; at others, about an hour. They occurred at various periods of the day, and appeared to be irrespective of reception of food and various external conditions—of warmth or cold, wet or dry days, or of mental emotions. Throughout, the child had similar food to the other children of the family, and was the only one affected, and had never before ailed in a similar manner. Her father is a healthy, strong agricultural labourer; her mother is a robust and vigorous, but faint-hearted woman. Between the attacks, the patient ran about and played as usual. Sometimes while playing, at others while in bed or sitting still, she complained of pain; and then some part was found to be becoming affected. While the neurosis remained, the child was in pain, wanted to lie undisturbed, and had anorexia. The attacks sometimes lasted all day, and sometimes passed off quickly; they ceased more rapidly during the last days than when the neurosis began.

It will be observed that the left side was most affected; that the discharge from the nostril of the same side (to which it is limited) was suppressed when the symptoms first appeared; and that, when the ozæna returned on the 6th, the pseudo-gangrenous appearances ceased, but only for a time: they recurred occasionally, although the ozæna continued; so that the nasal discharge and the symptoms did not appear, as at first, to exist in any relation to each other.

There has not yet been any perceptible desquamation; nor is any expected, as the skin of the various parts has throughout been soft and pliable. During the recurrences of the neurosis, the weather has been, for May, unusually cold.

In Dr. C. Handfield Jones's work on *Functional Nervous Disorders* (at p. 472 *et seq.*) are some remarks on, and cases of, somewhat analogous attacks to that now adduced.

Since the above was written the ozæna had ceased. One day in June the child expelled a fetid mass (which probably contained the remains of the velvet), and its nose has been quite free since then.

SANTONIN AS A PARASITICIDE.

By DAVID PAGE, M.B. Edin., Kirkby Lonsdale, Westmorland.

SOME time ago, the efficacy of santonin in destroying intestinal parasites, and the peculiarity of its effects on the system, now and again observed, received a passing notice in the pages of the JOURNAL. I wish on this occasion to add a remark or two in the same direction, furnished by cases lately under my observation.

In the first of these, a healthy-looking girl, aged 12, was brought to me, suffering from loss of appetite, toothache, white-furred tongue, and symptoms generally indicating an irritable state of the *primæ viæ*. Her mother told me that, for some weeks, the navel had been the seat of great pain and uneasiness, and there were now much redness and tenderness to touch. The failure of domestic medicine had alarmed the frugal housewife, and induced her to seek a remedy elsewhere. I suspected, from the above symptoms, that the *ascaris lumbricoides* was lurking within the small intestines, and so gave her five-grain doses of santonin, to be taken at bedtime, followed next morning by eight grains of the compound scammony powder, to be taken early before breakfast. This treatment was to be repeated for three successive nights; but, on the morning after the second dose, I was informed that two round worms had come away by stool. One of them, which had been kept for my inspection, I found to measure fourteen inches in length. A week later, I repeated the medicine, but without any result, and the girl had already recovered her former good spirits and appetite. In spite of the large quantity of santonin administered, there was no disturbance of the eyesight or other function.

In the second case, I was consulted a fortnight ago by a country gentleman, about his youngest son, a bright little boy, aged 5, but whose health began to cause the parents much anxiety. I found him showing all the signs of a general derangement of the gastro-intestinal tract, characterised by a very capricious and fastidious appetite, and a pale tongue, with enlarged papillæ, and a slimy yellow coat along the dorsum. His bowels, too, were sluggish, and his sleep was often disturbed by waking and cries. Though, certainly, here the primary condition was a catarrhal state of the *primæ viæ*, I considered that, if the irritable symptoms depended upon parasites finding a comfortable and luxurious habitat in the excessive mucus adherent to the intestinal walls, the most prudent step would be their removal before proceeding to a tonic treatment proper to the catarrh. Santonin was therefore given as in the foregoing instance, and syrup of senna substituted for scammony, as less likely to irritate the bowels. Perhaps the old-fashioned compound decoction of aloes might have been preferable to either, seeing that the aloetic drug exerts a special stimulant and bracing action upon the small intestine, helping it to shake off the viscid mucus and allowing free osmosis to the fluids of the choked-up glands. At any rate, the immediate effect of the treatment was to dislodge a whole colony of the oxyuris or threadworm with masses of jelly-like mucus. After the first dose, much alarm was excited when it was discovered that my little patient had involuntarily passed during sleep a large quantity of urine, which stained the bed-linen bright yellow. This, I had to explain, was one of the occasional effects of santonin. The eyesight, however, was not affected. I see in Ringer's *Handbook of Therapeutics*, that santonin is recommended as a remedy for the nocturnal incontinence of urine in children.

CLINICAL MEMORANDA.

INTERMITTENT HÆMATURIA OF MORE THAN TWENTY YEARS' DURATION IN AN AGED WOMAN.

MRS. B. of Plymouth, aged 75, of a nervous and rather sanguine temperament, ceased to menstruate at 49; and from that time to the present, a period of twenty-six years, has been subject to attacks of intermittent hæmaturia, coming on at irregular intervals, without pain, and continuing for some months at a time, in spite of continued rest in the horizontal position; the constant use of iron, lead, gallic acid, and iced lemonade, being frequently administered as a drink when thirsty. The pulse is natural, the tongue clean, the countenance rather anæmic. She complains of debility. The urine is normal in quantity, but deeply coloured with blood, which becomes deposited in a thick grumous layer at the bottom of the utensil on the urine becoming cold. No more albumen is obtainable than may be accounted for by the presence of the blood in the urine, which is of specific gravity 1015. No premonitory symptoms have characterised these attacks, such as pain, or a sense of weight at the loins, etc. The appearance of the blood has been more venous than arterial. The question naturally arises, What is the peculiar pathological condition in this extraordinary case? Has it been simply arising from periodic passive congestion of the kidneys, or has it been parasitical? Calculi, I think, may be excluded, from the total absence of pain. If not parasitical, I am inclined to regard it as a salutary effort of nature to prevent venous congestion of the system arising from the suppression of an accustomed discharge of blood.

J. N. STEVENS, M.R.C.S.E.

Princess Square, Plymouth, July 31st, 1871.

EFFECTS OF THE VAPOUR OF AMMONIA IN THE TREATMENT OF WHOOPING-COUGH.

IN consequence of the benefits which patients have received by the inhalation of the atmosphere containing sulphuret of ammonia in the purifying-room of the gas-houses in whooping-cough, when the disease is in its last stage (that is, after the third week), I conceived the idea that ammonia might be more potently administered in the form of moist vapour by means of my "brick bath", an account of which I published in the BRITISH MEDICAL JOURNAL for August 20th, 1864. Accordingly, in cases which I have had recently, I had one ounce of the strongest liquid ammonia put into a gallon of boiling water in an open pan, and the steam kept up by means of half a brick made red-hot throughout and put into the boiling water containing the ammonia, and placed the pan in the centre of a room, into which I had the patients brought as the ammoniated steam was passing off. This method was used in the evening, just before bedtime; and it has been so efficacious in abating the spasmodic attack, and after three or four

days terminating the malady, that I cannot over-estimate the great value of this mode of inhaling the ammonia as a therapeutic agent in tranquillising the nervous system in whooping-cough.

JOHN GRANTHAM, F.R.C.S.(Hon.).

Crayford, August 24th, 1871.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE NOSOLOGY AND TREATMENT OF DIARRHŒA, CHOLERINE, AND ASIATIC CHOLERA.

IN view of the approach of Asiatic cholera, and of the prevalence at this season of ordinary forms of autumnal diarrhœa, it has seemed to us opportune to lay before the profession notes of the opinions and practice of Metropolitan Hospital Physicians on the nosology and treatment of autumnal diarrhœa, English cholera and cholerine, and Asiatic cholera. The particular points as to which it seemed desirable to ascertain the views of hospital physicians, related to the symptoms, if any, which establish the nosological distinctiveness of these diseases, and the treatment which each physician favours. The following notes represent some of the first results of our inquiry; and we hope to receive further communications from those physicians in town and country who have not yet furnished us with their views, or to whom we have not been able to address individual communications.

KING'S COLLEGE HOSPITAL.

DR. GEORGE JOHNSON is of opinion that, apart from the history of an epidemic, there are no signs by which autumnal diarrhœa, English cholera, and Asiatic cholera, can with certainty be distinguished from each other. Every summer and autumn there occur sporadic cases of English cholera with collapse and rapid death, which during an epidemic of Asiatic cholera would be indistinguishable from the latter disease. On the other hand, during a cholera epidemic there occur many cases of diarrhœa which are cases of Asiatic cholera in a mild form, yet not to be distinguished by any positive symptoms from ordinary cases of autumnal diarrhœa or English cholera. With regard to treatment, Dr. Johnson attaches more importance to abstinence from the administration of opium in the early stages of diarrhœa than to any positive remedial measures. He maintains that, by the early and indiscriminate use of opium even in small doses, either the diarrhœa is prolonged, or its abrupt arrest is followed by painful distension of the bowels, by fever, and sometimes by collapse. He believes that rest and diluents (cold water) will suffice for the cure of most curable cases of choleraic disease; but he gives evacuates when diarrhœa is attended with pain, when the discharges are offensive, and when palpation and percussion of the abdomen show that the bowels are distended by morbid secretions. This rule of practice he applies both to the diarrhœa and to the collapse stage; but he considers that the probability of recovery from extreme collapse is scarcely greater than the chance of recovery from embolism or thrombosis of the pulmonary artery. With reference to the use of opiates, Dr. Johnson maintains that the true principle is this: opiates are often useful to soothe irritation after the evacuation of the bowel; they are useless and even dangerous when the blood is poisoned, or the bowel filled with morbid secretions. Opiates in the early stage of choleraic diarrhœa would, he believes, be more frequently and decidedly injurious were it not for the fact that, their absorption being prevented by the active eliminative efforts, they are quickly expelled with the morbid secretions, and they are therefore powerless to arrest the discharges. The administration of opium and alcohol during the stage of collapse has been demonstrated to be an irrational and a deadly practice.

The term English cholera, or choleraic diarrhœa, Dr. KELLY remarks, is in many cases apt to mislead, as it seems to imply that there may be a combination of real Asiatic cholera and the ordinary diarrhœa, which is generally very common in the autumn. By the term Asiatic cholera should be understood a disease depending on a specific morbid poison, which is very liable to be communicated from one person to another, and which is attended with very fatal results in the district in which it occurs. But there is no evidence of any poison in the cases of ordinary autumnal diarrhœa; a main cause seems to be an unduly relaxed condition of the mucous membrane of the alimentary canal in hot weather,

so that any error of diet will readily produce an increased flow from the bowels. In such cases the diarrhœa may be the only symptom, or it may be attended with more or less griping, pain, and sickness; but when, in addition, there are great vomiting, prostration, and cramps in the legs, then the case is termed one of English cholera; nor need such a term be discarded if it be used to signify a severe form of diarrhœa, and not a modified attack of Asiatic cholera. At the present time, for instance, there is no case of true cholera, while diarrhœa, in its mild and severe forms, is very abundant. But, just as in an epidemic of typhoid fever a certain number of persons will seem to have all the symptoms of a very slight or abortive attack of that disease, so when cholera is in our midst there will be cases in which persons are affected in a very slight degree, and diarrhœa is, perhaps, the only symptom. In such cases we are ready to assume either a small dose of the poison or a want of susceptibility on the part of the individual to the effects of the poison; and in this sense it is quite true that diarrhœa and cholera are associated terms, and that the former is a modified form of the latter. But when Asiatic cholera has not appeared on our shores, it is not right to say that an ordinary case of diarrhœa may run on into true cholera, although it may pass on into that severer form which is termed English cholera.

For the treatment of diarrhœa in its milder manifestations, a dose of castor-oil, taken at bed-time, seems to be the best remedy; and this is chiefly the case where some indigestible food has been taken, and where there is griping pain with distension of the abdomen. At the Evelina Hospital for Sick Children, Dr. Kelly has found such treatment most beneficial. It is not needful to persist in giving castor-oil; one dose, so as to relieve the bowel of any peccant material, will usually suffice. It is very useful afterwards to give some aromatic mixture containing rhubarb, soda, and aromatic chalk-powder, flavoured with some essential oil. In children, however, dentition and bad feeding are very rife causes; and then a more careful diet with a simple saline will generally suffice.

In severe cases, where there is much vomiting, iced water or iced milk is very useful; and if there be much pain or cramps in the legs, hot flannels are of much service. Opium and astringents do more harm than good; and it is far better to begin with some mild aperient, and afterwards give some stomachic mixture. It has very often happened that children have come to the Hospital with diarrhœa who have been taking chalk mixture; and the almost invariable account the mothers give is, that at first it seemed to do good, and then sickness and distension came on, and the diarrhœa returned. In such cases, one or two drachms of castor-oil and mucilage will give great relief; or a rhubarb and soda powder may be given at bedtime.

Diarrhœa in children is often caused by the milk turning sour in hot weather; this may be in great part avoided by using the condensed Swiss milk, which keeps very well and is sweet and palatable. Cooked fruit may be eaten, but unripe fruit of all kinds should be avoided when there is any looseness of the bowels. Beer and porter may cause diarrhœa; and this often seems the case with labourers who, after perspiring freely at their work, then drink freely of some inferior or, perhaps, sour beer. In cases of diarrhœa, the food should be very simple, and only a little taken at a time; all fluids should be taken cold, and sucking small pieces of ice slowly is very grateful. As a rule, stimulants should be avoided.

WESTMINSTER HOSPITAL.

DR. FINCHAM believes that a high temperature is the main cause of summer or autumnal diarrhœa. This is injurious to the system in two ways: firstly, it overstimulates the liver, hence the secretion of an undue amount of bile, which acts as a direct irritant upon the stomach and bowels, vomiting and purging being the result. The decomposition by excessive heat of animal and vegetable matters is the second great source of summer diarrhœa. Noxious gases are generated, and, like the atmosphere of the dissecting-room, produce, if absorbed, the symptoms of an irritant poison.

As regards the treatment of such cases, Dr. Fincham knows nothing better, when the patient is seen at the onset of the malady, than the old-fashioned dose of three grains of calomel and half a grain of opium, followed in a couple of hours by the equally old-fashioned rhubarb draught. This may be repeated, if necessary; and afterwards, should the diarrhœa continue, a draught, consisting of bismuth, soda, and a few drops of laudanum, given three or four times a day, is sufficient to complete the cure. Should the patient not be seen until the purgings have lasted, it may be two or three days, he sees no reason to give the purgative, but order the bismuth, etc., at once: to give, however, as is by no means uncommon, astringents at the onset of the attack, is bad practice, and ought to be discontinued.

The so-called English cholera, in which, in addition to vomiting and

purging, cramps of the abdominal and other muscles, with more or less tendency to collapse, are present, is, Dr. Fincham believes, in ordinary seasons only an aggravated form of the ordinary summer diarrhoea. When, however, Asiatic cholera is impending or present, it must often be difficult to decide whether a severe case of apparently English cholera may not be due to the poison of the graver malady. Nor does he know of any symptom which can lead to a decision except the presence, not merely of serous, but of true rice-water, evacuations. These may be looked upon as pathognomonic of genuine Asiatic cholera. If they be not, he does not see how any distinction can be made. With respect to the treatment of English cholera, the first thing to insist upon is, that the patient should at once go to bed and be kept warm by means of hot bottles, etc.; a large linseed poultice, as hot as it can be borne, being at the same time applied to the abdomen and loins: it of course must be frequently changed. Should the purging have already lasted some time, a draught, consisting of half a drachm of chloric ether, with fifteen drops of laudanum, should at once be given, unless there should be much vomiting, in which case a grain of opium in a small pill should be substituted, to be followed by a tablespoonful of brandy in soda-water as soon as the state of the stomach permits. Should the cramps and tendency to collapse appear simultaneously with, or shortly after, the onset of the diarrhoea, the calomel and opium pill should then be given, to be followed either by the rhubarb draught or by a tablespoonful of castor-oil; the application of external heat, especially the poultices, being equally insisted upon. Should the diarrhoea continue, the bismuth and soda draught, with a few drops of laudanum, should be given, as in the case of the less severe form of the malady.

As regards the treatment of Asiatic cholera there can be no question that, when the stage of collapse has set in, all astringent opiates and stimulants are worse than useless. Copious draughts of iced water, a solution of chlorate of potash, in the proportion of two drachms to the half-pint of water, given in two-ounce doses every hour or two, and Liebig's beef-tea, as recently suggested by Dr. Lowndes in a contemporary, are pretty nearly all that can be taken with advantage. During the stage of reaction the same plan may, in the main, be pursued. Hot baths do not seem to be of any use; but Dr. Fincham would be much disposed to recommend the application of hot poultices to the loins, in the hope of sooner restoring the function of the kidneys. As to the debated point whether astringents or evacuants are to be given in the early stage before collapse has set in, he would be disposed to follow the same rule as in the case of English cholera. Should the purging have been of considerable duration, he would give the dose of chloric ether and laudanum, keeping the patient in bed and applying sedulously hot poultices. Should the purging have only lately come on, then the calomel and opium, followed by a dose of castor-oil, would be, he thinks, the appropriate treatment. Iced water can at the same time be used *ad libitum*, and Liebig's beef-tea given as in the stage of collapse.

GUY'S HOSPITAL.

DR. HABERSHON says that attacks of *autumnal diarrhoea* are accompanied with, and are probably dependent upon, hepatic disturbance. The secretion of bile is changed; at first its quantity is diminished, and it is irritating in character, but afterwards the flow is greater than usual. The symptoms of autumnal diarrhoea are nausea, with uneasiness in the abdomen; colic; diarrhoea; the discharges consist of mucus with bile, with or without scybala; the tongue is furred and injected; the pulse is compressible, and there is considerable prostration of strength. Sudden changes of temperature, chill to the surface of the skin, cold drinks, and undigested food, will each induce the disease; and in the latter case, the colic is sometimes very severe.

Since autumnal diarrhoea is essentially connected with intestinal disturbance, the tendency of which is to subside as soon as the cause is removed, we generally find that rest in the recumbent position, warmth to the surface of the abdomen, and bland demulcent diet, as arrowroot, mutton broth, etc., will alone suffice to relieve the disease. The diarrhoea should be checked by aromatic astringents and opiates; and, if the colic be severe, the opium should be used freely. If, however, irritating food or excreta be present in the intestinal tract, it is useless to administer astringents and opiates; and the old remedies of castor-oil and tincture of rhubarb are of greater value. Grey powder or a small dose of calomel with Dover's powder, followed by a warm aperient draught, will effect a similar useful purpose, and will remove these offending matters.

In *English cholera*, there is the same disturbance of the hepatic function, but the symptoms are more sudden in their commencement, and there is greater irritability of the stomach, violent vomiting being present with the purging. The colic is often severe, and there are also cramps in the legs; prostration of strength is more speedily induced, the surface of the body becomes cold and clammy, and the pulse scarcely percep-

tible. There is a close resemblance to Asiatic cholera in the condition just described; but there is not the same lividity of countenance as in malignant cholera, nor does the voice have the same character as in the latter disease, nor does the breath become so decidedly cold. The motions in English cholera may consist of thin watery mucus like the washings of beef; but the rice-water motions of Asiatic cholera are not observed, nor do we find any secondary fever as the prostration disappears.

At the onset of English cholera, the diarrhoea should be checked; opium and astringents may at first be used freely with advantage, and afterwards dilute sulphuric acid with spirit of chloroform. If there be retained excreta, the same means should be used as were mentioned for diarrhoea.

In *Asiatic cholera*, the nervous shock is more severe, and the stage of collapse is more quickly produced. In a few hours, even without diarrhoea, a patient may be in a state of hopeless collapse. Not only does the function of the liver become checked, but that of the whole of the vaso-motor nerves receives a sudden arrest; and there appears to be as much reason to ascribe the disease to the interrupted nerve-function of one part as of another—the heart as much as the lungs, the kidneys as much as the liver.

If there be any *preliminary* diarrhoea, it is a judicious plan to check that diarrhoea; but, in the cold stage of cholera, the vomiting and purging are not relieved by opiates and astringents, and there is greater fear of secondary fever and of coma if those remedies be employed. It is now well established that opiates and stimulants increase the danger of a fatal result in Asiatic cholera; but, where diarrhoea precedes the more severe symptoms, it is a wise plan to check that diarrhoea by every means in our power. At the present day, there is a tendency to run wild upon hypotheses of elimination; and it is one of the great impediments to our progress in scientific medicine when we go beyond and before established facts. Patients recover from Asiatic cholera under treatment the most diverse; calomel treatment and cold water treatment appear to be equally effective; and saline medicines, camphorated stimulants, and castor-oil have statistical returns of nearly equal value. Castor-oil in the cold stage of cholera can only be recommended as being *less* injurious than opium and ardent spirits. External warmth should be applied to the surface of the abdomen, friction should be used to the extremities, and demulcent drinks given to the patient, as arrowroot, ice-cold water, mutton broth, etc. The apparently beneficial effect from spirits of camphor would lead to its further use combined with ammonia and with quinine in full medicinal doses.

ST. MARY'S HOSPITAL.

DR. F. B. NUNNELEY is of opinion that the symptomatic distinctions between diarrhoea, English cholera, and Asiatic cholera, depend chiefly on the extent to which the nervous system is implicated in the disease. In simple diarrhoea there are few nervous symptoms—trifling or moderate pain, and only slight feelings of prostration; in English cholera the prostration becomes severe, muscular cramps are added, and there is great depression of the powers of life; whilst in the collapse of Asiatic cholera these symptoms reach their extreme development; and the processes of digestion and assimilation, which are slightly interfered with in the first, and gravely so in the second, are in this almost abolished—a further evidence of the profound changes which have occurred in the nervous system. It is on considerations such as these that different names are given to cases of diarrhoea of varying severity. Thus, if there be merely looseness of the bowels, the disease is called simple diarrhoea; and if there be great prostration, together with cramp, English cholera is the name assigned. A common form of diarrhoea, more especially with children, is that in which blood and slimy mucus are passed with the stools, and there is much straining: it may be called dysenteric diarrhoea.

Asiatic cholera is markedly distinct from any kind of diarrhoea, though the diagnosis, which in individual cases is not always easy, mainly rests on its essentially epidemic character, on the early and profound implication of the nervous system, on the rice-water stools, and on the fatal tendency of all the early cases of an epidemic.

Summer diarrhoea in numerous cases appears to depend on some general conditions of atmosphere or temperature, which also give rise to catarrh of the bronchial mucous membrane, often coincidently with that of the intestines.

Though diarrhoea never becomes either cholera or typhoid fever, it renders the subject of it especially susceptible to these contagions, and on this account the treatment of all forms of it, whether slight or severe, should be directed to the early and complete suppression of that condition which is common to them all; viz., an increased and altered discharge from the bowels, together with nervous depression. This remark applies to those cases which are attributed to some "peccant"

matter in the intestines, and for the removal of which an aperient is often considered necessary; but the irritant is far better got rid of in the form of solid stools and unattended by prostration, than by purging, and this end is promoted rather than hindered by moderate doses of opium with some astringents, which assist in restoring the intestines to the condition of health. An useful formula is—*Misturæ cretæ* ʒj; *tincturæ catechu* ʒj; *spiritus chloroform.* mxxv; *tincturæ opii* miv—x, given every four hours; or *acidi sulphur. diluti* mxx—xx; *spiritus chloroform.* mxxv; *tincturæ opii* miv—x; *aqua* ʒj. The dysenteric diarrhoea, so common in children, yields readily to castor-oil, in doses of from 5 to 10 minims, with a few grains of sugar and gum arabic, to which, in severe cases, from one-sixth to half a minim of tincture of opium can be added.

Since pathology has not yet enabled us to frame a rational system of treatment for Asiatic cholera, we are limited to the tradition of experience and to treatment on general principles, such as checking excessive evacuation and supporting the powers of the patient; but amongst special methods, an earlier and more systematic resort to the injection of saline solutions into the veins appears to give most promise of success.

MERCER'S HOSPITAL, DUBLIN.

TREATMENT OF GANGLIA.

(By MR. LEDWICH.)

THE following should have appeared in our report on the treatment of ganglion. The manuscript, however, was mislaid.

In the treatment of those sometimes very troublesome affections, Mr. Ledwich, like others, had tried many methods in order to effect a cure; but he has latterly abandoned them all with the exception of two—viz., puncture and seton. Mr. Ledwich, however, has never recourse to the latter but with extreme reluctance, and only after every other means have failed, as, even with the greatest exercise of caution and closest watching, untoward symptoms will occasionally ensue, quite sufficient to excite in the mind of the operator no small amount of anxiety and alarm. The method by puncture is, he conceives, above all others the least liable to objection, as it is generally free from all dangerous consequences, and most certain in its results where properly done; in fact, Mr. Ledwich has known it to succeed in almost every instance where several other methods have been tried ineffectually. The operation in its nature is most simple, as all that is required for the purpose is a common sharp-pointed bistoury, with which a small puncture should be made in the ganglion, previously made tense between the finger and thumb of the left hand. About one-half of its contents should be allowed to escape, and the point of a small glass syringe, previously filled with the compound tincture of iodine, having been introduced into the opening, a quantity about equal to what had been allowed to escape should be injected into the cavity. The instrument should be then gently withdrawn and a piece of lint soaked in cold water applied, with strict injunctions to keep the part at rest for the next twenty-four hours. The operation in itself is attended with very little pain, as all that is complained of is a slight sensation of heat and burning, which may last for an hour or two, or perhaps a little longer. When the part is examined on the ensuing day, if the fluid employed have been of the proper strength, the following appearances may be observed: a slight blush of inflammation over the part, the swelling feeling harder and firmer to the touch; pain in a moderate degree experienced on pressure; the small puncture closed, and no discharge visible. Under those circumstances, it is always better not to interfere with it until another twenty-four hours shall have elapsed, when it will be found to be harder, firmer, and more sensitive to the touch. The blunt end of a probe may now be employed to open the original puncture; and when this has been done, a quantity of matter mixed with blood will escape, when the ordinary treatment with bandage and cold water dressing will, in the great majority of cases, ensure a complete and permanent cure. It may, however, be necessary to add that, if after the first twenty-four hours the part should fail to exhibit the appearances described—in short, a sufficient amount of inflammation as would appear to be necessary to accomplish the object in view not having been induced—the puncture should be at once reopened and the injection, with its strength more or less increased according to circumstances, be repeated.

There is no doubt whatever that the seton must be always more certain in its results, and more especially so where the threads have been soaked in either the tincture of iodine or a solution of nitrate of silver; but it is so often attended with a high degree of risk arising from the resulting inflammation, which may extend in every direction and assume a very dangerous character, that Mr. Ledwich believes few surgeons

will have recourse to it except as a last resource, and only in those peculiar cases where other measures have been fairly tried, and have failed in achieving the object in view.

NORTHAMPTON GENERAL INFIRMARY.

CASE OF BELLADONNA POISONING.

(Under the care of Mr. Mash.)

WE are indebted to Mr. Carruthers, House-Surgeon, for the following account.

In the following very interesting case, there was no disturbance of the due relation between the respiration and circulation. There was no gay delirium; no diplopia. The rash was confined to the head and face, and there was no desquamation of cuticle. Some of the contents of the patient's stomach was applied to the conjunctiva of another patient, likewise some of her urine to another; in both cases rapid dilatation followed. Every day a drop of urine was applied to a healthy conjunctiva, and so long as the patient's pupils continued dilated, for so long was her urine capable of causing dilatation of the subjects' pupils; thus showing that the elimination of the poison from the system was coincident with the return of the patient's pupils to their normal state. The absence of delirium was possibly due to the large quantity of belladonna taken, so exerting a narcotic effect very rapidly. The case was treated entirely by the eliminative method, for the small quantity of morphia administered exerted no appreciable effect.

H. M., aged 38, married, suffering from secondary cancer of the breast, was admitted on April 30th into the General Infirmary, Northampton, under the care of Mr. Mash. She was generally cheerful in demeanour, though occasionally despondent on account of the unfavourable prognosis of her case. At 5.45 A.M., on May 6th, she got out of bed and took a teaspoonful of extract of belladonna and glycerine, which had been used as an application to her breast. Half an hour afterwards, she told the night-nurse what she had done. Mr. Carruthers saw her immediately, taking with him a drachm of sulphate of zinc. From the symptoms present, he saw that there was no doubt of her having taken belladonna, so he at once gave the emetic and prepared the stomach-pump. He did not wait for vomiting, considering the length of time which had elapsed since the poison was swallowed, but at once used the pump. About two gallons of water were passed into the stomach; in the first half gallon there was a quantity of belladonna. The pump was kept going until the fluid ejected was quite clear and free from smell.

When she was first seen, there was no dysphagia, delirium, nor convulsive movement. Pulse somewhat rapid. After the emesis, three drops of croton oil were administered. Fluids were swallowed readily. After this a copious enema was used, which brought a small quantity of scybala away. She now became nearly unconscious, but still able to swallow; so strong coffee and brandy were administered. After about fifteen minutes, she became unable to walk from loss of co-ordinating power in the muscles of the lower extremities. She was then put to bed, an enema composed of two ounces of brandy and coffee was administered, and repeated in half an hour, and again used after the same interval.—8.30 A.M. She was quite unconscious; breathing was diaphragmatic, not stertorous. The countenance was flushed; the pupils were widely dilated; the pulse was feeble, but regular; there were spasmodic twitchings of the arms and legs; the conjunctivæ were sensitive to the touch. A third of a grain of morphia was injected subcutaneously, and a small quantity of extract of Calabar bean in solution was applied to the left conjunctiva, producing slight contraction of the pupil of that eye.—9 A.M. Another enema of beef-tea and two ounces of brandy was given; and sixteen ounces of urine were withdrawn by the catheter.—3.15 P.M. She had manifested some consciousness; she tried to reply when spoken to, and was able to swallow. She had vomited once. The pupils were still widely dilated; the breathing laboured; the pulse 60, soft; while there was still some twitching of the hands, but quietude of the legs.—12 P.M. The face was highly suffused; the pupils were still widely dilated, and although not sensitive to light, she could perceive the difference between the face and back of a gold watch. There was no diplopia. She had still some tremulous movements in attempting to hold anything. Pulse 140, soft. The patient was conscious, and expressed anxiety to recover.

May 7th.—The bowels were opened four times in the night; the evacuations were very loose, some of them liquid; pulse feeble (84); the pupils were contracting, though not sensitive to light. She complained of pain on attempting to swallow. Vision was much improved; she was quite coherent, and complained of hunger. The suffusion of the countenance was subsiding. She could tell the time by a watch. In the evening the pulse was 84, soft; the tongue clean; deglutition

was easier. The countenance was still suffused, though less so than in the morning.

May 8th.—Pulse 100. The patient was still improving. The countenance was tranquil and natural; the tongue somewhat brown; deglutition was more easily performed; the bowels were open.

May 11th—She had now quite recovered from the effects of the belladonna. The pupils were normal. The dysphagia had quite disappeared.

REVIEWS AND NOTICES.

INSANITY AND ITS TREATMENT: Lectures on the Treatment (Medical and Legal) of Insane Patients. By G. FIELDING BLANDFORD, M.D. Oxon. Edinburgh: Oliver and Boyd. 1871.

THE thanks of the profession and of the student are due to Dr. BLANDFORD for the production of a work on insanity, eminently practical, lucid, and, above all, medical. It is this latter characteristic which most particularly recommends it to the student and practitioner. Insanity is spoken of as a disease of the body. No metaphysical or psychological dissertations are introduced whereby, the purely physical nature of the various diseases treated of is obscured. Mental phenomena are discussed shortly and tersely by the physician and physiologist, and are solely regarded from the objective aspect—the aspect from which every practitioner of medicine practically views them, however strongly he may in theory advocate the positive system of philosophy. Dr. Blandford has done well in departing from the time-honoured practice of beginning a book on mental diseases by raising a metaphysical ghost which is never satisfactorily laid in subsequent chapters, but, on the contrary, is ever always standing upright, an immaterial bugbear, a phantom finger-post pointing the wrong way.

No one can read this work without noticing the firm but gentle (the latter word used in its highest sense) manner in which the opinions and theories of others are commented on; the liberal spirit in which the works of contemporaneous authors are discussed; in a word, the general "good form" of the whole treatise. Although our own views are in opposition to Dr. Blandford's on many points, we can neither fail to recognise the amount of thought which he has bestowed on these very subjects, nor to acknowledge the potency of many of his arguments—in fact, the world must be a little older before they can be entirely refuted. In the present state of knowledge, the position he takes up as to classification is to some extent unavoidable; it is so in a considerable proportion of cases of insanity. He says: "We are obliged to make two classifications—to lay down abstractedly a pathological classification of insanity; and, on the other, to describe, according to the most prominent and important symptoms, the various patients we have to protect and cure. Classifying not the disorder, but patients, I would reverse the order suggested by the Committee of the Medico-Psychological Association, and note, in the first place, the mental symptoms observable at the time of inspection, and afterwards assign to these their pathological significance, if the history or the symptoms enable us to do so. As in all diseases, the immediate symptoms must direct the immediate treatment, though the pathology will also have an importance which it is hard to over-estimate." To this we cannot subscribe as a principle, although, unhappily, in practice, it must be admitted, circumstances occasionally compel its adoption. Much harm may—nay, is—done by the immediate treatment of prominent symptoms. Take one prominent symptom—acute mania—it may depend on anæmia, hyperæmia, or sympathetic irritation. Before proceeding to immediate treatment, is it not absolutely necessary to determine the pathological inductive condition of the patient? If so, we act not on a symptomatic, but on a pathologico-etiological, classification. Our author takes as an illustration of the fallacy of such a system the distinction between mitral and aortic disease, which, pathologically, may each spring from rheumatic endocarditis, and therefore the division is accidental, and not scientific. This is not a case in point. These diseases of the heart produce asthma and dropsy. Rheumatism may also produce changes in brain-structure; and the changes in brain-structure may manifest themselves by insanity. We begin in both cases with rheumatism: in the one, we go on to heart-disease, and its consequent asthma or dropsy; in the other, to brain-disease, with its consequent insanity. It is the dropsy and the insanity which must be considered together—not the heart-disease and the insanity. Dr. Blandford would not treat dropsy apart from its pathological causation; it would not be the prominent symptom that he would indiscriminately attack; nor would acute mania receive from him medication without strict inquiry, and therefore without pathological classification. The whole tenor of the book, however, is in the direction of pathological, not symptomatic,

treatment. We believe that the author is only withheld from the adoption of etio-pathology as a basis of classification, because he cannot reduce the position to an absolutely logical deduction. He speaks most warmly of Skae's *System of Nosology*, admits its force, and touches kindly on its imperfections. In consequence of this tendency, the directions for treatment are much more sound and definite than we meet with in most books on insanity. The advice to the family physician as to the early treatment of such cases is most valuable; this is followed up by instructions as to the proper legal steps to be followed in case restraint in an asylum should become necessary. Good common sense pervades all his remarks as to artificial feeding, restraint, and hygiene. It is a book to go to when in a difficulty; it leads the professional mind in the right direction as to the nature of the diseases of which its treats. It is fit for the student, and a guide to the general practitioner. If its teachings were more fully indoctrinated, there would be more home-treatment of insanity, and fewer cases of nervous disease consigned to asylums.

REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LYNCH'S NEW POISON-BOTTLE.

WE have repeatedly urged the necessity of the general adoption by dispensers of some one of the cheap safety-bottles and inventions which add to the security of persons for whom are prescribed poisonous draughts, liquors, or solutions, for external or internal use. Lynch's



new poison-bottle (171 A, Aldersgate Street, London, E.C.) is one of the simplest, cheapest, and most efficient inventions that we have seen. There are a number of conical projections from the surface of the bottle, so arranged that any one grasping it carelessly in mistake in the dark will "from the nettle danger extract the flower safety".

WRIGHT'S ANTISEPTIC SOAPS AND SOLUTIONS.

WE have already spoken favourably of Wright's Coal-tar Soap and Solution of Coal-tar. We have tested them, and can affirm their value as antiseptic, disinfectant, and detergent agents. There is a perceptible improvement in the coal-tar soap now manufactured. It is firm, rather pleasantly scented, and has lost none of its merits as a skin-soap, or for use in the sick-room or hospital ward, or in the medical man's toilette. In our opinion, a medical practitioner, who is frequently compelled to touch surfaces more or less infected, should invariably keep in use some form or other of the soaps now manufactured with coal-tar and its products.

ARNOLD'S SURGICAL BAG.

THIS bag is one of those refinements of modern comfort with which the ingenuity of our instrument-makers constantly tempts medical men, to their great convenience and advantage. Of course one has to think how far a certain expenditure can be afforded with the view of preventing the trouble, loss, and discomfort which attend imperfect arrangements, defective fittings, and insufficient supply of instruments. It happens often enough that, owing to the scattering of instruments, to the want of convenience for packing them, or to defects of selection, just the instruments which are wanted at a surgical emergency are out of the way. To all practitioners we may recommend an inspection of the very convenient, well selected, and portable *armamentarium* in Arnold's Surgical Bag.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 16TH, 1871.

HER MAJESTY'S HEALTH.

THE brief reports in the *Court Circular*, indicating the somewhat protracted and very severe indisposition of the Queen, have been read with loyal sympathy and vague anxiety. Her Majesty has, indeed, passed through a trying and severe illness, from which she is now happily recovering. At the outset, Her Majesty suffered, early in August, when at Osborne, from dislike of food, disturbance of rest, headache, general *malaise*, and slight inflammation of the tonsil. The latter local trouble soon subsided; but the heat of Osborne and of Windsor proved very trying to the Queen, and she did not satisfactorily recover her general health. The journey north was, however, borne well, and Her Majesty slept better on the road than for several nights previously. On the 19th, and for some days subsequently, the Queen suffered from very severe sore-throat, interfering both with speech and with power of swallowing. As the throat improved, the Queen began to experience pain and swelling a little below the right arm; the general health suffered severely, and for days Her Majesty was unable to take any food. On September 4th, Mr. Lister opened an abscess at the seat of swelling; it was of considerable size, but the subsequent progress was favourable. The improvement in Her Majesty's health during the past three days has been very decided. But, although it is with heartfelt satisfaction that we are able to state that Her Majesty is now believed to be in the path of complete recovery—an announcement which will be everywhere received with sympathetic and loyal pleasure—it must be remembered that convalescence from so severe a form of illness must be somewhat tedious, and that some time must necessarily elapse before the Queen can be as well as she was earlier in the year.

In consequence of the improved health of the Prince Leopold, the constant attendance of a medical man on his Royal Highness was no longer necessary, and Dr. Poore resigned his charge. But, as the Queen desired, for herself and the royal household generally, to have a medical man constantly in the Palace, to attend to cases of emergency, her Majesty has appointed Dr. Marshall of Crathie to be resident medical attendant to her Majesty and the royal household, wherever the Court may be. Dr. Marshall came into residence when the Queen reached Balmoral on August 16, and was in attendance on the Queen, with Sir William Jenner and Mr. Lister, during her Majesty's late severe illness. The appointment of Dr. Marshall will not interfere with the duties hitherto performed by Dr. Hoffmeister at Osborne, or Drs. Ellison and Fairbank at Windsor.

STUDIES IN CONTAGION.

THE Thirteenth Report of the Medical Officer of the Privy Council contains the results of a very able and interesting research by Dr. Burdon Sanderson under the above title. An abstract of the paper was read at the late meeting of the British Association in Edinburgh by Dr. Ferrier, who was associated with Dr. Sanderson in the inquiry. The subject of the inquiry, which is a continuation of that contained in Dr.

Sanderson's previous Report on the Intimate Pathology of Contagion, "is to examine into the origin, growth, and development of microzymes; to investigate the conditions which are fatal or favourable to their existence in the liquid and gaseous fluids by which we are surrounded, in the hope that by doing so we may be enabled to approach one degree nearer to an understanding of their influence on the processes which go on in the living body."

In reference to the origin of microzymes, the question of "spontaneous generation" comes up. The Report, however, does not profess to deal with the general question, but gives convincing proof that in the liquids which were used as tests for the presence of microzymes in the media in which they are supposed to exist (with special reference to Hallier and Béchamp), no spontaneous evolution of bacteria ever takes place, although the question of the evolution of torula in these fluids is not determined by the experiment. Before proceeding to describe the experiments and the methods adopted, the Report gives a short account of the characters of bacteria or microzymes, and the views entertained as to their nature, origin, and relation to other organic forms. Hallier, as is known, considers them as the beginning and end of a genetic cycle or chain; *i. e.*, they develop into higher fungus-forms, and proceed from them again. In the body of the Report, reasons are assigned for the belief that bacteria are well defined independent organisms, and that there is no developmental connexion between bacteria and torula or other fungal forms, their apparent connexion being merely one of juxtaposition. This is opposed to the view put forward by Professor Huxley, that bacteria may be produced as out-growths from torula.

The characters of bacteria, the viscous scum in which they grow, and their method of multiplication, are all described. The most important facts as regards their action on the liquids in which they grow are: "1. That their growth is attended with absorption of oxygen and discharge of carbonic acid; 2. That they are remarkably independent of the chemical constitution of the medium, provided that they are supplied with oxygen; 3. That they take nitrogen from almost any source which contains it, and use it for the building up of their own protoplasm. It is this last power which specially indicates what may be called their place in Nature as the universal destroyer of nitrogenous substances, acting as the pioneers, if not the producers, of putrefaction. They exercise this function, not by virtue of any special relation of their own nutritive processes to putrefaction as such, but simply by their extraordinary power of seizing on the elements which they require for the construction of their own bodies."

The question how far bacteria are the cause of putrefaction is elucidated by numerous experiments, which show that, so long as "the germinal matter" of microzymes is excluded, animal fluids or tissues withstand decomposition for very long periods; while the slightest contact with media containing this material at once determines septic changes. On this subject, however, it may be observed, that the use here of the phrase "germinal matter," is a quasi-begging of the matter in dispute—which is, whether microzymes may or may not arise without "germinal matter." It is not asserted that putrefaction is caused by bacteria only, as the facts do not afford sufficient grounds for drawing such a wide conclusion.

The experimental results are stated under three headings, according as they relate to the conditions which limit the evolution of organic forms, and particularly microzymes, in test-liquids; to their distribution in ordinary water and in most substances; and, lastly, to their occurrence in the tissues and liquids of the animal body. The method adopted in reference to the first consideration was to enclose the test-liquids in capillary superheated tubes in such a way as to avoid all external contamination. The liquids used were Pasteur's solution and albuminous liquids, such as serum. As the result of numerous experiments, it was found that in all these tubes organisms appeared if the liquids had not been heated. It was found, on the other hand, that no evolution of organisms takes place in the same liquids when boiled or superheated, whether they are kept at the ordinary temperature or

that of the body; and that the effect is not modified either by the tension of the air or by its quantity as compared with that of the liquid.

The occurrence of organisms in these liquids is entirely due to introduction from without. There are two great sources of contamination—the air; and water, or contact with moist substances. The most interesting and perhaps most important part of the Report is that which traces to their primary source the various forms which spring up so readily in organic liquids. While the various fungal forms (commonly *torula* and *penicillium*) are derived chiefly from the air, the germs of bacteria exist almost exclusively in water, and adherent to apparently dry but really moist surfaces. Thorough desiccation without great heat is fatal to bacteria; and it would appear that bacteria germs can only exist in the air in the living state in exceptionally moist conditions of that medium. The slightest contact of organic solutions with moist surfaces, or the admixture of the minutest drop of water in ordinary use, is sufficient to determine the appearance of myriads of bacteria.

This property of determining the development of organic forms in a test-solution is called the *zymotic power* of water. The only water which was found not to possess this power was freshly distilled water received in superheated vessels from the condensing apparatus, previously heated to a high temperature by a thorough steaming out. Ordinary distilled water, as contained in laboratory receptacles, as well as undistilled water in ordinary use, possess the zymotic power in a high degree.

The bacteria-germs, it is stated, are quite invisible to the highest powers of the microscope; and even water obtained by the fusion of the purest ice, and approaching the standard of optical purity so nearly that the electric beam, in passing through it, displays a blue colour, is found to be as zymotic as many other varieties of water which in the beam are seen to be full of light-scattering particles. There is here, however, still the assumption that “zymotic” power is related only to the presence of “germs,” and not perhaps of mere dead particles—as Liebig and his school maintain.

A practical method is given whereby to determine the zymotic power of different kinds of water. It consists in adding to a quantity of boiled Pasteur's solution, contained in a superheated eprouvette, a small quantity of the water in question—in the proportion of one drop of the water to each cubic *centimètre* of the solution. An unimpregnated eprouvette is placed side by side for comparison. At the end of a week, the impregnated eprouvette becomes hazy or opalescent from the enormous development of bacteria. Distinct degrees of opalescence can be readily detected in the various eprouvettes impregnated with specimens of different waters. A comparative analysis of the amount of *living* organic matter contained in the water supplied by several of the metropolitan water companies was instituted; and it was so far satisfactory, that different degrees of zymotic power could be established. Further than the fact that filtration has no perceptible effect on the zymotic power of water, no conclusions are based on the experiments. That this method may lead to very important practical purposes, we have no doubt. A series of experiments was made to determine in how far the zymotic properties of water are affected by chemical compounds which are believed to have the power of arresting the evolution of living germs in organic liquids.

Water through which ozone was passed for some time was found to have entirely lost its zymotic properties. On exposure to air, *penicillium* grew luxuriantly, but no bacteria. The same result was obtained with water rendered pink by Condry's fluid. Carbolic acid in the proportion of 0.1 per cent. does not destroy the zymotic power. In the proportion of 0.5 per cent in these fluids, it is stated entirely to prevent the development of bacteria, but not of *torula* or *penicillium*. A similar result was obtained with sulphate of quinia in the same proportion. This is a result somewhat different from those obtained by Binz.

Peroxide of hydrogen, and also chlorine, are likewise fatal to bacteria. These results are very valuable, as they seem to show that precisely those substances which are known as antiseptics exercise their power by their fatal effect on bacteria life. In connexion with this, the experi-

ments related under the third heading—viz., the circumstances which determine the existence of microzymes in liquids and tissues of the body—are of extreme interest. It might naturally be supposed that from the continual contact of the body with media containing the germs of bacteria, and their introduction into the stomach with ordinary water, these organisms might find their way into, and pervade, the tissues and liquids of the body.

The most careful experiments with blood, however, show that it does not contain bacteria, either actually or potentially; and, moreover, that when received with due precautions in superheated vessels direct from the artery, it does not become putrid even when exposed to the air, although the surface may become covered with *penicillium*. The addition of one drop of zymotic water is, however, sufficient to determine an immense growth of bacteria, and with them the signs of putrefaction. A precisely similar result was obtained with muscle and animal tissues generally. In all cases, putrefaction was traceable to the admixture with water or contact with unheated surfaces. Urine apparently owes its decomposition entirely to the development of bacteria and other organisms from external contamination.

Pus obtained from a deep-seated abscess did not contain bacteria germs, and did not decompose till water was added. On the other hand, pus obtained from a pyæmic abscess was found to teem with bacteria. From this may be made a deduction of such considerable importance that further experiments, we trust, will be communicated. Its precise relation to practical surgery seems to us, however, doubtful.

Of immense practical import likewise are the conclusions drawn from certain experiments in reference to the decomposition of milk. The experiments show that the decomposition of this secretion proceeds *pari passu* with the development of bacteria derived entirely from contamination with water or impure surfaces.

Such are the chief results of a most careful and laborious investigation, which will serve to explain many hitherto obscure facts in relation to the theory of spontaneous generation, and, what is of more importance, the whole question of putrefaction and its relation to antiseptics. Hallier's doctrine of micrococcus has been severely shaken by these researches, and with it “the whole superstructure he has so ingeniously and laboriously built on it.”

SANITARY MATTERS IN DUBLIN.

A DOCTOR's holiday is often another name for work in disguise; and, just as Dr. Lankester, last year, taking his holiday at St. Helier's, poked his nose into all the dirty places of the town, analysed the drinking-waters, harangued the people at a lecture at the town hall, and made himself generally extremely useful and disagreeable, so Mr. Benson Baker, deserting the beautiful scenery of the Tamar, and thinking scorn of the Mên-an-Tol and the rocking-stone, went straight from the Plymouth meeting of the British Medical Association, and plunged into the purlieus of Dublin. To the “wild scenery of Zennor”, he preferred the back-slums of a populous city; and for otter-hunts on the Lynher, he substituted a perquisition into the fever-haunts and diseased meat markets of the metropolis of Ireland. We have had much to say to our readers lately of the excellent system of curative public medicine which is organised in the sister kingdom under the Irish Poor-law. They are, through us, familiar with the merits of the Irish dispensary system, its excellent organisation, the zeal and efficiency with which it is worked, the facilities which it affords for the quick and economical treatment of the poor; the extent to which it has favoured efficient vaccination, relieved the sick, and lightened the rates by reducing the general average of zymotic, or preventable, sickness throughout the kingdom. The faults in that system are, the facility with which tickets are granted, and the consequent abuse of the public

funds by undeserving persons ; and the insufficient remuneration of the medical officers who work under it. As a whole, it is considerably in advance of our own Poor-law system.

There was reason to hope that we might also find something to imitate in the general sanitary administration on the other side of the channel. The admirable organisation of the Poor-law medical officers offers great facilities for a complete system of protection against preventable diseases by a scheme of sanitary administration, which should attribute prophylactic health-functions to the dispensary physicians. Mr. Baker, in studying the details of the two systems together, appears to have entertained these anticipations. They were not, however, fulfilled. Mr. Baker declared the result of his voluntary visitations in some letters addressed to the Dublin papers ; and, in another part of our columns, he gives further details. His object in all this was, to declare to the Dublin corporation the impressions produced upon a new and independent observer, looking with unprejudiced eyes upon the arrangements which they make for the health and physical safety of their citizens ; in the hope that such a public declaration may prove of service to those who at present suffer from the neglect of that body. He found the scavenging of the streets abominably neglected : the refuse of houses thrown into the public ways, and largely left there to fester and poison the air ; so much of it as is removed, he describes as deposited on great heaps in the most populous parts of the city. This system of cess-poisoning is carried out at an expense, for the last year to the citizens of Dublin of £51,378. The sewers are neither ventilated nor flushed : a hundred million gallons per day of Vartry water are allowed to overflow by the bye-wash, which, it is suggested, might be used for flushing the sewers, and other sanitary purposes. The Liffey, which receives the outfall of the sewers, and runs past a number of important public buildings, and through the heart of the city, is little better than a seething ditch. The tenement-houses, which are kept cleanly enough by the poor people who live in them, are poisoned by filthy yards and cess-pools, "which baffle description". Fever—always a test of the state of soil, air, and water—is endemic in Dublin. There is only one fever-cab connected with the sixteen Dublin hospitals. "It is not an uncommon thing," says Mr. Baker, "to see all kinds of fever taken through the streets without the slightest precaution, in ordinary cabs and cars." He saw a patient suffering with small-pox being drawn through the streets, at noon, on a greengrocer's barrow, surrounded by the sorrowing members of her family. There is a disinfecting apparatus provided by the corporation, but it was afflicted, when seen by Mr. Baker, with a hole in the pipe, so that the disinfecting chamber is loaded with smoke and soot. The articles to be disinfected are brought in cabs and cars. Ten people had used it in the course of a month ; according to the published statistics, it should have been used by little less than a thousand. On the whole, such an apparatus, so used, by giving a sham feeling of security to the city, is rather a public evil than a public good. The cholera arrangements are described as on a similar scale of efficiency. If cholera be discovered in a ship, the patient is to be brought, as best he can, on shore, and conveyed by the nearest cab to a hospital situated in a fashionable part of the city.

Dr. Mapother, the able corporation health-officer, makes some qualifying statements in our columns to-day, to which due weight will of course be attached ; but, on the whole, Mr. Baker has evidently hit some very weak points in the administration of the city of Dublin. We feel sure that an inquiring sanitarian from Dublin might make an exposure not less damaging of the state of things in some parts of London. We invite our fellow citizens from Dublin to the useful task. But we feel certain that no inhabitant of Dublin will feel satisfied at being unnecessarily infected, diseased, and killed, on the sole ground that other people in other places are treated with no less unjustifiable neglect. They will rather, we think, be inclined to thank Mr. Baker for his labour and honesty of speech, and to take into their own hands the much needed sanitary reform of their city.

ELECTRO-PUNCTURE OF THE HEART IN APPARENT DEATH FROM CHLOROFORM.

THE means at our disposal for the restoration of persons in whom life is endangered while they are under the influence of anæsthetics, are not so certain of success that we can afford to rest content with them. For this reason, we here place before our readers an abstract of a very interesting paper on Electro-puncture of the Heart as a restorative measure in chloroform-syncope, published in the last number of *Langenbeck's Archiv für Klinische Chirurgie*, by Dr. Steiner of Vienna. It will be seen that the author of the paper does not assert that electro-puncture is an absolutely infallible remedy ; but he produces sufficient evidence in favour of the innocuity, and at least occasional success of the operation, to entitle it to consideration.

Dr. Steiner, after some preliminary remarks, quotes a number of cases from various authors* to show that, while in some instances punctured wound of the heart, even by so small an instrument as a needle, has been followed by death, in others the injuries have been recovered from, the article by which the lesion was inflicted having been sometimes found in the wall of the heart after death from some independent disease several years afterwards.

To ascertain by direct experiment the effect of puncture of the heart, Dr. Steiner introduced needles into the hearts of various animals—namely, horses, an ass, dogs, cats, and rabbits. The results of fourteen experiments of this kind have led Dr. Steiner to conclude that puncture of the ventricular wall with a needle is not attended with danger, provided that the instrument be at once removed. If allowed to remain, or moved to and fro, it may produce fatal inflammation, or laceration of the muscular substance. Puncture of an auricle or of a coronary artery, is followed by continuous and fatal hæmorrhage ; though there is just a possibility that the hæmorrhage from the artery may be arrested by the formation of a plug. If the needle penetrate the endocardium, the contractions of the heart may in one or two minutes produce such an amount of laceration of the muscular fibre as to lead to rupture of the heart at this point. The careful temporary introduction of a needle into the substance of the heart is, then, not necessarily dangerous.

Turning, next, to the subject of galvanism, Dr. Steiner observes that in two recorded cases of chloroform-poisoning attempts were made to excite the heart's action by the galvanic current. They were, however, both unsuccessful ; the remedy not having been applied until all other usual means had failed. No conclusion, therefore, as to the effect of galvanism on the heart could be drawn from them.

The principal objections raised against electro-puncture of the heart are, first, that it may do harm by cauterising ; and, secondly, that it may give rise to a dangerous development of gas. Dr. Steiner has found that these objections are without weight in regard to a weak interrupted current—which is all that should be used for the purpose of resuscitation. Even after passing a continuous current for a quarter of an hour into hearts filled with blood, there was only a very slight extrication of gas by the electrolytic action of the battery. The caustic effect he found to be practically *nil*.

In his experiments on animals narcotised by chloroform, Dr. Steiner found the most useful instrument to be a single-celled Smee's battery with an induction apparatus. The needle was introduced before the full effect of the chloroform was produced ; and in this way the arrest of the heart's action was at once indicated by the cessation of the movements of the needle. Of the experiments performed, six were successful, and ten unsuccessful. In seven other cases, artificial respiration failed to restore the animals.

The conclusions at which Dr. Steiner has arrived from his experiments are the following.

Electro-puncture of the heart is not dangerous. In cases of arrest of the heart's action by chloroform, even the immediate application of electro-puncture to the heart is not a certain means of resuscitation. The cause of this lies in the rapidity with which the heart loses its irritability after arrest of its action ; and this occurs sooner under the in-

fluence of chloroform than in ordinary circumstances. The immediate application of galvanism to the heart is to be preferred to artificial respiration, in all cases where the cessation of the pulse at the wrist and the apparently fatal collapse indicate the total failure of the heart's action. The success which has in some cases attended artificial respiration is probably to be explained partly by the circumstance that the heart's action had not altogether ceased, and partly by the heart having been irritated during the progress of artificial respiration. In applying electro-puncture, the positive pole should be applied to the needle introduced into the heart, and the negative at the scrobiculus cordis or over the seventh intercostal space on the left side. The current should be weak, and should be interrupted every few seconds. Galvanism of the heart applied in this way is not only relatively the most powerful means of rousing the action of the organ, but it also materially favours the inspiratory movements. The reappearance of movements in the needle or of those of respiration, and the return of the pulse at the wrist, are not sufficient indications for ceasing to apply the galvanic current; it must be continued until the heart acts rhythmically and vigorously. When commencing recovery, however, is indicated by the above mentioned signs, artificial respiration may be employed at the same time with electro-puncture, so as to afford the heart the additional stimulus of a supply of oxidised blood. If no result follow the application of electro-puncture for a period of fifteen minutes, it may be concluded that the irritability of the heart is entirely lost, and that all further attempt at resuscitation will be useless.

The cases, says Dr. Steiner, in which electro-puncture of the heart should be applied, are those in which there is profound syncope with rapid collapse; the pulse becoming immediately imperceptible, and the eyelids fallen.

A SERIOUS charge of cruelty towards one of the inmates of the Wandsworth County Lunatic Asylum has been preferred.

THE Midland Counties Idiot Asylum at Knowle will benefit to the amount of £1,350 by the bazaar held in Birmingham last week.

THE Board of Guardians of Manchester, having instituted a house-to-house visitation, discovered 2,094 unvaccinated children, of whom 1,187 were over the age at which vaccination can be enforced.

AT a Sheriff's Court held at Winslow, Bucks, Mr. R. De'Ath, surgeon, of Buckingham, was elected Coroner for the northern division of the county of Bucks.

MR. LORIMER, being about to leave Welshpool for Farnham, has been entertained by his friends at a public dinner in the former town.

DR. W. HOME, V.C., C.B., Deputy Inspector-General of Hospitals, retired on half-pay, recently appointed a Medical Inspector of the Privy Council, has this week been gazetted to the honorary rank of Inspector-General.

THE existence of yellow fever, "to a limited extent", in Charleston, is announced by the Medical Society of that city. The first case occurred on the 27th of July, and in the following four weeks there were thirty-five cases, and nine deaths.

THE Town Council of Dudley are aggrieved by a valuable, but severe, report by Dr. Thorne Thorne concerning the sanitary condition of the town; but the *Birmingham Morning News* mildly remarks, "the sanitary state of Dudley is certainly in need of improvement." Dr. Thorne's reports have always proved excellent and reliable.

KING'S COLLEGE HOSPITAL has just undergone the process of a thorough cleansing, painting, and redecorating, throughout all the wards. The Board decided to close the hospital until the 16th instant, so far as the admission of fresh out-patients is concerned. All accidents and urgent cases, however, were admitted as usual.

THE Paris death-roll for the week ending September 9th includes thirty-five deaths from dysentery, ninety-one from diarrhoea, thirty-six from cholera, and four from cholera.

THE current numbers of the *Edinburgh* and *Quarterly Reviews* contain each an interesting article on Mr. Darwin's late work. That in the *Quarterly* is particularly able and well reasoned, and is evidently from the pen of an accomplished and thorough zoologist.

THE fifteenth annual meeting of Hungarian physicians and naturalists has lately been held in Arad, commencing on August 28th, and terminating on September 2nd. Dr. Poor, one of the vice-presidents, occupied the chair; the Archduke Joseph, who had been elected president, being closely occupied with the organisation of the Hungarian army. During the meeting, a donation of 1000 florins was received from Dr. Poor, and another of 1500 florins from the widow of Dr. Flor, to serve as the foundation of a pension-fund for medical men and their widows.

THE PRESTON CASE.

WE hope no more will be heard of the "fasting girl" of Preston. She is, in fact, a well-nourished woman of thirty, who takes food like other people, and thrives on it. The friends have admitted as much to Dr. Marshall, and we have other evidence of it—if any were needed. There are still fools in abundance who flock to the place and are willing to pay for seeing a recumbent woman, about whom has been raised a cheap and lucrative halo of imposture.

PUBLIC SWIMMING BATHS.

As we are all agreed that something more ought to be done for providing proper bathing-places for our thickly gathered and great unwashed population, will not some one now take the trouble of going through the process of calling a meeting, forming an association, and appointing a committee, who shall utilise and direct the force of public opinion, and bring the subject deliberately and successively under the notice of the central and local authorities, and work till the object is achieved? An association and a public meeting is now the *obligé* antecedent of every useful piece of legislative or executive progress. Never did any nation live so essentially under government by public meeting.

MEDICINE IN RUSSIA.

ACCORDING to the official reports for 1870, there were in that year 10,000 legally qualified medical practitioners in Russia; of whom 6113 held public appointments, and 4686 were engaged in private practice. There is about one medical man to each 7182 of the population. Among the lower classes, the value of rational professional assistance is quite unrecognised; and hence infectious diseases commit frightful ravages, and the mortality among children is greater than in any of the countries of western Europe.

DOMESTIC WATER-STORAGE.

MR. H. E. TRESTRAIL of Harston urges us to draw attention to the fact that in thousands of houses in many of our large towns and cities, the cistern is in the water-closet. In all such places there are noxious gases; and the water in the cisterns becomes impregnated with them according to the length of time it remains before being drawn off, and to the extent to which these cisterns are shut off from the closet-compartment. In Glasgow, for instance, in hundreds of houses the cisterns are not at all covered in, and the continual dripping from the feeding-pipe rather tends to increase the amount of noxious gases taken into the water of the cistern by exposing a fresh surface continually. That such gases are absorbed, has been abundantly proved. If, for instance, after the water has been in one of these cisterns all night, a tumblerful be taken, any one with the ordinary sense of smell can detect the water-closet effluvia in it. "And the other day," says our correspondent, "whilst staying at Yarmouth, a lady complained to me that she could not use the water to clean her teeth in the morning; 'it

was so disagreeable.'” Now that we hear so much of cholera and diarrhoea, these remarks are timely; and it is a pity that more suitable places are not found for placing drinking-water cisterns.

WESTMINSTER HOSPITAL.

IT is stated that the site of Westminster Hospital has been claimed by the Government, and that it will be necessary for that hospital either to resign its being and hand over its work to its big brothers, St. Thomas and St. George, which now occupy the districts on each side of the water, or to migrate in search of a *raison d'être* and a place for standing. It is suggested that both may be found at Chelsea Hospital and that the pensioners should be dispersed as their brethren at Greenwich were.

THE “MEDICAL DIRECTORY.”

WE are glad to learn that no qualifications will be inserted in the forthcoming edition of the *Medical Directory* which cannot be registered under the Medical Act. The returns which have been made to the editors during the past few weeks show a considerable increase in the number of foreign degrees obtained without residence; and as these confer no right to practise, and cannot be registered in this country, the editors have decided not to insert them. Actual registration is not a condition of insertion in the *Medical Directory*, but the qualifications must be such as the registrars would receive. This is a very sound and judicious arrangement.

DISINFECTANTS.

DR. SAMUEL R. PERCY, Professor of Materia Medica in New York, who has been spending some time in this country, writes to the public papers, *à propos* of cholera, to urge the extensive use of chloralum as a harmless, inodorous, and effective disinfectant, in all parts of a house, and for drains and out-door purposes. He says: “With such an agent as chloralum, possessing the active properties of hydrochloric acid, it is possible effectually to disinfect; and wherever offensive matter exists, especially in the sick-room, this agent should be used. I especially advocate chloralum, because not only is its power known to me, but, in my opinion, it has no substitute.” Dr. Hardwicke also loses no public opportunity of urging the uses of this antiseptic.

POISONING BY ABSORPTION OF BICHLORIDE OF MERCURY.

AN inquest has been held at Bath on a child of Mr. Fowler, M.P., aged nine years, who has died from the absorption of bichloride of mercury once applied locally in the well known caustic solution of ten grains to the drachm, for the cure of ringworm, by Dr. Meeres of Melksham. The application is one which has long been most extensively used for the destruction of *nævi*, and as a topical parasiticide. It is recommended in the text-books, and has been used innocuously and with great benefit in probably many thousand cases. There appears in this case to have been an unusual susceptibility. The substance was absorbed, and the poor child died with symptoms of mercurial poisoning. The jury attributed—most unjustly—blame to the surgeon in their verdict. In the circumstances, every one will sympathise with the sad loss of the relatives. Occurrences so distressing are only less shocking to the medical attendant. To the pain which they give, so unjust a verdict adds a further acute pang, and inflicts a serious and most undeserved injury. Dr. Meeres has our sincerest sympathy, and we protest against the injustice done to him.

PROPOSED MEDICAL ASSOCIATION IN SPAIN.

THE advantages of combination among members of the medical profession are, we are glad to observe, beginning to be perceived by our *confrères* in Spain and Portugal. In the former country, it is proposed to form a “Medico-Pharmaceutical Association”, to which all physicians, surgeons, and pharmacists are to be admissible on expressing in writing their desire to become members and their intention to submit to the rules in force for the time being. The object of the Association is stated to be the improvement of the material interests and the elevation of the moral and scientific condition of its members. The Association is to be constituted of and managed by a central *junta* in the

capital, a provincial *junta* in the chief town of each province, and a section in each judicial district. The provincial *juntas* are to be independent, provided that the common action of the Association be not interfered with. The disposal of the funds is to be in the hands of the Association from the time of its formation; but the provincial branches are each to have the power of possessing their own funds and disposing of them as they may think fit. The project is supported, we believe, by the whole medical press of Spain; and the *Correio Medico de Lisboa*—a new and highly promising medical journal—speaks strongly in favour of a similar Association being formed in Portugal, urging that the substitution of *esprit de corps* for the *individualism* now prevailing would raise the profession in that country from its state of decadence, and would enable it to gain and maintain that position to which its learning and its services entitle it.

STOCKWELL FEVER HOSPITAL.

IN consequence of the comparatively limited number of small-pox cases now occurring, it has been decided to close the Stockwell Hospital, and make preparations for the reception of fever-patients.

DEATH UNDER THE INFLUENCE OF AN ANÆSTHETIC.

A RECENT number of the *Oxford Chronicle* reports a fatal case in the Radcliffe Infirmary, Oxford. The patient, a married woman, aged 44, was about to undergo an operation for cancer of the breast. Bichloride of methylene was administered by the dispenser of the infirmary, in the presence of the house-surgeon and one of the surgeons, on a flannel bag. After two or three convulsive gasps, the patient expired. The quantity administered was small. Artificial respiration was practised, and other means of restoration, but without success.

PROFESSOR TROUSSEAU ON THE TREATMENT OF DIARRHŒA AND INFANTILE CHOLERA.

DR. BRABAZON, and other of our readers, will thank us for directing attention to the practice of that great clinical authority, the late Professor Trousseau. It will be seen, by reference to the fourth volume of his *Clinical Medicine* recently issued by the new Sydenham Society, that in the treatment of most forms of diarrhœa he employs purgatives, and even saline purgatives, freely, while he strongly condemns the opiate treatment, except in cases of what he calls “nervous diarrhœa,” and diarrhœa from “excessive tonicities of the bowel,” when he gives opium in small doses, one drop of laudanum to an adult, and a quarter of a drop to an infant. Speaking of infantile cholera, he says (p. 137): “In the cold stage of infantile cholera, purgatives, as well as emetics, are indicated. The purgative which I prefer before all others is the hydrargyrum cum cretâ, etc.” Then of opium, in the same class of cases, he says: “I cannot express myself too strongly against this agent. I repeat, that I am not acquainted with one more disastrous in its effects, nor more frequently and more imprudently employed.” He repeats (p. 139) that, “in infantile cholera opium in any form ought to be rigorously avoided;” and he recommends in the second or febrile stage of the disease “mild laxatives, such as the neutral salts, but particularly calomel in very small doses.” Perhaps the authority of this great empirical physician may have some weight with those who are prejudiced in favour of an opiate and against an evacuant treatment of diarrhœa. We commence to-day the collection of the views of English physicians on the subject.

RECONSTITUTION OF THE POOR-LAW BOARD.

THE appointment of Mr. Lambert, C.B., as Secretary of the new Local Government Board (which includes the Poor-law Board, the Medical Department of the Privy Council, and the Local Government Office), will be very acceptable to all who know the great ability and intelligence which he has shown in some of the most important measures of state-medicine. He was the author of a very important report on the Irish dispensary system, and has taken an initiative and leading part in most of the recent improvements in Poor-law administration; and we feel confident that he will have the wisdom to see that the

hope of reducing pauperism is bound up with the prospect of perfecting the curative and preventive organisation of public medicine, and placing the Poor-law medical system on a better footing. The retirement of Mr. Fleming will not be regretted by the Poor-law medical officers. Justly or unjustly, he was credited with stubborn opposition to much that has been done to improve this department of the Poor-law; and he unquestionably assumed a false position of hostility to persons such as those who constituted the Workhouse Infirmaries' Association, and who sought for public benefits by legitimate representations. His uncompromising hostility had the useful effect of stimulating them to greater activity. He was an especial thorn in the flesh to some of his colleagues, and to his late chief, Mr. Villiers. To retain his position and maintain his influence, which he did, was in itself an evidence of no small vigour and activity of mind.

THE CONTAGIOUS DISEASES ACTS IN INDIA.

THE *Times* correspondent in Calcutta calls attention to a recently published report on the working of the Contagious Diseases Acts in Bombay. It is in favour of Dr. Payne's plan (now adopted in Calcutta) of permitting the women to pass the necessary ordeal at their own homes, on paying the surgeon's costs; only the Bombay Superintendent would pay the inspector a stated salary, and not permit him to receive the fees. The subject is exciting much attention in India. If it could only be discussed dispassionately, some of the real evils of the Acts might easily be removed, but unfortunately it cannot, and the result is, groping about among undoubted evils for a real good. Every report, however, shows that the benefit which has accrued from the Acts has been immense, and there cannot be a doubt that in some form or other they will be maintained. Dr. Payne, who has set on foot the private system, is one of the most high-minded gentlemen in India; but the correspondent does not think that his system will work well till it is based on female, not male, visitations, the latter only being brought to bear on exceptional cases. The subject, he says, is being very earnestly dealt with by Indian medical men, who, as a rule, appear scarcely to comprehend the ground taken by the opponents of the Acts.

CHOLERA AT CARDIFF.

FOUR severe and rapidly fatal cases of cholera are reported to have occurred on board an American ship, on her way from Hamburg to Cardiff. All the four cases were fatal within twenty-four hours of seizure. The ship and crew have been quarantined.

PREVENTION OF CHOLERA ON THE THAMES.

ACTIVE measures are being taken by the joint local boards, under the guidance of Dr. Buchanan, of the Local Government Board, and Dr. Meymott Tidy, to inspect the shipping in the port of London, and guard against the importation of cholera. The Admiralty have consented to lend the *Rhine* and the old *Dreadnought*—now clear of small-pox convalescents—for cholera and quarantine service. The services of Mr. Harry Leach, of the Seamen's Hospital, will be sought as superintendent and medical adviser of the committee. Mr. Harry Leach's reports on this subject, in the *BRITISH MEDICAL JOURNAL*, have been reprinted. These very able reports have done much to bring about the present organisation, of which they abundantly proved the necessity, and furnished the outline plan.

THE MORAL OF RENFORTH'S DEATH.

THE sudden death of Renforth of Newcastle, while rowing an international match, was rendered still more gloomy and tragic by the rumours of poisoning set abroad. They proved to be entirely without foundation. They are none the more likely to be forgotten by the credulous and ignorant public. On the other hand, the disciples of Mr. Wilkie Collins will find in this sad instance a conclusive proof of the mortal dangers of athleticism. The fact is, that such a case as this proves nothing of the sort. Renforth was a man whose constitution was undermined by tropical disorders. He was an epileptic. He was a very excitable man, and rowed under the consciousness of the impending

collapse which his constitutional condition threatened and his medical man prophesied. He never ought to have rowed in a match at all; but his pluck overbore his knowledge of what was due to his weakness. Epileptics of doubtful strength ought not to engage in severe and exciting physical contests. That is the precise moral of this sad affair; but it is one of so little novelty, that it needed not to be pointed by any such tale.

THE MEDICAL OFFICER OF ISLINGTON.

AMONG the candidates for the office of Medical Officer of Health to Islington, vacant by the resignation of Dr. Ballard, is Mr. Haviland. Mr. Haviland is well known to our associates as a laborious and very able worker in various branches of public medicine and sanitary science. Especially he is known for his great work on the *Geography of Disease*. Some of his lectures at St. Thomas's Hospital, illustrated by admirable maps, have been laid before our readers. They have attracted universal admiration. We fear that they have been but ill requited; and we heartily hope that he may receive in this appointment a fitting acknowledgment of his ability and great services. It will afford him a congenial field for further labour of a kind for which he is admirably fitted.

THE WORK OF THE ANGLO-AMERICAN AMBULANCE.

THE illustrious Stromeyer has honoured the work of the Anglo-American Ambulance at Asfeld by translating the report of it, which its surgical chief Mac Cormac published in the *BRITISH MEDICAL JOURNAL*, and has since republished in an interesting and exquisitely illustrated volume. The prologue and epilogue from the pen of the veteran Army Surgeon, are written with the most charming good feeling and warmth of appreciation. His commentaries are of great practical value. *Apropos* of the admirable work of this ambulance, we may notice some prevalent misconceptions as to its relations, and a little "trouble" which occurred at the outset, and of which some incorrect versions have been recently current in the papers. The ambulance was Anglo-American in constitution of its *personnel* and in its origin; but it was Anglo-French in its equipment at the outset, and wholly English in its finances and supplies through its later stages. The facts are, that Dr. Evans, the dentist of Paris, Chairman of the American Committee, opposed to the utmost the proposition of Drs. Sims, Mac Cormac, Frank, Pratt, Tilghman, and May, to start for the scene of action and join the army. So energetic and effectual was his opposition, that these gentlemen separated themselves entirely from Evans's Committee, and, being thus regularly constituted and supported by the French and English Societies, started, in spite of that gentleman's resistance and independently of his aid, for Sedan. At the last moment, the feeling of annoyance led to a personal *fracas* between Dr. Sims and Dr. Evans, which the latter recently brought before the French police; and, on their declining to take any notice, brought a civil action against Dr. Sims, in which he laid his damages at £200, and received £12. After this premature act of warfare on the part of the chief of the ambulance, they started, unimpeded, for the seat of war, and fortunately reached Sedan in time to render the great services which have reflected lustre on both Societies and on all the *personnel* of the staff, and of which the first act is recorded in the pages to which Stromeyer has paid so high a compliment. The brilliant services of the ambulance at the Loire are as yet practically unrecorded, except in a very brief note in the Report of the British Society just published. It will remain for Dr. T. T. Pratt, the working head of the ambulance there, or for Messrs. Parker, Tilghman, and May, his surgical coadjutors, to give them adequate record.

NOBODY'S CHILD.

It will be well that the official inquiry, to be opened next Tuesday by Mr. Henley and Dr. Buchanan of the Local Government Board, into the management of the Small-pox Hospital at Hampstead, should extend beyond the particular cases thus far published. The mysterious disappearance there of a child-patient, of whom all trace has been lost,

s paralleled by the facts of another case which have been authentically laid before us. The parents of a lad of fifteen, who was removed for isolation and treatment, received the afflicting intelligence of his death. They duly prepared for his interment, and followed his coffin to the grave, when the mother received the startling communication that her son was alive and convalescing. Hastening to the hospital, she found—a mistake. She had to be satisfied that her son was really dead. We do not attempt to speak of the gratuitous anguish and alternating mental shocks inflicted on this poor woman. She was one who felt them acutely; and there is no parent in the country who, on hearing her story, will not feel a sympathetic pang. But let that pass. Another somewhat similar history (except that it had a ludicrous ending) comes to us from another of these asylums; and many complaints of inaccurate and imperfect information to friends asking about their sick relatives. Now, in the case of asylums to which patients are removed under the compulsion of a necessary sanitary law, and from which visitors are necessarily excluded, it is peculiarly necessary that the arrangements for giving such information should be efficient and satisfactory. No merits of installation, dietary, or general treatment, will altogether compensate for serious defects in the identification of patients. We are satisfied that inquiry and revision are necessary to save from scandals, under this head, the great metropolitan asylums, which have rendered, and are rendering, inestimable service to the sick poor of London, and whose erection and general administration reflect the greatest honour on the Poor-law Board, and on the many able and public spirited men who have shrunk neither from labour nor from danger in their gratuitous and disinterested services as managers.

SCOTLAND.

WE call attention to the letter of Mr. Annandale in another column, respecting the proposed issue of Parian busts in connexion with the Syme Testimonial.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

AT the meeting of this Society, held on Friday, September 1st, in the Hall of the Faculty of Physicians and Surgeons, the following gentlemen were elected office-bearers for the ensuing session; viz., *President*, Dr. James Adams. *Vice-Presidents*—Dr. James Stewart; Dr. George Buchanan. *Council*—Mr. Torrance, Airdrie; Dr. H. Thomson; Dr. James Gray; Mr. Robert Grieve; Mr. J. Pollock, Mearns; Dr. R. Renfrew; Dr. George Miller; Dr. T. D. Buchanan. *Secretaries*—Dr. Robert Perry; Dr. Alex. Robertson. *Treasurer*, Dr. H. R. Howatt.

IRELAND.

THE CURRAGH.

THE state of the Curragh would still seem to require some improvement; and it is to be hoped that, amidst the preoccupation of military manœuvres elsewhere, the sanitary state of this camp may not be treated with the utter neglect of which there is at present reason to complain. On the occasion of a recent report from the sanitary inspector of the district to the local board, of the accumulations of filth from the Curragh, Major Burrowes said that he could confirm the truth and justice of the complaint. The remedy lay with the Government, "and it was very hard to get the Government to do anything—in fact, the Government would do nothing." The disgusting nuisances complained of have been reported by Major Burrowes and the Hon. Col. Foster, the magistrate at the Curragh, but "no reply has been received." Fever, scarlatina, and other zymotic diseases, are rife in the neighbourhood of the camp. We observe that picketing experiments seem not much more successful at the Curragh than in Berkshire.

"To show you, gentlemen," said the Chairman, "how the present Government do business, I was informed when at the Curragh the other day that, in forty-eight hours after being put into use, not less than six hundred articles of horse-gear for picketing horses were made smash of. So much for economy."

AN ALLEGED LUNATIC.

MR. JUSTICE FITZGERALD on Friday last heard in the Consolidated Chamber in Dublin an application in an important lunacy case. A conditional order had been granted for a writ of *habeas corpus* to bring into court the body of Mr. Manders, who was detained at the Farnham House Private Lunatic Asylum, owned by Dr. J. F. Duncan. The Attorney-General applied for an order that Dr. Wilson, the assistant and representative of Dr. Duncan, be ordered to hand over to Mr. Lewis all letters, papers, and documents belonging to Mr. Alfred Manders which were then or at any time had come into his possession. The order for the inspection and copying of the documents was then made. Subsequently Mr. Macdonogh said he had, by a perusal of the affidavits, satisfied his mind that the gentleman's state of mental health had been very much improved, but he was convinced that under a writ of *habeas corpus* he could not be discharged; yet, under the powers of the Act of Parliament, the Inspector of Lunatic Asylums would be at liberty to discharge him. Counsel had therefore agreed that the conditional order for a writ should be discharged and the cause shown allowed, and that the gentleman should be liberated. This arrangement was ratified by the court.

LUNACY IN IRELAND.

FROM the twentieth report of Drs. Nugent and Hatchell, Inspectors of Lunatic Asylums in Ireland, it appears that the statistics of the year 1870 show an increase in the total number of insane persons in the country as compared with those of the previous year. There was an apparent increase of 347 persons in public asylums, the numbers being—In 1869, 6,316; and in 1870, 6,663. The inspectors also reported the following decreases, viz.:—In private asylums and in gaols, 4; in poorhouses, 153; in Lucan Asylum, 2; and in the Central Asylum for criminal lunatics, 3. The total number of registered lunatics in 1869 was 10,080, and in 1870, 10,266, while the numbers at large were in 1869, 6,579, and in 1870, 6,936, thus showing a net increase of 541. There was only one lunatic confined in gaol at the end of the year. The increase in the number of lunatics in district asylums is natural, and was to be looked for; the accommodation for the classes of insane supported at the public expense having been considerably extended within the last few years, so that these institutions have now, in round numbers, provision for 7,600 lunatics. The diminution observable in poorhouses is accounted for by the numbers of insane persons transferred from them to the various asylums during the year. The term insane is here used in a general sense, and applies, we regret to say, indiscriminately to the idiotic and demented, as well as to the lunatic classes, many of whom, when they become a little troublesome to those in charge of them, are sent to asylums, without any reference to their fitness for treatment in institutions for the insane, or consideration for the additional expenditure entailed upon the district by placing persons in expensive curative establishments who cannot possibly derive any benefit therefrom, and who, with due care and attention, could be very well and suitably provided for in the wards of a poorhouse. The cost of support and maintenance in district lunatic asylums for the year 1870 exceeds that of the preceding year by £10,930, the amounts being respectively, 1869, £140,034:10:11; 1870, £150,964:19:9. This increase is caused in the first place, by the additional number of patients to be supported, namely, 347, which, at the average rate of maintenance per head, gives £8,088:1:6; the actual advance, therefore, in the gross expenditure has been but £2,742:7:4, and it is fully accounted for by the dearness of provisions and other articles of consumption during the past twelve months. The inspectors also give a report on the condition of each asylum.

NOTES OF A SANITARY TOUR THROUGH DUBLIN.

I.

SPENDING this autumn a brief doctor's holiday in Dublin, and being desirous of investigating, for the sake of comparison, the Poor-law and sanitary machinery and arrangements in the metropolis of Ireland, I devoted my time to a personal inspection of the city and suburbs, and to the collection of facts connected therewith. I was induced to make some communications on the result of my observations to the public press of the city; and these have excited some attention and a faint contradiction. It will, I am satisfied, not be useless if I record now, somewhat more in detail, my precise *impressions de voyage*. Strongly predisposed in favour of the admirable Irish Poor-law system and its staff of officers, and warmly attached to many distinguished personal friends in Ireland, I am sure that I shall not be accused of any Saxon prejudice if, in spite of my favourable predispositions, I have to point out some glaring blots in the sanitary administration of Dublin, which reflect, not upon the valuable and indefatigable officers of the city, but upon the faults of the system, and the administration under which they work. It is, of course, far from my intention to hint that other, and perhaps greater, faults and shortcomings may not be pointed out in other great cities; but the Poor-law system of Ireland is so far in advance of that in England, that I hoped to find Public Medicine equally advanced there in its other departments. The *tu quoque* argument may, possibly, be retorted; but, in such a matter as this, it is too pitiful an arm to be used by worthy antagonists, and has no other than a merely dialectic value.

The soubriquet of dear dirty Dublin is a title well earned. The genial and generous hospitality of the Irish is as proverbial as, unhappily, the dirty and unsanitary condition of their metropolis. With some few exceptions, the streets present a disgusting appearance. *It appears to be customary to throw into the streets the refuse from the houses.* This is allowed to accumulate and decompose: hence, in the poorer districts, the air is reeking with foetid exhalations.

The Corporation do not appear to have provided sufficient appliances for keeping the streets in a sanitary condition. For the purpose of washing, cleansing, and scavenging the whole of Dublin, there are only five horse-scrapers, four horse-brooms, thirty-one dust-carts, thirty-five watering-carts, and one roller, which, by-the-bye, is useless. A steam roller was recommended three years ago by the city engineer; but it has not yet been obtained. It, therefore, follows that Dublin, with an area of fifteen square miles and 24,000 houses, and a population of 310,565, cannot efficiently keep her streets in a sanitary condition: it is further proposed to reduce the number of horses from seventy-eight to fifty. The rate levied for the repair and cleaning of the streets is two shillings in the pound, and amounts to £51,378 for the current year.

The water-supply to Dublin is abundant, and exceptionally good, affording twenty-five gallons per head daily. This water is brought from the Vartny water-works, a distance of twenty-two miles from the city. The expenditure on the whole of the Vartny water-works amounts to £524,244:15; the water-rate is 1s. 3d. in the pound, and amounts to £46,000 per annum. This, though apparently expensive, is the most truly economical and satisfactory sanitary feature in Dublin. This removes one of the most important factors in the spread of preventable disease, and contributes to the health, comfort, and happiness, of the citizens of Dublin.

The sewers of Dublin are said to be better than they were some years ago. During the past twenty years, the authorities have been engaged in this most necessary work; and it is estimated that another five years will elapse before they are completed. The sewers do not appear to be ventilated; consequently, at the full tide, concentrated noxious gases are driven up the pipes into the houses, to the manifest injury of the health of the inhabitants.

It has been shown that, in sewers that are alternately wet and dry, a slimy substance forms inside the pipes, and is the source of danger; this can be removed by frequent flushings. In few places could this be more efficiently done than in Dublin. From the City Engineer's Report, it appears that "the bye-wash is 300 feet long, and the quantity passed over it down to the river during the last three months (1869) has been enormous. I estimate it would average at least 100,000,000 gallons per day."

There is a double service of conduit-pipes from Stillorgan to the city, one of which might be used to water the streets, flush the sewers,

and mitigate the Liffey nuisance. The condition of the Liffey has in times past received the consideration of the corporation, but nothing has been done. The present Chief Justice of Ireland said, more than a year ago, that he should be unable to continue his sittings unless the nuisance was somewhat abated. The Liffey nuisance is proverbial. A few evenings ago, it formed the subject for one of the most popular comedians of the day to rebuke the powers that be from the stage, to the manifest appreciation of the house. The Four Courts, Poor-law Commission Offices, Custom House and other important public and private establishments are situated on the banks of this seething ditch, to the manifest injury of the health of thousands of *employés*. The sewers rate is fourpence in the pound, and yields £8,000 *per annum*.

The houses in Dublin of the wealthier classes are, with the exception of the difficulty in keeping out the sewer-gases, in a sanitary condition. Those inhabited by the poorer classes are generally farmed out, and known as tenement houses. The rental is high when compared with the rental of houses in better streets; the weekly payment for each room averaging from 1s. 6d. to 4s. Thus houses that appear in the valuation list as being rated at £30 per annum, realise when let in tenements over £80; for which sum an elegant house might be rented in one of the best streets in Dublin. The people inhabiting these tenement houses are clean. The staircases, passages, and rooms, are fairly whitewashed, and compare favourably with the rooms of people of a like class in London. The cellars of these houses, as a rule, are not inhabited, but they become the receptacle of accumulated refuse. Waterclosets and dust-bins in these houses are unknown; the yards, privies, and cesspools, baffle description: they are frightfully filthy. In some of the yards pigs are kept. The water from the roofs of these houses is not carried off by drains, but allowed to percolate through accumulated filthy refuse into the cellars, and thus noxious gases are diffused through the houses. Under these conditions may it not truly be said, here we have excrement-sodden soil producing excrement-reeking air? Thus is Dublin fully prepared for the reception and rapid multiplication of cholera and fever germs. Under such favourable conditions it is not surprising to learn that fever is endemic in Dublin.

It is worthy of remark, that there is only one fever-cab connected with the sixteen Dublin hospitals. It is not an uncommon thing to see all kinds of fever taken through the streets without the slightest precaution in ordinary cabs and cars. On one occasion I saw a bad case of small-pox drawn through the streets of Dublin on a greengrocer's barrow, accompanied with other members of the family, to the hospital. There is an apparatus for the disinfection of clothing, bedding, etc. It is situated in Marrowbone-lane, built in the corner of a dunghill—one of the depôts for the accumulated refuse of Dublin. There is a hole in the pipe through which the smoke and soot escape into the disinfecting chamber. This condition has existed for several weeks. The chamber is about thirteen feet square by seven feet high; it is open daily from ten till four. The process of disinfection occupies five hours. There is no vehicle to bring the foul clothes to the apparatus. The articles to be disinfected are, therefore, brought in cabs and cars. Are these public vehicles disinfected, or are they allowed to spread the disease? or does the same cart that brings the foul clothing take back the disinfected clothing, and thus reinfect it? Is not disinfection carried out in this manner a false security? According to the reports, ten people had five hundred articles disinfected in a month. Now, the number of persons suffering from communicable disease during that month would be over 1000, therefore 99 per cent. did not have their things disinfected. It is the duty of the Corporation to find adequate means for the disinfection of bedding and clothing, and to supply one or more covered carts for the conveyance of foul articles through the streets to the disinfecting apparatus. It is a monstrous thing to permit either persons or clothes infected with communicable disease to be carried in public vehicles.

The special arrangements made in the anticipation of cholera are, to say the least, unique. In accordance with the advice of the Privy Council, inspectors have been appointed to examine all suspected ships. Should cholera be discovered, the patient is immediately to be brought on shore as best he can. Then the nearest cab will be impressed to convey him to one or other of the two general hospitals that have arranged to receive cholera patients. These hospitals are so admirably situated, that a cholera focus will be established in the most fashionable parts of the north and south sides of the city. It is also contemplated to erect cholera-sheds in the grounds of another hospital, as in a former visitation of cholera. The danger of introducing and spreading cholera amongst the citizens of Dublin might have been averted by obtaining a government ship and improvising a temporary floating hospital.

BENSON BAKER, District Poor-Law Medical Officer, Honorary Secretary of the English Poor-Law Medical Officers' Association, etc.

THE CHOLERA.

A MAN died at Atzgersdorf near Vienna on the 3rd instant of cholera, after an illness of twelve hours' duration. No case had occurred in Vienna itself on the 9th.

THE Hungarian Minister of the Interior has addressed to the authorities in various localities a circular, directing attention to several real or alleged cases of cholera which had been reported as having occurred at Ofen, Marossék, and other places; and calling for the exercise of the greatest energy and rigour in the promotion of sanitary measures.

THE CHOLERA IN GERMANY.

FROM Königsberg, under date September 7th, it is announced that the cholera appears to be diminishing in the Baltic provinces. On the 4th instant, 40 persons were seized, of whom 27 died; on the 5th, 17 cases and 15 deaths occurred. Both at Stettin and Danzig only one fatal case had occurred within the last few days; and at Elbing, up to the 5th instant, 69 persons had been taken ill, and 42 had died.

Mr. Archer Burton of Coblenz writes to the *Times*:—"It is true that conditions exist in this country which are considered in England highly favourable to the spread of cholera. For example, houses which are not drained into cesspools are the exception in Germany; but this is not found to be attended with the results we should anticipate with our generally-received theories. From a table quoted by Dr. E. Lankester, in his pamphlet on cholera, the fruit of the researches of a French writer, it appears that while 1 in 130 are attacked by this dire malady in Great Britain, where sanitary questions and regulations are supposed to be well understood, in Germany, where drainage is in its infancy, only 1 in 700 are attacked." We should like to hear something more from Dr. Lankester of these statistics and their interpretations. We should be not a little surprised to find them in any way bear the meaning which Mr. Burton attaches to them.

THE CHOLERA IN PERSIA.

THE *Levant Herald* has received the following brief note from its Tabreez correspondent, dated August 11th:—"The cholera broke out here on the 15th of last month, and has been daily increasing in virulence; the death-rate lately amounted to 240 daily, but is now about 125, if the Persian accounts can be received as authentic. A violent thunderstorm happened in the mountains around Tabreez about ten days ago, followed by such an inundation as has never been known hitherto. The destruction of property caused in the bazaars and gardens is estimated at £120,000. We are all, Christians and Mussulmans, camped out in the mountains. All the bazaars are closed; commerce and business of all kinds are at a standstill. The mortality among the soldiers was so great that all the regiments at Tabreez were disbanded, and the soldiers allowed to proceed to their villages. There is a quarantine of three days at the Russian and, I believe, the Turkish frontier. The advantage of the former is not very evident, as we hear that Erivan is suffering from cholera equally with Tabreez."

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting is appointed to be held at Rochester (at St. Bartholomew's Hospital), on Tuesday, September 26th, at 3.30 P.M.; Dr. BURNS in the Chair.

Papers on clinical subjects by A. W. Nankivell, Esq.; by J. H. Lyddon, Esq.; and by Dr. Bell, are promised.

Dinner will be provided at the Bull Hotel at 5.30.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, September 11th, 1871.

SOUTH MIDLAND BRANCH.

THE next meeting of the above Branch will be held at the Town Hall, Wellingborough, on Tuesday, October 10th, at 2 P.M.

Gentlemen who intend to read papers or cases, are requested to forward the titles of the same forthwith.

J. M. BRYAN, M.D. } *Honorary Secretaries*.
WM. MOXON. }

Northampton, September 11th, 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

A MEETING of the members of the above District will be held at the Castle Hotel, Hastings, on Wednesday, the 27th instant, at 2.30; the chairman to be chosen at the time.

Dinner will be provided at 4 o'clock. Charge 5s., not including wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

As the District Honorary Secretary, Mr. Mudd (being about to leave Uckfield), will resign, it will be necessary to appoint his successor at this meeting.

Gentlemen who wish to make communications to the meeting, are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

G. F. HODGSON, *Hon. Sec. of the South Eastern Branch*.

52, Montpelier Road, Brighton, Sept. 6th, 1871.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch will be held at the Railway Hotel, Taunton, on Tuesday, October 3rd, at 5 P.M. Dinner on the table at 5.15 punctually. Tickets 3s. 6d. each, exclusive of wine and waiters.

The following resolution was passed at the annual meeting:—"That with a view to obtaining from members of the Branch their opinion, and to this extent, authority on especial points of interest, a notice be sent to each member, at least one month before a general meeting of the Branch, of a question on a medical or allied subject to be proposed by the Council, on which at the said meeting each member will be expected to express his opinion; but having regard to the number of opinions it is sought to elicit, no argument in supporting an opinion shall exceed five minutes in delivery, whether read by the writer, or deputed, or spoken extemporaneously."

The following question has been settled by the Council as the one on which opinions should be now asked:—"Does the application of Carbolic Acid favour the healing of wounds?"

Gentlemen intending to be present at the dinner, or to read papers afterwards, are requested to give notice to the undersigned, so that he may make the necessary arrangements.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, September 11th, 1871.

CORRESPONDENCE.

SANITARY AFFAIRS IN DUBLIN.

SIR,—Mr. Benson Baker's statements had been reported in the local papers when some of them were quoted in your pages; but as your readers have not seen these papers, I am sure you will allow me to show them how Dublin has been traduced. Mr. Baker states that the means for removal of filth from the streets, and for disposal of sewage, are of the worst kind, disgusting and dangerous. They are not satisfactory, as must be also said of many English towns; but that his description is greatly exaggerated, every member of our Association who has visited Dublin will allow. It should be remembered that we have had, for five years only, Sanitary Acts which have been working beneficially in England for twenty-three years, and that sanitary improvements must be always gradual. Our proportion of poor persons is very large; and our city taxes will have to bear, in the ten years 1864-73, an expenditure of a million on our water-supply and main drainage. Our water-works were constructed by Bateman and Rawlinson, and approved most highly by Bazalgette and Lesseps; but Mr. Baker teaches us that we waste more than half our water by the bye-wash, and that this should be used for watering our streets and flushing our sewers. Not a drop is let off by the bye-wash save during the two wettest winter months, when rain waters and flushes only too plentifully. When required, our streets and sewers are watered and flushed by water containing carbolic acid.

Mr. Baker next tells you that "thirteen thousand of the citizens of Dublin suffer from fever annually, of which nine per cent. die." That this statement quadruples the number appears from the following extract from my report for four weeks ending September 2nd, 1871. "The deaths by fever for each of the past six years have been 492, 480, 309, 256, 241, and 351 respectively. The admissions from city dwellings into the above hospitals (Hardwicke and Cork Street), which receive at least three-fourths of the fever cases which arise, were, during

the same periods, respectively, 3,245, 2,536, 1,841, 1,211, 1,164, and 1,652. The Cork Street lists do not distinguish the various diseases, and a considerable proportion are not contagious; for example, of the 989 admissions recorded in the last report of the Government Hospital Board, 232 were for bronchitis, pneumonia, and rheumatism. A circumstance which heightens Dublin death-rates and fever-rates is, that the returns include about thirteen per cent. of strangers who seek relief in its numerous and famous institutions for the sick poor."

The last Annual Poor-law Report (which Mr. Baker has probably seen, for we are favoured with his investigations on that department) returns for all Ireland's "cases of fever or other contagious diseases in workhouse hospitals and fever hospitals", the figures 13,513, which, by a curious coincidence, closely accords with the round number he inflicts on Dublin.

"The sanitary authorities have not supplied any mode of conveyance of infectious disease to the various hospitals"—because the hospitals had already provided vehicles. To prevent the occasional use of other carriages is impossible.

With regard to the reception of cholera cases from foreign ships, I have always advised a floating hospital; but many great authorities (including Sir D. Corrigan and Dr. Haughton) have counselled otherwise. We are striving to establish sheds for the purpose on a pier in the bay, over a mile from the city. Dublin is so strikingly healthy, and the contagion is still so distant, that I trust they may not be wanted.

I think your readers will agree with your editorial opinion that Mr. Baker's "statistical observations are not without flaw", although they may not award even your faint praise "that they are likely to be found based upon facts." If his statements were true, he would have done more good by reporting them to those who have care of the city, than by alarming our citizens and censuring their medical authorities.

I am, etc., E. D. MAPOTHER.

18, Merrion Square North.

THE TORQUAY EXCURSION.

SIR,—As a pendant to your notice of the Torquay Excursion meeting, can you find room for the following verses by my friend, Dr. Evanson?

I am, etc., C. RADCLIFFE HALL.

Derwent House, Torquay, Sept. 11th, 1871.

"OUR HOME": A REFLECTION.

Saturday, August 12th, 1871.

Inscribed to DR. BEATTY, of Dublin.

Still was the evening, the scene passing fair,
And the broad summer lightning illumined the air;—
But oh! more than all, my old Friend, he was there,

And we sat by the smooth terrace walk,
And there were two ladies, each genial as bright,
Whose presence can ever add double delight
To the brightness of day or the beauty of night,
And we sing, and we laugh, and we talk.

My Friend and I talk of the old, early times,
When the days passed all merrily as wedding chimes,
While he sang his songs, and while I wrote my rhymes,

In the gay, joyous days of our youth.
And then we reflected, and thought of the past,
And our looks o'er a long varied lifetime were cast,
Till we felt how old age stole upon us at last;
For old men are we both, now, in sooth.

But is spring time, indeed, without any alloy?
And does summer time never know aught to annoy?
Is it autumn alone that's divested of joy,

While its harvests wave o'er the rich loam?
Oh! the autumn has scenes that are grand as sublime;
And Heaven itself has its own harvest time;
Be our music, then, sacred,* and solemn our rhyme,
As we hasten apace to Our Home.—R. T. E.

THE RECENT INQUEST AT BATH.

SIR,—The very sad case of the death of a little child after an application of an alcoholic solution of bichloride of mercury, made by Dr. Meeres for the cure of ringworm, which has been reported in the daily press, is of so much importance that I hope you will allow me to

* Dr. Beatty is author of an Essay on Sacred Music, and has enjoyed the rare not unique distinction of having been President of the Royal College of Surgeons, and also President of the Royal College of Physicians in Ireland.

make one or two comments upon it, especially as my name has been mentioned in connexion with the remedy employed.

In the first place, the remedy is not mine: it must have been used many years before I was born. Though I do not use it now, because I like other things better, yet I did use it for about thirteen years very extensively and very freely, painting it lightly over patches of tinea tonsurans. It was, indeed, my usual remedy for ringworm. I have never in a single instance seen any evil result follow its employment. I am confident that in Dr. Meeres's case the patient must have been peculiarly susceptible to the influence of mercury. It is clear that some mercury was absorbed into the system—an occurrence perfectly novel to me under the circumstances. I do not see that Dr. Meeres could have in any way foreseen the exceptional result which took place.

I learn that the child improved the day before its death; and that the latter happened suddenly during fainting, on the child, who had been prostrated by diarrhoea, getting out of bed unassisted to relieve the bowels. This is an element in the case which should not be overlooked in estimating the cause of death.

I do think the verdict most unjust towards Dr. Meeres. It is almost unnecessary for me to add, that these remarks are perfectly consistent with a feeling on my part of the keenest sympathy for the parents of the little child.

I am, etc., TILBURY FOX, M.D.Lond., F.R.C.P.
Sackville Street, W., September 1871.

SYME TESTIMONIAL.

SIR,—The bust of the late Mr. Syme being now completed, it is proposed to have some copies of it made in statuary porcelain. These copies will be one foot in height; and should one hundred be ordered, they can be provided at a cost of one guinea each. Before making arrangements for the preparation of these small busts, I shall be glad to receive the names of any gentlemen who may wish to have one.

I am, etc.,

THOMAS ANNANDALE.

34, Charlotte Square, Edinburgh.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

THE instruction in Natural Science is carried on at the Museum, where there is practical instruction in Physics, Chemistry, and Anatomy and Physiology, together with courses of lectures by the several professors; viz.—Regius Professor of Medicine—H. W. Acland, M.D., LL.D., F.R.S.; Geometry—H. S. Smith, M.A., F.R.S.; Natural Philosophy—Rev. B. Price, M.A.; F.R.S.; Experimental Physics—S. Clifton, M.A., F.R.S.; Chemistry—Sir B. C. Brodie, Bart., M.A., F.R.S.; Physiology—G. Rolleston, M.D., F.R.S.; Zoology—J. O. Westwood, M.A., F.L.S.; Geology—J. Phillips, M.A.; Botany—M. Lawson, M.A.; Mineralogy—N. S. Maskelyne, M.A., F.R.S.; Lee's Reader in Anatomy—J. B. Thompson, B.A.; Demonstrator in Anatomy—Charles Robertson, Esq.; Demonstrator of Chemistry, T. H. G. Wyndham, M.A.

Large collections illustrate the several subjects; there is a pathological series, including the collection of Schroeder Van der Kolk, in the medical department, and a medical laboratory. The Radcliffe Library, containing nearly 20,000 scientific volumes, is open to all students daily from ten to four, and on certain evenings during term. There are also lectures and practical instruction in Botany at the Botanical Gardens; and clinical instruction at the Infirmary.

UNIVERSITY OF CAMBRIDGE.

THE following courses of lectures will be delivered during the ensuing year.

Michaelmas, Lent, and Easter Terms.—Practical Chemistry, by Mr. G. D. Liveing, M., W., F., 1 P.M.—Medical Clinical Lectures, F., 10 A.M.: (Michaelmas) Dr. Paget; (Lent) Dr. Latham; (Easter) Dr. Bradbury.—Surgical Clinical Lectures, Th., 11 A.M.: (Michaelmas and Lent) Mr. Lestourgeon; (Easter) Dr. Humphry.

Michaelmas and Lent Terms.—Zoology and Comparative Anatomy, by Mr. Newton; M., W., F., 1 P.M.—Anatomy and Physiology, by Dr. Humphry; Tu., Th., S., 1 P.M.—Practical Anatomy, by Dr. Humphry and Mr. Carver; M., W., F., 7 P.M.—Practical Histology, under the superintendence of Dr. Humphry.—Pharmacology, by Dr. Fisher and Dr. Latham, Tu., Th., S., 9 A.M.

Lent and Easter Terms.—Pathology, by Dr. Bond, M., W., F., 9 A.M.—Chemistry, by Mr. Liveing, M., W., F., 12 noon.

Michaelmas Term.—The Laws of Heat, by Mr. Liveing, M., W., F., 12 noon.

Easter Term.—Botany, by Mr. Babington, M., Tu., Th., F., 1 P.M.

The dissecting-rooms and museums of anatomy are open daily during the vacations as well as in the terms, and the Professor and demonstrator are in attendance to assist and direct the students. A course of Practical Histology and a course of instruction in Practical Anatomy is given during the long vacation.

The Chemical Laboratory is open daily from 10 A.M. till 6 P.M.; and the professor will attend to give instruction at the times above specified, and at such other times as he may from time to time appoint. The Museum of Materia Medica at Downing College is open daily to all medical students. The physicians will attend at the hospital on Mondays, Wednesdays, Thursdays, and Fridays, for medical instruction, at 10 A.M.; and the surgeons on Tuesdays, Thursdays, Fridays, and Saturdays, at 11 A.M., for surgical instruction.

In order to obtain certificates of attendance on the medical practice and medical clinical lectures, pupils must have attended the physicians' practice three times at least in each week, during term time, inclusive of the clinical lecture, and must also have taken notes of such cases as may be assigned to them by the physician; and for the certificate of attendance on the surgical practice and clinical lectures, pupils must have attended the surgeons' practice three times in each week, inclusive of the clinical lecture. Pupils are recommended to attend the physicians' and the surgeons' practice concurrently.

Opportunities for clinical instruction in mental diseases will be afforded at the County Asylum, Fulbourn, by Dr. Bacon, during the Michaelmas and Lent terms.

Attendance on the lectures on Botany, Chemistry, Materia Medica, Anatomy, Physiology, and Dissections, is recognised by the Royal College of Surgeons of England as a sessional course. Students entered to the practice of the hospital are admitted to the clinical lectures without additional fee.

OBITUARY.

THOMAS HORNBY, ESQ., POCKLINGTON.

MR. HORNBY, whose death has recently taken place, practised at Pocklington in Yorkshire for nearly sixty years, and was much respected by his friends and patients for his professional skill and moral qualities. He had never missed a meeting of the British Medical Association for many years; and, in his eightieth year and in declining health, could not be dissuaded from attending the meeting at Plymouth. This proved too great an exertion in his feeble state: he returned home in a state of extreme prostration, from which he never rallied.

WILLIAM EGGINTON THOMPSON, M.R.C.S.

MR. THOMPSON died from acute enteric and pulmonary inflammation, after an illness of three weeks, at his residence, Shepherd's Bush, London, on the 5th instant, aged 54. Mr. Thompson was born in 1817, at Stanbrook Hall, near Worcester. He received his medical education at Guy's and St. Thomas's Hospitals. He spent the earlier years of his professional life in practice near his home; but during the last four years he was engaged in practice at Shepherd's Bush, where he had gained a good and rapidly increasing connexion. Mr. Thompson was possessed of sound professional experience and judgment; and his character was that of an amiable, unobtrusive Christian gentleman. As such, his loss is severely felt by his late patients and friends.

CHARLES DUIGAN, L.K.Q.C.P.I.

AFTER a painful illness of three months' duration, this eminent provincial physician died on the 31st ult., at the age of 45. Dr. Duigan was educated at the Richmond Hospital and School of Medicine. He was apprenticed to the late Mr. O'Beirne; and took his diploma in 1844 at the early age of nineteen, having shortly before won Sir Henry Marsh's prize for an essay on Dropsy. He at once settled down to country practice as assistant to his father, who then had the Dispensary of Kilbeggan. On his father's death very soon afterwards, he moved into the town of Mullingar, and took on himself the entire charge of his mother and a large family of brothers and sisters. He rapidly rose into practice, and gained the confidence and esteem of all who had the good fortune to engage his services. He lived a most laborious life, never allowing himself any relaxation day or night, and apparently enjoyed excellent health; but his overtaxed constitution suddenly gave way to the disease which for some time was insidiously progressing. His first symptom of failing health was a sudden attack of vomiting

which came on early one morning, apparently without cause. On searching for the cause of this, he was found to have highly albuminous urine; and from that moment the symptoms of uræmic poisoning rapidly and steadily progressed. At length suppression of urine came on, and he died comatose after a long series of uræmic convulsions. Dr. Duigan was Honorary Surgeon to the Westmeath Infirmary.

JAMES DOUGLAS MURRAY, M.B., OF BIRKENHEAD.

JAMES DOUGLAS MURRAY became a matriculated student of Durham University in October 1864, and studied arts there for three terms. In 1865, he entered upon his medical studies in the School of Medicine at Newcastle-upon-Tyne. In June 1869, he passed for Licentiate in Medicine and Master in Surgery at Durham; and in June 1870, he took his degree of M.B. at the same place. During his student's career he obtained a scholarship, a medal, and several prizes. Mr. Murray was in the course of forming a successful and remunerative practice at Birkenhead, but it is believed that its fatigues and responsibilities, preying upon a young frame and an exceedingly nervous temperament, proved too much for his physical strength and his mental equilibrium. He died September 5th, aged 23.

E. S. GREEN, L.R.C.P., SETTLE.

WITH much regret we record the death of Mr. E. S. Green, which took place on the 3rd ult. Mr. Green was the youngest son of the late J. S. Green, Esq., surgeon, of Houghton-le-Spring, Durham. His death was caused by a sad accident. He had ridden to his hay-field; and, anxious to assist his man, as a steep hill had to be ascended, he was attaching an impromptu trace to the horse which he had ridden, so as to connect it to the shafts as a leader, and assist the cart-horse. Having tied the rope to each end of the trace, he was about to fix it, uncut, to the shafts of the cart, when the horse took fright, and started off at a furious pace up the hill, dragging Mr. Green (who was encircled) after him. For a considerable distance, by grasping each side of the rope, he succeeded in keeping his feet. Eventually, however, from exhaustion, he fell, and his foot became entangled. He was in this manner dragged along the road, a distance of a mile and a half, when the runaway horse was stopped. He was immediately conveyed to his residence at Settle. His body was frightfully bruised over the back, hips, and both arms. He lingered for two days. He was attended by Dr. Deighton of Clapham, and Mr. Samuel Hey of Leeds; but all their efforts were of no avail.

His loss is severely felt. In his professional capacity, he was an expert surgeon and a successful operator. He was surgeon in connection with the Settle and Carlisle Railway. He was interred in the burial ground of Ascension Church, Settle. His funeral was attended by a large number of friends; and the shops in the town were closed. A full choral service was given in respect to his memory. He was only twenty-seven years of age, and has left a widow and three daughters.

BRAMLEY WHITTLE, M.R.C.S.

MR. BRAMLEY WHITTLE was born at Croydon in 1809, and was apprenticed to Mr. Dix, at Long Buckby, in Northamptonshire. He was a student at Guy's Hospital, and spent some years at the Paris hospitals. He practised for upwards of thirty years in Norfolk Street, Strand, as a general practitioner. In 1864, he partly retired from practice, residing at Langton, in Dorsetshire; and in 1867, he removed to Sidbury, in East Devon, where he died lately of heart-disease, aged 62.

THOMAS CASEY, M.D.

DR. THOMAS CASEY, whose death took place at St. Albans on August 21st, after a long and painful illness, was born at Cork in 1795. Shortly after his graduation at Edinburgh in 1818, he was appointed Physician to the Dispensary at Cork, where he had commenced practice, and a few years afterwards to the North Infirmary in the same town. In 1840, a serious illness compelled him to leave Ireland and relinquish practice for a time. The Committee of the Infirmary, in gratitude for his seventeen years' services, appointed him Consulting Physician. After a time he was able to recommence practice in St. Albans, where he took an important part in the foundation of the Dispensary (now Hospital), to which he was the first Physician, and which he served for twenty years, until age and illness compelled him to retire from practice. On his resignation, he was appointed Consulting Physician, and presented by the subscribers with a handsome testimonial. He also held the appointment of Consulting Physician to the North Herts Infirmary at Hemel Hempstead from 1846 to 1855.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, September 7th, 1871.

Raines, Charles, Hull
Rendall, William, Maiden Newton, Dorset

The following gentlemen also on the same day passed their first professional examination.

Davies, Ambrose Lewis, St. Mary's Hospital
Northey, Gilbert William, St. Thomas's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

APOLLO GLEE AND FRIENDLY SOCIETY, Birmingham—Surgeon.
ATCHAM UNION, Salop—Medical Officers for the St. Chad's and St. Mary's Districts.

BIRMINGHAM LYING-IN CHARITY—Two Honorary Surgeons.

CHARING CROSS HOSPITAL—Assistant Physician.

CLOGHER UNION, co. Tyrone—Medical Officer for the Aughnacloy Dispensary District.

COLCHESTER—Certifying Factory Surgeon for District of.

DUMBARTON—Surgeon to the Prison.

GAINSBOROUGH DISPENSARY—House-Surgeon.

GREENWICH UNION—Dispenser.

ISLINGTON—Medical Officer of Health and Analyst.

KENT AND CANTERBURY HOSPITAL—Assistant House Surgeon and Dispenser.

MAGHERAFELT UNION, co. Londonderry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bellaghy Dispensary District.

MANCHESTER ROYAL INFIRMARY—Physician's Assistant.

MERTHYR TYDFIL UNION—Medical Officer for the Penderyn and Rhigos Districts.

MIDDLESEX HOSPITAL—Assistant Surgeon; Resident Physician's Assistant.

MOSTYN COLLIERY FRIENDLY SOCIETY—Medical Officer.

NORTH DISPENSARY, Liverpool—Honorary Medical Officer.

NORTHERN HOSPITAL, Liverpool—Physician.

ORSETT UNION, Essex—Medical Officer for the Grays District.

POCKLINGTON UNION, Yorkshire—Medical Officer for the Pocklington No. 1 District.

PORTSEA ISLAND UNION—Medical Officer for the Southsea District.

QUEEN ADELAIDE DISPENSARY, Bethnal Green—House-Surgeon.

ROYAL INFIRMARY, Edinburgh—Resident Physician, Clinical Wards.

ST. SAVIOUR'S UNION, Surrey—Medical Officer for District No. 3.

SOUTHAMPTON UNION—Medical Officer for District No. 2.

STOCKPORT INFIRMARY—House-Surgeon.

TIVERTON UNION, Devon—Medical Officer for the Silverton District.

WESTERN GENERAL DISPENSARY, Marylebone Road—Assistant Dispenser.

WESTMINSTER HOSPITAL—House-Physician.

WORKSOP DISPENSARY—Resident Surgeon.

YORK UNION—Medical Officer and Public Vaccinator for District No. 4.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ROGERS, Robert J., Esq., appointed Surgeon to Brighton Police, and Examiner of Lunatics for the Borough Magistrates, *vice* *Henry Penfold, Esq., resigned.
THOMSON, George, M.B., appointed Medical Officer for Braemar, *vice* William Marshall, M.D. Glasg., appointed Medical Officer to Her Majesty's Household at Balmoral.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

JAY, Frederick Fitzherbert, L.R.C.P. Lond., to Martha Eliza, widow of the late William Lupton, Esq., of Leeds, on September 11th.
VASEY, Charles, Esq., of Cavendish Place, London, to Jane, eldest daughter of William Lyonn, M.D., at Brandon Place, West George Street, Glasgow, on September 1st, by the Rev. Dr. Burns of the Cathedral, assisted by the Rev. Dr. Gillan of Inchinnan.—No cards.

BEQUESTS.—Mr. Giles Loder (in addition to £5,000 to the Salisbury Infirmary, and legacies to many non-medical charities) bequeathed £2,000 to the Asylum for Idiots; £1,000 each to the Orthopædic Hospital, Western General Dispensary, St. Mary's Hospital, Paddington, and the Royal Hospital for Incurables; and £500 each to the Royal Medical Benevolent College, the Western Infirmary for Incipient Consumption, Torquay, the Hospital for Consumption, etc., Brompton, and the Cancer Hospital.—Dame Jane Morrison, of Snaresbrook, relict of Sir James William Morrison, bequeathed £500 each to the Hospital for Diseases of the Chest, Victoria Park, and the Dover Infirmary.

DR. WILLIAM MAC EWEN, having been appointed Casualty Surgeon for the Central Police District, Glasgow, has been presented with a complimentary address, a signet ring, and other articles of jewellery, by the officials of the Belvidere Fever Hospital, London Road, Glasgow, as a mark of their appreciation of his services there.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL *Letters and Communications for the JOURNAL*, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. BUSH (Frome).—We have referred the question to Professor Corfield of University College, London.

G. A. P.—A gentleman possessing the M.D. of Pennsylvania or of Otaheite is entitled to call himself Doctor in the present state of the law, whether his degree can be registered or not.

MEDICUS (Leicester) will be able to derive an answer to his question from a perusal of the regulations of the Royal College of Physicians, given in the Educational Number of the JOURNAL. We would refer him specially to the last paragraph of the second column in page 284, and the first column of page 286.

THE HEART IN DEATH FROM ASPHYXIA.

SIR,—With reference to the condition of the cavities of the heart in death from asphyxia, set down in your reply to "J. F." (Aug. 12th), I beg leave to say that my experience as medical witness to one of the City coroners leads me entirely to concur in the view which you express—"that both sides of the heart are found full, the left less so than the right." In all the cases which I have examined—and I see, perhaps, as much of the pathology of sudden death as most persons—I invariably find the state of heart which you describe to exist, modified more or less as to quantity and quality by the rapidity with which death took place in each subject. Taylor says (p. 723) "that the left side is either empty or with less than the right." I am, etc., R. W. EGAN, L.R.C.S.I., L.R.C.P.Ed.
Dublin, August 18th, 1871.

ROYAL COLLEGE OF SURGEONS.—The Library and Museum will be re-opened on Monday, October 2nd, on which day the annual registration of metropolitan students will take place, and terminate on Saturday, the 14th.

KOUMISS.

SIR,—With your permission, I would suggest the correction of an error in your leading article upon "The Geography of Phthisis", in the JOURNAL for September 2nd, 1871.

Institutions for the treatment of disease with koumiss have not yet gone out of fashion in Europe; but, on the contrary, are multiplying yearly. Moreover, the scientific literature of the subject is rapidly increasing in amount and interest. These facts are attested by the catalogues of the Leipzig and St. Petersburg publishers.

In my own knowledge, Stahlberg now conducts an extensive and popular institution at St. Petersburg; and there is another of equally high favour at Warsaw, under the direction of Drs. Przystanski and Nowakowski. At Odessa, Dr. Levinson has charge of an establishment; at Maskau, Dr. Marechi; at Oltenstein, near Dresden, Dr. With, jun. In Samara, Berlin, and different parts of Europe, there are other larger and minor institutions, all of which are in high tide of success at present. Moreover, arrangements are now being completed for inaugurating several Koumiss Institutions in the United States.

In England, there is no institution; but here at London a manufactory has been in successful operation for nearly two years, and to this latter many medical men send their prescriptions for koumiss.

In conclusion, my own personal observations and professional experience enable me to say that the good effects of koumiss are not dependent upon locality, for I have never failed to obtain from its proper use here all the great benefits that attend its administration in Tartary.

I am, etc.,
8, Weymouth Street, September 7th, 1871.

VICTOR JAGIELSKI, M.D.

JENNER'S TEACHINGS.—In order to avoid a formidable correspondence on a matter easily settled, we advise Dr. Davey to communicate with Dr. Seaton, who will no doubt point out the passages to which he refers. This will clear the way for any further remarks which Dr. Davey may wish to offer, and enable him to abbreviate them.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

MR. CLEMENTS (Manchester).—For early insertion, the necessary condition is great brevity. We have always on hand a number of long manuscripts from which to select; short papers and notes of interest and merit make their own way *quickly*—as was the case with that of our correspondent.

GREY HAIR (Birmingham).—To our great misfortune, the note which we published four years since of a new hair-dye, suggested by Dr. McCall Anderson, of Glasgow, in a paper in the *Edinburgh Medical Journal*, was copied into some of the London papers, and thence made the round of the whole of the press of Great Britain and the Colonies. It seems to possess some peculiar fascination, and has brought down upon us a continued stream of stamped envelopes, with requests for private information as to this and other dyes. We have come to the conclusion that hair dyes are in extraordinary request, and that the field of invention is profitably open to persons of enterprise and ingenuity. But as it lies out of our functions, we must ask "Grey Hair" to refer back to the *BRITISH MEDICAL JOURNAL* of Nov. 21, 1868 (long since out of print), for the only information which we have to give on the subject; and express the unalterable determination of destroying all stamped envelopes addressed to us for carrying back information relating to it. The same post which brings "Grey Hair's" letter, brings a number of *Il Diritto*, containing a translation of this same paragraph still on its travels. Dr. McCall Anderson's fame as an inventor must by this time have become firmly rooted in the two hemispheres.

DISPUTED MIDWIFERY FEES.

SIR,—If recollection serve me rightly, I read in one of the numbers of our *JOURNAL* (which I am unable to alight upon) that a brother professional had sued a person in the county-court for a midwifery fee, and, although his services having been previously enlisted he had not actually attended, recovered his fee. The practice of disputing such fees obtains here not unfrequently; and to obviate its repeated occurrence, I am anxious to take steps. Would any correspondent kindly supply me with the name of the Court where the action was tried, to form a precedent to legal proceedings?
I am, etc.,
August 14th, 1871. A MEMBER.

EFFECTS OF BROMIDE OF POTASSIUM.

A CORRESPONDENT asks whether any ill effects, and, if so, of what character, have been known to follow the long-continued use of the bromide of potassium (latterly in two-scruple doses three times a day).

** Dr. W. A. Hammond has noticed, in the case of a patient suffering from paralysis agitans, the temporary production of melancholy, with delusions, contraction of pupils, drowsiness, and failure of memory, while the bromide was being taken in thirty-grain doses three times a day. We shall be glad if any of our readers can aid us to further answer our correspondent's question.

CASTOR-OIL TREATMENT OF CHOLERA.

A MEMBER (Reigate) has evidently profited by the teaching which he intimates has been too profusely scattered. The doctrines which he thinks "no one will now dispute", are precisely those which a few years since almost every one would have disputed. We think, however, that he overrates their acceptance; and the large amount of attention which is still bestowed upon them, arises not more from their importance and the remarkable ingenuity and completeness of the physiological theory and pathological observations on which they are based, than on the active opposition with which they are met by eminent and practical authorities, and the degree of uncertainty which still hangs about them. In a subject of so much importance, it is doubtful whether discussion can be too free, even at the risk of boring those who have (perhaps prematurely) "made up their mind."

A SECOND YEAR'S STUDENT.—The primary and pass examinations for the diploma of membership of the Royal College of Surgeons, will take place about the middle of November. The exact dates will be duly advertised.

A COMMERCIAL ANTAGONISM.

SIR,—One of the weekly medical papers, with the style, taste, and liberality that generally distinguish it, in feebly sneering by anticipation at the Annual Meeting of the Association, says "the addresses to be delivered by Dr. Johnson and Mr. Lister are the solitary *pièces de resistance*." Of course it may never have heard of the names of Inspector-General Murray, Smart, Gordon, Beatty, Macnamara, W. Mac Cormac, Square, Sankey, Braxton Hicks, Tilt, Meadows, Jonathan Hutchinson, A. P. Stewart, Allbutt, Henry Smith, Christopher Heath, Barnes, or Tilbury Fox, Anstie, Henry Bennet, Barham, Wilson Fox, Hughlings Jackson, Aveling, Hope, Dyke, Davies, etc.

I wonder if the *Lancet* would oblige the profession by a truthful statement of the reasons for its persistent hostility to the British Medical Association; and whether it would declare on its honour that the real reason is *not* that of commercial antagonism, arising from the rapid extension of the Association, and the fact that the members escape paying a profit of fourteen shillings a year to private proprietors by the success of their own *JOURNAL*, which costs them only sixteen shillings instead of thirty. If some struggling apothecary were to pursue the *Lancet's* own tactics towards another struggling apothecary, how the elderly lady of the Strand would gather up her skirts and scold; if her example were only equal to her precept, what a charming old lady she would be.

I am, etc., AN HONORARY SECRETARY OF A LOCAL BRANCH.

CORONERS AND HOUSE SURGEONS.

DR. PAGE (Infirmary, Newcastle-on-Tyne).—It is for the police or the coroner's beadle to obtain for themselves the information as to deaths from accident; inquests should be held in every case of death the result of accident. The object of the inquiry is not only to ascertain the immediate cause of death, but to ascertain the circumstances connected with it, whether of a preventable character, involving any culpable carelessness or misconduct, or suggesting any necessary caution. The medical witness, being an officer of a public hospital, is not paid for his evidence unless he has made a *post mortem* examination by order of the coroner. It is wise, therefore, in all such cases, to abstain from making the *post mortem* until the order has been received; and it is justifiable to refuse to guess the cause of death—the *vera causa* being oftentimes different from the apparent cause—until the order has been sent and the *post mortem* made. The fee for necropsy and evidence on a body brought in dead is £2:2. Of course this would not include any chemical examination, which should be reserved for special order, and adequately remunerated.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

POOR-LAW LUNACY FEES.

SIR,—May I trouble some of my fellow medical officers to tell me if I can claim the half-guinea fee in the following case? I was sent by the relieving officer to examine a man who was supposed to be a lunatic, from reports made by his neighbours. The "order" given to me did not state "the nature of the case." I went to find the man; and, after two or three visits, I saw him and examined him. I certified that "he was suffering from an attack of delirium tremens, but that I did not consider it necessary to remove him to a lunatic asylum." This certificate I forwarded to the relieving officer. I should be glad if a precedent could be given me, as "my guardians" are sceptical when an extra fee is spoken about.

August 22nd, 1871.

I am, etc.,

MEDICAL OFFICER.

P.S.—Although the case was not described as one of "supposed lunacy" on the order, I was informed by the relieving officer that such was the nature of the case.

RAHERE.—There will be no "Introductory" at St. Bartholomew's. The usual dinner will take place on October 2nd, in the Great Hall, under the chairmanship of Dr. Black.

THE UTILISATION OF SEWAGE.

SIR,—Would you allow me, as one of the compilers of the Report of the British Association Committee on the "Treatment and Utilisation of Sewage", to point out an error which has crept into your article on that report, and which entirely alters the sense of an important passage?

In quoting the part of the report which relates to Forbes and Price's Phosphate Process, you say:—"The actual ammonia, and, to a certain extent, the soluble organic matters, were entirely removed from the sewage when oxidised." It should be "were *neither* removed from the sewage, *nor* oxidised." A few lines lower down, "Leighton's process" should be "Weare's process"; and at the end of the article, "Buta's farm" of course means "Breton's farm."

I am, etc.,

W. H. CORFIELD, M.A., M.B. Oxon.,

Professor of Hygiene and Public Health at University College.

London, August 22nd, 1871.

TEMPERANCE AND INTemperance.

It is a very great pity that the temperance cause should be so much and often injured by intemperate advocates. In the *Sheffield and Rotherham Independent* of August 29th, we find a speech by "Dr. Edmunds of London", which seems to have attracted the attention of several of our members, as we have received more than one marked copy. It includes the following gems of oratory:—"If they asked medical men to give them reasons for recommending alcoholic liquor, they would find they had no reasons to give them; and if a medical man told them to do that for which he could give no reason, what did they call him? [*A Voice: 'A Quack'; much laughter.*] That was perfectly true; and he thought they might say such a man was a quack of two sorts—he was either a fool or a humbug. [*Renewed laughter.*] A glass of sherry, or porter, or spirits was now recommended in cases which, thirty years ago, were treated by bleeding, starvation, and poisoning; and he had fairly come to the conclusion that the doctors of the last generation killed nine patients to one whom they cured. . . . He believed the practice of recent years in regard to the recommendation of intoxicating beverages would shortly be looked back upon as a greater curse to society than all the bleeding, starving, and poisoning that had ever been perpetrated by the profession." This gentleman still thinks it worth his while to continue a member of the British Medical Association.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, Sept. 9th; The New York Medical Record, Sept. 2nd; The Boston Medical and Surgical Journal, Sept. 2nd; The Madras Mail, July 1st; The Shield, September 9th; The Philadelphia Medical Times, July 24th; The Philadelphia Medical Independent, August 26th; The Birmingham Morning News, Sept. 8th; The Irish Times, August 30th; The Western Times, Sept. 8th; The Western Morning News, Sept. 8th; The Devizes and Wiltshire Gazette, Sept. 7th; The Torquay Directory and South Devon Journal, Sept. 13th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Habershon, London; Dr. Humphry, Cambridge; Dr. C. Kelly, London; Dr. Robert Barnes, London; Dr. Heaton, Leeds; Dr. R. W. Forrest, Glasgow; Dr. C. Handfield Jones, London; Mr. H. E. Trestrail, Harston; Dr. David Page, Kirkby Lonsdale; Dr. Aitken, Göteborg; Dr. Collie, London; Dr. George Johnson, London; Dr. J. Crichton Browne, Wakefield; Dr. Fincham, London; Dr. Maunsell, Dublin; Dr. F. B. Nunneley, London; Dr. E. Casey, Windsor; Medicus; Mr. Leonard Armstrong, Clifton, Bristol; Dr. J. Lewis, Bridgend; A Member; Dr. F. J. Brown, Rochester; Dr. Stanley Haynes, Malvern Link; Our Dublin Correspondent; Mr. G. Clements, Manchester; Dr. Bryan, Northampton; Deputy Inspector General C. A. Gordon, Dover; Dr. Tilbury Fox, London; Dr. Mapother, Dublin; Dr. Radclyffe Hall, Torquay; Mr. T. C. White, London; Dr. Clapton, London; The Editor of the *Medical Directory*; Dr. J. W. Moore, Dublin; Mr. R. J. Rogers, Brighton; Dr. Bolton, Leicester; Our Hamburgh Correspondent; Mr. Bush, Frome; Dr. Samelson, Manchester; Mr. Annandale, Edinburgh; Dr. Kelly, Taunton; Mr. B. Ball, Liverpool; Mr. Haviland, London; Mr. Sewill, London; Mr. Norton, London; Dr. Markheim, Paris; Our Manchester Correspondent; Mr. W. Mac Cormac, London; Dr. A. P. Stewart, London; Mr. John Wood, London; Mr. Hulke, London; Mr. Steele, Clifton; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. H. F. Wilson, London; Dr. Foss, Stockton-on-Tees; Mr. G. Elder, Nottingham; Mr. Hunt, Biggleswade; Dr. Southey, London; Dr. Hastings Baxter, Dublin; Mr. Greenway, Plymouth; Mr. A. W. Tomkins, Leamington; Mr. Coles, London; Mr. Jukes, Halifax; Dr. Chadwick, Leeds; Dr. Pratt, Paris; Dr. Davey, Bristol; Dr. Marshall, Preston; Mr. Hussey, Oxford; Mrs. Priestley, Pitlochrie; Mr. Le Gros Clark, London; etc.

OBSERVATIONS

ON THE

RADICAL CURE OF RETROFLEXION OF THE UTERUS.*

BY T. E. BEATTY, M.D., Dublin,

Master S. E. Lying-in Hospital; late President of the Royal College of Surgeons and of the King and Queen's College of Physicians in Ireland; President of the Midwifery Section.

It is not my intention on the present occasion to enter into any lengthened discussion on the nature and causes of retroflexion of the uterus. I expressed my opinion pretty freely on the subject twenty-four years ago in 1847, in a paper read before the Dublin Obstetrical Society, and subsequently in another communication to the same society in the year 1862, both of which were published at the times of their being read. At the time of my first writing, retroflexion of the uterus was considered a very rare affection. Dr. Ashwell had thus recently expressed himself: "There is no doubt in the profession about the existence of procidentia, inversion, and retroversion of the uterus, but there are many practitioners who question whether the uterus is ever anteverted, anteflexed, or retroflexed." In the course of my paper I detailed several cases that had come under my observation, and expressed my opinions as to the nature, cause, and appropriate treatment, and I concluded with the following:—"In conclusion, I would observe that it is not unlikely these cases are more common than is generally imagined; that the diagnosis from the symptoms and from an examination by the vagina and rectum is not difficult; and that much benefit can be obtained by attention to the pathological condition of the uterus." In the following year—that is, in 1848—the late Sir James Simpson published his first paper upon this subject in the *Dublin Quarterly Journal of Medical Science*. In that paper he says: "With some of the displacements of the unimpregnated uterus practitioners have long been familiar. In particular, the displacements of the organ downwards in the form of prolapsus and procidentia, are recognised and acknowledged by all, and elaborately described in every work on female diseases; but displacements of the unimpregnated uterus in the form of versions or flexions, either of the whole or of the upper part of the uterus, posteriorly, anteriorly, or laterally, have hitherto been looked upon as rare, and this far more, however, from our past want of power of diagnosing them, than from their own infrequency."

From this it is plain that retroflexion of the uterus was considered to be a very rare affection up to the year 1848. But subsequent experience has shown, as I expected, that it is not an uncommon occurrence, but that, as the means of detecting it have been improved, so has its greater frequency been observed. I have spoken of retroflexion all along, as I do not wish to include the subject of retroversion. Sir James Simpson considered them both under the one head; but I think there is quite enough difference between them to entitle them to separate consideration. In retroversion the whole organ is displaced, the fundus coming down, while the os is turned up; but in retroflexion there is little or no displacement of the os; it preserves its natural position, while the fundus is bent down at an acute angle backwards. I am not going to enter into the consideration of the cause or causes of this displacement; but of this I am quite sure, that treatment which will relieve, and even remove the one, will not be sufficient to remove the other, and in retroflexion something more is required than in retroversion to effect a cure. Pessaries of various forms are found to retain the uterus in its position after being replaced by the sound in cases of simple retroversion, and if persevered in for a sufficiently long time, and due attention be paid to the position of the patient, great relief follows. But when the organ has got the vicious bend in retroflexion, I do not believe that any form of pessary in the vagina is capable of rectifying its shape. You may push up the fundus, but you do not thereby straighten the uterus; and the case remains uncured until that is done. Sir James Simpson was aware of this, and he contrived various means of straightening and keeping the uterus straight. His first was the stem with a bulb at the bottom, intended to keep the instrument in the uterus for an indefinite time; but finding that the stem continually slipped out, he contrived the method

of fixing the stem in the uterus by means of a wire-cradle fixed outside over the pubes, and extending down to the perinæum, where an arm projected into the vagina, to which the intrauterine stem was rigidly fixed. This, from its fixity, was found not to answer, and it became desirable to contrive means whereby the uterus could be kept straight and yet permitted to have that freedom of motion which is its natural condition. Dr. Moir (*Edinburgh Medical Journal*, 1860) proposed to dilate the os largely by means of sponge-tents gradually increased in size; and having done this, to allow the uterus to contract on wire bougies covered with gutta-percha, these being gradually reduced in size; his object being to allow the uterus to contract very gradually, and to make it contract in such a manner that it at the same time acquired the proper shape. It appeared to me, about the same time, that a simpler mode of proceeding would accomplish the object more easily and perfectly; and having found it to answer my expectations, I published an account of it in my second paper on Retroflexion, in 1862. I will quote a passage from that paper, which will show the principles on which I founded the treatment proposed. "Most commonly there is a certain amount of enlargement, the result of inflammation, which keeps the organ in a state of painful sensibility; and when this is accompanied by ulceration of the cervix, it gives rise to the distressing sensations complained of when the patient stands or walks, and more particularly during the act of defæcation, when the contents of the bowels are forced past the tender fundus, displaced and bulging, into the canal of the rectum. Whether this inflammation of the uterus be the cause of the displacement by enlarging the fundus and thus giving it additional weight and tendency to topple over, or whether it is the result of the unnatural and strained position in which the organ is placed by the retroflexion, I will not now stop to discuss. It is enough for my present purpose to state that, the inflammation is at times, and not rarely found to exist, and when it does exist, it should have much influence in modifying the treatment. To attempt to force an inflamed and distorted uterus into its natural shape and position, and to keep it in that restored condition by artificial supports, must only increase the existing inflammation, and, if persevered in, will surely place the life of the patient in great danger. On the other hand, when there is no inflammation of the uterus, or if, when there is, proper means have been adopted to remove it—such as rest, leeches, warm hip-baths, light diet, vaginal injections, direct applications to the ulcers (if any exist), etc.—there is no doubt that the use of mechanical support may be had recourse to with great advantage."

The plan which I then proposed was to rectify the position and shape of the uterus by means of the sound, and then to pass one of Sir James Simpson's uterine stems with the bulb at the bottom, into the cavity of the organ. This, I may say, in passing, is often not easily done; for the sharp bend in the uterus is at times so rigid and permanent, that the instant the sound is withdrawn the organ flies back to its false position, as if with a spring. The stem once introduced, is to remain for at least four or six weeks. But unless it be kept in its place it will fall out. To prevent that, I proposed to insert a flat boxwood pessary into the vagina, upon the smooth surface of which the bulb of the stem would rest, and would move freely over its surface, thus enabling the uterus to change its position as it is accustomed to do, according as the bladder and rectum are filled or emptied, or as the position of the woman is horizontal or perpendicular, while yet the organ is kept quite straight by the stem within. The daily use of a weak astringent wash thrown into the vagina with a syringe would keep the mucous membrane free and healthy, and the woman from the first day might go about without the least inconvenience. I proposed to remove the pessary and stem at the end of the term specified, by which time the uterus had grown straight; but as a precaution against any relapse, I proposed the insertion into the vagina of a single ring of gutta-percha, made by bending a rod of that material a quarter of an inch in diameter into a circle of the same diameter as that of the boxwood pessary just removed from the vagina. When such a ring is introduced into the vagina, and the woman stands up, it assumes the same position as a flat pessary does, namely, a very oblique one. If the finger be passed into the vagina of a woman in the erect position whilst she is wearing a flat round pessary, the instrument will not be found lying horizontally, but very much sloped; its anterior margin will be felt low down behind the pubes, while the posterior rises high in the back of the vagina behind the cervix uteri. The ring, when introduced, assumes the same position, and while the posterior part of its periphery rises up behind the cervix, and offers resistance to the fundus if disposed to fall back, the cervix is permitted to pass through the wide ring, and descend to its proper position in the vagina. The uterus, previously straightened by the uterine stem, is thus kept in its natural form by this simple means. The ring may be removed at the end of six weeks or may remain longer, for it does not interfere with any of the functions of the vagina.

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

Since that paper was written in 1862, I have treated all cases of retroflexion of the uterus on the principles just mentioned and by the means which I have described, and the result has been in almost every case a radical cure. As an example, I will give some particulars of the last case of the kind that was under my care.

A lady, twenty-four years of age, married four years, the mother of one child, born twelve months after marriage, began to complain two years ago of pain in the back and in the hypogastrium, with a sensation of bearing down. These symptoms gradually increased in severity until at last she was scarcely able to walk, and defecation was performed with great difficulty. On examination *per vaginam*, I found a complete retroflexion of the uterus with a very acute angle between the body and the cervix. The curve was so sharp that I was obliged to bend the uterine sound much beyond the usual curve before I could make it enter the body of the organ. By turning the sound the uterus was straightened, and the prominent tumour behind was completely removed. On withdrawing the sound, the fundus immediately came down, and the distortion was resumed. I told the lady the nature of her case, and that it would be necessary to introduce some instruments which she would wear for some time. Accordingly, on the 12th of last May, I proceeded to pass the stem pessary, but I found great difficulty in doing so, for the uterus was so confirmed in its bent condition that, the instant the sound was removed, and before the stem could be made to enter, the fundus flew back to its unnatural position. I succeeded at last by passing the stem alongside the sound while it remained in the uterus, and I then withdrew the sound, leaving the stem, which kept the uterus quite straight. The flat boxwood pessary was then inserted, and the lady was directed to remain in bed that day.

On coming the next day to see her, I found her so free from any inconvenience that she was unconscious of the presence of the instruments, and asked when I was going to introduce them. The instruments were perfectly in their place, and she was allowed to get up and go into the drawing-room, but not to go out. On the third day I again examined and found everything in its place, and she said she felt better than she had done for many months. The menstrual period was expected in ten days, and I cautioned her that she would probably find it more profuse than usual. This was the case; and it lasted a week and then went off. She used the syringe daily with a weak solution of sulphate of zinc and alum, and went out walking and driving with perfect freedom. On the first of July, the instruments having been then seven weeks *in situ*, I removed them, and found the uterus quite straight. I then passed the plain ring into the vagina, and she left town for the country the following day, and I have not heard of her since.

Subsequently to the publication of my proposal to treat retroflexion after this manner, Dr. Graily Hewitt, in his admirable work on the *Diseases of Women*, suggested a somewhat similar proceeding, using a stem of ivory, and supporting it with a ball of India-rubber, inflated after being passed into the vagina. This, no doubt, is a very good means, but I do not think it as simple as that which I have described; for Dr. Graily Hewitt says, "It is not advisable for the instrument to be worn longer than two or three days at a time, and after each removal the vaginal douche should be freely used." Now, this entails an amount of trouble and attention to the case which is not required in my plan, for, when once the proper sized flat pessary has been introduced, no further attention to the case is required until the time comes for taking all out, and then, the ring being placed *in situ*, the patient may go where she likes for six or eight weeks or longer.

INJURY TO THE AXILLARY ARTERY, CAUSING GANGRENE OF THE UPPER EXTREMITY.*

By WILLIAM R. E. SMART, M.D., C.B., Inspector-General R.N.

INJURY of the axillary artery by forcible extension, without puncture or laceration of the integuments, is not a common accident. Three cases of it in gunnery practice have come to my knowledge; and, as their record may prove useful, I present them at this large professional assembly at one of the chief naval and military stations. They all occurred from explosions in the act of ramming home, by which the rammer was expelled, driving backwards the arm employed in loading.

CASE I.—J. F., aged 23, was injured in a battery before Sebastopol on April 9th, 1855. The thumb and forefinger of the left hand were

lacerated; the acromial end of the clavicle was luxated, its ligaments being torn; and the parts about the shoulder very soon became tumid. I first saw him on the 10th, within thirty hours of the accident. The thumb was in a state of sphacelus; the hand gangrenous. The forearm was insensible halfway to the elbow, but retained warmth downwards to that point; while emphysematous crackling was traceable up to the joint. The shoulder and parts to the mesial line above and below the clavicle were much swollen, with lividity along the anterior border of the axilla. No pulse could be discerned in the brachial or radial arteries. The outer end of the clavicle was raised up, but could be easily replaced by pushing it backwards, when it seemed to float up again at once. A tremor of uncertain pulsation was detected in the tumour; but the transmitted sounds were those of the first stage of pneumonia or a large crepitation, and not of a blood-current. Respirations 40; pulse 108; skin warm; tongue not foul; no sleep.

Third day.—Gangrene was extending up the inner side of the forearm; its veins were turgid. There was a large bulla above the wrist. Towards evening, there were anxiety of face and hard pulse. A whirring sound was thought to be detected deeply in the tumour. The sputa were bloody in dotted points, and non-vascular. Respirations 48, laboured; pulse 108, compressible.

Fourth day.—He was delirious in the night, but calm again in the morning. Emphysema extended to the inner side of the arm.

Fifth day.—The gangrene was not extending; there was no mark of its limit. He had increased cough and pneumonic signs.

Sixth day.—There were appearances of demarcation above the wrist. There was less anxiety. Pulse 98. He had evening exacerbation of fever and fits of cough, with blood-clots in tenacious sputa.

Seventh day.—Vesication and a sphacelated spot appeared above the inner condyle. Respirations 43; pulse 104; tongue dry at point.

Ninth day.—The forearm was in a state of complete sphacelation, and on that account it was taken away at the elbow. A small vessel required ligature at the posterior part. No pain was felt. Incisions were made into the emphysematous parts above the elbow. During the last few days, the axillary tumour had decreased somewhat, through decline of the superficial swelling.

Tenth day.—Pus appeared on the cut surfaces.

Eleventh day.—There were vesications in the axilla. Incisions made into it bled freely.

Twelfth day.—He was hectic and drowsy. A livid blush extended over the front of the chest. Deep incisions at the anterior border of the axilla gave exit to serous fluid mixed with pus and broken coagula, not of offensive odour. The swelling of the parts and the pain were diminished by this.

Thirteenth day.—There was some blood, but little pus, in the dressings. The gangrene was not extending. He had a hectic flush. Pulse very rapid; respirations hurried.

Fourteenth day.—There were vesications at the back of the shoulder, slight suppuration of the incisions, and granulations in the axilla. In the evening, the secretions were checked.

Fifteenth day.—Gangrene was extending. The shoulder and side of the chest were emphysematous. The pain suddenly ceased, and he died at 11 A.M.

Necropsy, six hours after death.—There was rapid decomposition of the corpse. Blood was extravasated in the adipose tissue and muscles of the pectoral region. The ribs and clavicle were sound. The acromial ligaments were ruptured. The shoulder-joint was unaffected. A large cavity of the size of a clenched fist, filled with broken-up coagulum, extended from the axilla inwards under the pectoral muscles and the clavicle; its walls were jagged and sloughy. The artery was pervious to an inch and a half below the clavicle; it was of small calibre, and filled with a well formed black clot. The vein was pervious for two inches, and then was contracted to a point; its walls were softened, and its lining coat blood-stained. Both vessels were lost in the sloughy mass that formed the posterior wall of the cavity. The brachial artery lay flattened and uncontracted, and its inner coat was blood-stained. The brachial vessels and nerves were matted together by infiltrated areolar tissue. There was no pleural effusion. The left lung was adherent at the upper lobe, which was condensed and heavy, and contained air with localised or lobular extravasations of blood, and a few gritty particles like obsolete tubercles. The lower lobe was natural.

REMARKS.—It was evident from the beginning that the axillary artery had been injured. When the patient came under my charge, gangrene had begun, and there was so much infiltration at the base of the neck as to annul the proposal to tie the subclavian at its inner third, amputate at the shoulder-joint, and clear out the cavity. The alternative was to

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

wait events; and the hope was entertained of a line of demarcation being formed through the force of the collateral circulation in the upper arm, which would give the sign for amputating with some chance of success. The vitality that set up suppurative action in the incisions in the upper arm, the apparent check to the extension of gangrene, the complete occlusion of the axillary artery, and the conversion of an aneurismal sac so near the centre of the circulation into the condition of an extravascular effusion ending in an abscess, and, finally, the sudden failure of vitality and the rapid extension of what may be termed hospital gangrene, in contradistinction to the precursory gangrene through want of arterial blood, are features of the case that came out in strong relief. The course of events and the necropsy impressed me that in these accidents the traumatic condition of the artery is similar to that produced when the limb is torn off by machinery without hæmorrhage, a vessel like the axillary not requiring ligature in such case. The inner coat is the first to yield; it is rippled up, and the torn subserous filaments serve to entangle fibrine, that fills up and occludes the artery, after which primary hæmorrhage is not likely to occur. The cavity containing the extravasated blood being then converted into an abscess, as in this case, or the serous portion being absorbed, and its fibrine and corpuscles degenerating into mere connective tissue, there would be a spontaneous cure, as far as the injury to the vessel is concerned. The sudden cutting off the supply of blood without precursory adaptation of the collateral circulation, however, tends at once to loss of vitality of the limb; and, if there be laceration of the extreme points, sphacelus sets in with rapidity, as in this instance. When this case fell under my care, I knew nothing of this form of injury; but its result taught me that it would be the duty of a surgeon not to wait for line of demarcation to form, but to amputate near to the trunk as soon as any sign of gangrene presents; and I inculcated these ideas to others. Since then, two cases have become known to me, which recovered after amputation, without interference at the seat of injury to the axillary artery.

CASE II.—At Corfu, on our Queen's birthday, in 1856, an Austrian schooner of war, in firing a royal salute, had two men blown overboard in loading a cannon. I saw these men as soon as they were picked up and laid on the deck; one had lost both hands, and the other was whole, but greatly "shocked." His surgeon thought little of his case, as one simply requiring a stimulant. Warned by the case related I felt for the pulse, and found it absent; then, on examining the shoulder, I felt an increasing soft tremor, and diagnosed the case. Both men were sent ashore; and, after gangrene had extended to the forearm, amputation was performed about the ninth day, in the upper arm, by Surgeon Webb, of the Military hospital, the aneurismal tumour being treated by ice-bags. When the stump had healed, the patient was sent home.

CASE III.—The next case was made known to me, at the time of its occurrence, by an officer who was familiar with my advice, "to amputate early and leave the axillary artery untouched," as he knew I would gladly receive confirmation of it.

In the year 1868, a seaman was "blown overboard," from an Italian frigate at Spithead. He was sent to Haslar Hospital, where gangrene of the hand supervened; there was absence of radial pulse, early loss of heat and sensation, with great extravasation. The limb was amputated in the upper arm forty-eight hours after the accident, by Deputy Inspector-General Mason. There was no bleeding, and only one small twig required a ligature. The patient recovered without any interference with the vessel at the seat of rupture.

I consider this last case to have been like the first, in its most essential features; and I think that, had I been equally prompt to amputate, the unfortunate man's life might have been spared. I am not prepared to say to what extent, if any, the hand was injured in this last case, but in the second case there was no injury of it.

I am inclined to believe that, where the hand is blown away, the chances of injury at the shoulder are much less; and the only reason I can offer for this is that, when the explosive force is great enough to carry away the parts next to the muzzle of the gun, the leverage is at once destroyed, by which the whole arm would be thrown back with the disruptive force necessary to stretch and lacerate the soft parts which connect it to the trunk. In my early career I knew several cases in which a hand had been blown off in loading a gun, in which primary amputations were performed; but I never heard of suspicion of injury to the axillary artery in such cases. The same reasons will apply when both hands are lost, as in the gunmate No. 2, who lost them without system-shock to prevent amputation of both within three hours of the accident. In case No. 1 the injury to the hand was simply so much as can be caused by a rope or a rammer-staff running rapidly in contact with soft parts, but the arm was thrown back with immense force, as the force of the explosion was not expended on the hand.

LOOSE CARTILAGES IN THE KNEE-JOINT AND THEIR REMOVAL BY SUBCUTANEOUS INCISION.*

By WILLIAM J. SQUARE, F.R.C.S.,

Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

ABOUT ten years ago, I published nine cases of loose cartilage of the knee-joint, and their cure by the operation of subcutaneous incision. Since that time, my experience has been enriched by the addition of fifteen like cases, treated in the same manner. All these twenty-four cases have been operated upon without selection, just as they presented themselves; all have been cured without drawback or accident.

The present occasion appears to be a most fitting one to set forth and advocate the safety and claims of this operation. By reference to our current surgical literature, I find that the old operation of direct incision still has its advocates; and that its results are now, as heretofore, uncertain and dangerous.

My attention was first directed to the consideration of the subcutaneous operation from witnessing the bad results of two operations for the removal of loose cartilages from the knee-joint. One man, now alive in this town, submitted to amputation of the thigh to save his life; the other, a woman, less fortunate, died. In 1860, Sir William Fergusson removed a loose cartilage from the knee-joint by valvular incision. The patient was attacked with severe synovitis, ran great danger of his life, and recovered with a stiff joint. About five years ago, the nephew of a distinguished physician of this county consulted Mr. Whipple for stiffness of his knee-joint, the result of the removal of a loose cartilage by the direct method, by a deservedly eminent metropolitan surgeon. Mr. Whipple asked my opinion on the case. The patient told us that his life was in great jeopardy for many days after the operation, in consequence of inflammation, with fever and delirium. I could multiply examples, but these will suffice.

In his address delivered before the British Medical Association in 1865, Mr. Syme says: "The cartilaginous bodies which are so troublesome in the knee-joint, were formerly regarded as an unsatisfactory subject of treatment, on account of the inflammation which was apt to attend their excision; but the subcutaneous operation suggested by myself in 1841, and afterwards improved by Mr. Square of Plymouth, has afforded a means of remedy both safe and easy."

The operation which I perform was worked out by myself, as I could never find any account of the method recommended by M. Goyrand or Mr. Syme. It is as follows.

I first endeavour to conduct the loose cartilage to the inner and lower part of the joint, just above the articular edge of the tibia; it is then entrusted to an assistant, who firmly fixes it in that position. A strong tenotomy knife, at least two inches long, is thrust through the skin at such a distance from the cartilage that it can be readily cut upon. The capsule of the joint is freely and decidedly incised upon the cartilage through its whole length. The knife, being disengaged from the cartilage, is directed so as to open up the cellular tissue over a convenient part of the fascia of the limb. The cartilage is now pressed and lifted out of the joint into the cellular bed prepared for it, and slid along the cellular tissue for about three inches. It is fixed *in situ* with a firm pad and adhesive plaster; the foot and leg are bandaged up to the edge of the displaced cartilage, the limb attached to a straight splint, and placed at about an angle of forty-five degrees. If no inflammatory symptoms ensue, the cartilage is excised about seven days after the operation.

CASE 1.—James Ellis, aged 33, farm servant, was admitted into the South Devon and East Cornwall Hospital on December 3rd, 1856. He had been lame eighteen years, and distressingly so during the last twelve months. Two movable bodies were easily felt in the right knee-joint; they had been there fourteen years. They glided from one part of the joint to another with extreme mobility, and caused great pain and sudden lameness. The joint was often distended with synovia. He stated that these cartilages had distinctly increased in size.

Operation, December 8th.—I fixed the cartilages firmly at the lower and outer part of the joint, and entrusted them to an assistant. Two subcutaneous separations of the cellular tissue were then made with a tenotomy knife two inches in length, at two separate punctures. From the lowest puncture, the knife was directed upon the largest cartilage, and the synovial membrane freely incised upon it. The cartilages, being slid into the bed prepared for their reception, were fixed at its extremity with a pad of lint, adhesive plaster, and bandage. A straight

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

splint was applied along the back of the limb, which was raised to an angle of forty-five degrees, and cold-water dressing applied.

December 22nd.—He had had no pain, effusion, or other signs of inflammatory action. The cartilages were therefore excised. They were of a yellow, waxy, polished appearance. One side of the larger one was smooth; the other had a worm-eaten look. They were both covered with a fine membrane. They were composed of bone and cartilage, with a predominance of the former.

December 30th.—He was discharged cured. A very slight stiffness of the joint remained.

CASE II.—Robert Windsor, aged 27, farm servant, of healthy constitution, had a loose cartilage of the size of a walnut, readily felt in the left knee-joint. It had existed a year, and had given rise to the ordinary symptoms.

Operation, April 28th, 1858.—The cartilage was firmly fixed by Mr. Fox at the upper and outer part of the joint. I punctured the skin with the tenotomy knife, two inches above the cartilage; by a semicircular sweep made a bed for it in the cellular tissue; and then cut upon it at right angles, freely dividing the joint-capsule. The body now escaped from Mr. Fox's grasp. I, however, brought it again to the wound in the synovial membrane, and squeezed it into the subcutaneous tract. The patient was treated as detailed in Case I. On May 4th, no pain or inconvenience had arisen. The cartilage was excised. On May 6th, he was discharged; he walked well.

CASE III.—Edward Mitchell, aged 30, of good constitution, came under my care on May 13th, 1858. In his right knee-joint were three foreign bodies, the smallest of the size of a large pea. They glided with amazing swiftness into various parts of the joint, and could only be fixed just in front of the internal lateral ligament. There was no synovial thickening, nor effusion. Two years previously, he discovered a loose body in the joint, but he had already been lame for some months. Two months before I saw him, he discovered a second, and, a fortnight ago, a third foreign body. His conviction was, that the first discovered cartilage was larger than any now in the joint; whence the inference that the two last discovered were produced by the disintegration of the first.

Operation, May 15th.—The cartilages were fixed at the lower and outer part of the joint. The puncture and subcutaneous incision were made as in Case II. I endeavoured to push the cartilages out of the joint, but the pressure caused the one to recede into its cavity. With great trouble, the patient presented one of the cartilages at the synovial incision, and I pressed it out of the joint into its bed. Ten minutes of continuous manœuvring were consumed in getting a second cartilage into the subcutaneous tract, but the third could not be found. The cartilages were retained *in situ*, and the patient treated as before described.

On May 21st, the cartilages were excised; and, on the 28th, he returned home, the motion of the joint being perfect, but rather weak.

CASE IV.—John Ellacott, aged 40, a healthy farm servant, was admitted into the South Devon and East Cornwall Hospital on September 8th, 1858, under Mr. Whipple. A loose cartilage of the size of a horsebean was readily felt in the right knee-joint. He had the ordinary symptoms of the malady. He discovered the cartilage a year previously. It had not increased in size. He never had an accident. On September 10th, the ordinary subcutaneous operation was performed. On the 14th, the cartilage was excised. No inflammatory symptoms occurred, and he was discharged cured.

CASE V.—Medland, a miner, of good constitution, was operated upon by Mr. Whipple in 1859. The patient had recognised the presence of a large cartilage for about three years. His symptoms were very severe, and the pain at times was excessive. The operation was performed in the usual manner, and the cartilage was excised on the eighth day. No inflammation followed. He walked four miles the day after the excision of the cartilage, six the next day, and four days afterwards resumed his labour.

CASE VI.—Francis Warren, aged 20, farm-labourer, of robust constitution, was, in March 1859, suddenly attacked with severe pain in the right knee-joint, with much swelling. Under surgical care, he was relieved, but never entirely lost the pain in the joint. In October of that year, he first discovered the existence of a loose cartilage. It was of medium size, and very difficult to fix.

Operation, January 25th, 1860.—I performed the operation of subcutaneous section, with the intent of embedding the cartilage in the cellular tissue of the thigh, but, from its excessive mobility, failed to do so. The patient was treated as if the operation had succeeded. No inflammation followed. On February 8th, the operation was repeated, with this difference, that the subcutaneous separation was made over the inner surface of the tibia. I now succeeded in placing the cartilage in the space prepared for it. He was treated in all respects as before described. On February 15th, no inflammatory action had been excited; and, on the 20th, he was discharged cured.

CASE VII.—William Davey, aged 24, a healthy farm-servant, had had his right knee weak for years. He discovered a loose cartilage in it nine weeks before he came under treatment. It was flat, and about the size of an almond. On May 11th, 1860, by subcutaneous incision, the cartilage was embedded in the cellular tissue on the inside of the head of the tibia. By pad, plaster, and straight-back splint, it was retained *in situ*. On May 18th, the cartilage was excised. On the 25th May, he was discharged cured, walking well.

CASE VIII.—Wm. Davey was readmitted February 5th, 1861. For some weeks he had felt another cartilage in the same knee-joint. On February 8th, I attempted the usual subcutaneous operation, but failed to dislodge the cartilage. The treatment was as before; no bad result followed. On February 22nd, the operation was repeated, and again unsuccessfully. He was treated as before, and with like immunity from inflammatory action.

On April 24th, Wm. Davey was again admitted into the Hospital. On the 26th, I again performed the same operation, but without success. His treatment was as before. On May 20th, he had had no pain or bad symptom. He was discharged for readmission.

CASE IX.—William Davey was readmitted March 26th, 1862. He had now two loose cartilages in the right knee-joint. He discovered the second and larger one about a fortnight since. On March 28th, the smaller cartilage being well fixed at the inner and lowest part of the joint, I lodged it in the cellular tissue over the inner side of the head of the tibia, and then without difficulty pressed the larger one into the same tract. On April 4th, the cartilages were excised; and, on the 11th, he was discharged cured.

CASE X.—Joseph Badcock, aged 39, gamekeeper, of healthy constitution, was admitted into the Hospital, under the care of Mr. Whipple, on April 18th, 1861. He had felt the cartilage (which was now very large) for fourteen years. He had the ordinary symptoms, and was very lame. There was much synovial effusion and thickening.

On April 19th, Mr. Whipple operated successfully. The patient was treated in the ordinary way. On May 6th, the cartilage was excised. It was of very irregular outline and very nodulated. On the 16th, he was discharged; he had had no pain. Some synovial effusion and lameness remained. On June 13th, he was seen by Mr. Whipple; he was much better, and walked well.

CASE XI.—John Hart, aged 62, labourer, robust and healthy, had a loose cartilage: it was distinctly felt in the left knee-joint, which contained some synovia. Eighteen years previously, he had sudden inflammation of this joint, and on its subsidence felt the cartilage, which was of the size of a horsebean. On September 9th, 1865, I performed the subcutaneous operation, the cartilage being fixed at the inner and lowest part of the joint by Mr. Fox. The limb was dressed and placed as usual. No symptoms occurred. On September 29th, the cartilage was excised. On the 30th, there was slight erysipelas round the wound. On October 3rd, the skin around the wound was still inflamed; the joint was intact. On October 10th, slight suppuration occurred at the cutaneous orifice; and on the 26th the wound was still a little open. On November 5th, he was discharged cured.

CASE XII.—Robert Mortimer, aged 47, farm-labourer, of healthy aspect, was admitted August 24th, 1866. The left knee-joint contained a loose cartilage of the size of a horsebean. It could only be fixed at the upper and outer part of the joint. He had felt it four months. The symptoms had been very severe. On one occasion he fell suddenly, and could not rise without help. On August 26th, I performed subcutaneous incision with success. On August 31st, not the least pain or swelling had taken place. I excised the cartilage, which was globular, smooth, and white. On September 5th, he was discharged cured.

CASE XIII.—George Symonds, aged 37, gardener, had suffered from loose cartilage four years, often so seriously as to be confined to his bed for days together. On February 25th, 1868, a loose cartilage of the size of a horsebean was distinctly felt in the left knee-joint. On February 28th, I performed the subcutaneous operation. I pushed the cartilage out of the joint; but, being pressed very firmly, it slid behind the hamstring tendons, and could never be found again. On the 29th, he had passed a restless night, and was feverish; pulse 100. There was no pain of the joint. On March 1st, there were some synovial effusion, and tenderness of the joint on pressure. On the 4th, the effusion was absorbed. On the 14th, there was no trace of the cartilage. He was not lame, but there was slight stiffness of the joint. On the 18th, he was discharged cured.

CASE XIV.—Robert Doidge, aged 55, farm-labourer, was admitted May 1st, 1868. A very large loose cartilage was felt in the left knee-joint. It had been a tenant of the joint for the last thirty years, and a very troublesome one too. Mr. Whipple removed it by subcutaneous incision (with great difficulty) in the usual way. After excision, it was

found to weigh 110 grains, and to measure one inch and one-eighth in the long, and half an inch in the transverse diameter. On May 22nd, he was discharged cured, never having had a bad symptom.

CASE XV.—Thomas Hennessy, aged 17, bricklayer's labourer, came under care on August 12th, 1868. Three weeks previously he first felt what he called a bone in his left knee-joint. It gave him great pain. He sometimes fell, and could not rise or walk until the cartilage was dislodged from its position. On August 21st, the cartilage being fixed at the inner and lowest part of the joint, it was removed from the joint, and embedded in the cellular tissue in the ordinary manner. The treatment was as usual. On September 9th, he had had no bad symptom. The cartilage was excised; it was of the size and shape of a hazel-nut. On September 14th, there had been slight suppuration in the cellular tract since the removal of the cartilage; otherwise he was quite well. On the 16th, he was discharged cured.

CASE XVI.—Mary Hayman, aged 22, servant, was operated upon by subcutaneous incision by Mr. Whipple on December 2nd, 1868, and discharged cured on December 22nd. There is no history of this case; but it is evident that the result was perfect, not only from the statement of her cure in the hospital admission-book, but also from the fact that she was only twenty days under treatment.

CASE XVII.—F. Johns, aged 20, had a loose cartilage in the knee-joint, and was operated upon by Mr. Fox by subcutaneous incision in the South Devon and East Cornwall Hospital. I can find no record of this case; but the cure was complete without accident, and I am enabled to show you the cartilage with an inscription referring to the case.

CASE XVIII.—John Hocking, aged 51, miner, came under treatment May 25th, 1870. A loose cartilage was very evident in the right knee-joint. Fourteen years ago, he received a severe blow on his knee, and ever since had felt the foreign body in the joint. It gave him little annoyance until a fortnight ago, when the joint became distended with synovia; and ever since that time he had frequently fallen while walking, from the sudden movement of the cartilage.

Operation, May 25th.—The cartilage was with great difficulty fixed on the outer side of the joint. I was obliged to incise the capsule of the joint most freely; and by patient long continued manipulation I lifted the cartilage from the joint into its cellular bed. I fixed it with a firm pad, adhesive plaster, and bandage, in the usual way; and placed the limb on a straight splint, at an angle of forty-five degrees. On June 8th, he had had no pain or swelling. The cartilage was excised. On July 1st, he was discharged cured. Some delay in his cure arose from a slight suppuration which occurred in the wound from which the cartilage was removed.

CASE XIX.—G. Gorfett, aged 38, ironfounder, was operated on September 10th, 1869, when the subcutaneous operation for loose cartilage in the knee-joint was performed by Mr. Whipple at the hospital. On September 29th, he was discharged cured.

CASE XX.—Wm. Teale, aged 52, sailor, was admitted into the South Devon and East Cornwall Hospital February 4th, 1870, with loose cartilage in the right knee-joint, under the care of Mr. C. Whipple, who operated upon him by subcutaneous incision on February 6th. He was discharged cured on March 23rd. He had no bad symptom during the treatment.

CASE XXI.—Wm. Bennett, farm-labourer, Landulph, was operated upon by subcutaneous incision by Mr. Kempthorne. He was treated as before described, and was cured without the occurrence of any bad symptom.

CASES XXII, XXIII, and XXIV, were operated upon by Mr. W. Swain, of the Albert Hospital. They were all operated upon by subcutaneous incision, were treated on the plan before indicated, and all recovered without a bad symptom.

Since writing the above paper, I find a case reported in our JOURNAL for July 29th, 1871, by Mr. Alford, of the Taunton and Somerset Hospital. There were two loose cartilages in the right knee-joint. On May 1st, they were lodged in the cellular tissue of the thigh. On the 20th, they were excised; and on June 20th the patient left the hospital cured.

I have now given you a short report of twenty-four consecutive and unselected cases, cured, without anxiety or accident, by subcutaneous incision. Surely immense responsibility must henceforth attach to any one who ventures to incur the risks of direct or valvular incision. I most sincerely hope that these splendid results may carry conviction to all your minds.

When Mr. Syme had for the first time performed the operation which I advocate, he was so satisfied with it, that he said to his class, "When the safety and facility of this procedure are contrasted with the danger of excision and the irksome confinement to bed of several weeks' duration, which is requisite for accomplishing the process of fix-

ture, I think that there can be no doubt that the profession is greatly indebted to Mr. Square for perfecting the subcutaneous operation and rendering it available for all cases of the disease."

There are several varieties of loose cartilages. I am acquainted with five; and probably there are more. One variety originates in masses of lymph which have been effused by the inflammatory process. They may be termed fibrinous exudations. The second is a mere precipitate from a morbid synovial secretion. Rokitsky says that these loose bodies are often laminated. The third variety is described by Dr. Robert Adams, who calls them "addimentary bones". They are formed around the cavities of joints, or upon their articulations, in the course of chronic rheumatic arthritis. They often separate from their attachments, and become loose in the cavities of joints.

These three varieties have little surgical significance; but the two others are in this respect of more importance. The fourth variety is produced by the abnormal or morbid growth of the fine fringes of the synovial membrane. Kölliker states that these processes increase in size, solidify, and become detached from the vascular folds. These loose cartilages are composed principally of hyaline cartilage, and present calcified spots, generally about their centre. The fifth variety is of all the most important to surgeons, as it furnishes the majority of cases for operation. I here show you specimens from patients whose cases are recorded in this paper. Their surface on one side is smooth and shining, having a yellowish waxy aspect. On the other side, they often have a bony appearance and structure. The yellowish waxy portions consist of true articular cartilage, and the opposite side of true bone, as demonstrated by the microscope.

In the short paper which I published in 1861, I said "that a large proportion of these cases are the result of local injury—that, by accidental violence, small or large portions of the articular structures are detached." In the fourth volume of the *St. Bartholomew's Hospital Reports* is an excellent paper by Mr. Marsh, referring to this variety of loose cartilage. He says: "The forms of disease to which I wish to draw especial attention here is one that has been referred to by several surgical writers, although its occurrence has never, I think, been generally acknowledged. It is that which results from the breaking off or shedding into the cavity of a joint of a portion of the proper articular cartilages, together with a layer, more or less substantial, of the subjacent bone."

In the sixth volume of the *St. Bartholomew's Hospital Reports*, Mr. Paget has a paper on the Production of Loose Cartilages in Joints, in which he expresses his opinion, based upon facts observed by himself, that this group of loose cartilages has its origin in violence resulting in what he calls quiet necrosis. He says that these bodies are sequestra exfoliated after necrosis of injured portions of cartilage, and exfoliated without acute inflammation. In a note, Mr. Paget remarks that the late Mr. Teale published a like explanation of the occurrence of this form of loose cartilage in the thirty-ninth volume of the *Medico-Chirurgical Transactions*.

DESCRIPTION OF A NEW STRICTURE-DILATOR.*

By BERKELEY HILL, F.R.C.S.,

Surgeon to University College and the Lock Hospitals.

THE dilator that I venture to show you operates on the principle of Perrève's, Holt's, and Richardson's. The two halves of a split sound, which in juxtaposition equal the calibre of a No. 2 or No. 3 catheter, can be separated by thrusting between them a segment of a cone fixed to a slender stem. This cone or olive separates the blades till they occupy a space equal to No. 12, this to a No. 14, and this to No. 16, of Weiss's catheter-scale.

In using the instrument, I first explore the urethra with an olive-headed graduated bougie, to ascertain the position of the stricture. I then introduce the dilator with the blades approximated until this portion, which is bluntly knife-edged, lies in the stricture. The cone is next passed down between the blades, and bursts the stricture with very little force. The largest cone produces slight laceration of the meatus, which is of no moment, or that may be previously incised; but it has no injurious effect upon the elastic healthy part of the urethra.

The advantages which I anticipate will be found to belong to this dilator are, first, simplicity and cheapness of construction. The numerous parts of Holt's instrument raise the cost to nearly three guineas; while I am informed by Mr. Coxeter, who has very ingeniously carried out my ideas, that this can be made for a guinea and a half, if not for less.

* Read in the Surgical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

Again, the central guide of Holt's instrument is not needed in mine: hence this split sound can be passed through narrower strictures. It is true that, by doing away with the central guide, we lose Smyly's addition of a catheter to the dilator, whereby an unskilful operator may be satisfied that he has kept the true path to the bladder, and not diverged into a false passage. But this advantage is not practically a great one in actual use. The fine tube often gets blocked by mucus; and the operator seldom needs to see the urine flow to be assured he has passed through, and not by the side of, a stricture.

The third and chief advantage is this—diminution of resistance. The force needed for Holt's dilator is sometimes very great; indeed, I have seen his instrument break in the most skilful hands from this cause. Much of the power is required to overcome the continuous friction of the tube, both inside along the guide and outside on each half of the split sound. It is true that the necessity for excessive force has been overcome by screwing down the dilating tube; but what seems to me a very important point in Holt's plan of treatment is thus lost—namely, rapidity. The slowness of a screw fails to completely break through all the indurated tissue: part is only stretched, and soon contracts again. In the dilator before you, the friction-surface is reduced to these two dovetail grooves, which together do not measure more than half an inch. The rapid application of the wedge to the stricture is obtained by a force so small, that one hand has hitherto sufficed to overcome the resistance.

It is not my intention to occupy your time in discussing the relative merits of treating stricture by suddenly breaking through the patch of induration which causes it, and of slowly dilating by repeated passage of bougies. This question has been recently debated by the profession. Mr. Holt's plan is proved and acknowledged to be a safe, easy, and speedy mode of treatment. There are, however, two points which have not yet, so far as I am aware, been much insisted upon. Nevertheless, I am supported in my opinion by that of my teacher and colleague Sir Henry Thompson. Rupturing the tissue is not applicable to penile strictures or those anterior to the bulb. Here incision is preferable, because the new matter abundantly produced to repair the rent often blocks up the spongy tissue so much as to prevent or impede erection beyond the point ruptured. A clean internal incision does not cause the same amount of plastic formation, and hence subsequent erection is not interfered with after this mode of division.

The second point is this: No. 12 is rarely large enough to split all the fibres of a stricture; some are only stretched, and contraction returns as soon as after gradual dilatation. Hence I have carried the size of the cone to No. 16 for urethras where the calibre naturally approaches No. 10 and No. 12.

The instrument is only just out of the maker's hands; hence my experience is limited to four cases, in all of which the urethra has been fully dilated; the patients have had no bad symptoms whatever, and they have been detained in bed only a few hours.

CASE I.—M., aged 28, was admitted to University College Hospital July 15th, 1871. Difficulty in passing urine had been noticed three months. A No. 4 olive bougie stopped at six inches. The dilator with No. 14 cone was passed under chloroform. The stricture yielded at once. There was pretty free hæmorrhage. No instrument was introduced after the dilator was withdrawn. On July 16th, urine had passed very well the previous night, and the patient slept all night without any opiate. On July 18th, I passed a No. 12 probe-ended catheter, and drew off the urine. He attends twice weekly to have a bougie passed, until he can pass one himself.

CASE II.—J., aged 31, a horsekeeper, was admitted to University College Hospital July 20th, 1871. Difficulty in passing his urine had been felt for twelve years, and the patient had several times been relieved of retention at this hospital. At 4½ inches, a stricture was found, through which, after some difficulty, a filiform bougie, about No. ¼ in size, was passed and tied in. For micturition, the patient was twice compelled to withdraw the bougie, but replaced it himself. On the 21st, a ¾ catheter was passed and tied in. On the 24th, the dilator was passed with the No. 16 cone. Very little hæmorrhage took place, and by a No. 13 catheter the urine was drawn off. On the 26th, the No. 13 catheter was easily introduced, and the patient is now learning to pass his own instrument regularly.

CASE III.—August 27th. A gentleman since 1867 had kept his stricture dilated by the occasional passage of No. 10 and 11 bougies. Notwithstanding this, an abscess ending in perineal fistula formed in 1870, which apparently healed, to break open again with abscess three times, though the patient had been careful after each abscess to draw off his urine regularly through a catheter. This being his third attack, the patient begged me to do something to prevent its recurrence; and on August 2nd, Dr. Squarey giving chloroform, I burst the stricture by the No. 16 cone, and passed afterwards a 16 pewter sound to the blad-

der. No bad symptom occurred. There was very little pain in passing urine the first time; none after that. No. 13 passed easily on August 4th and 6th.

ON THE PHYSICAL GEOGRAPHY AND CLIMATE OF SPAIN, AND OF ITS HEALTH-RESORTS.*

By JAMES HENRY BENNET, M.D.,
Late Obstetric Physician to the Royal Free Hospital, London.

IN order to understand the climate of Spain, it is absolutely necessary to be acquainted with its physical geography. The peninsula of Spain is constituted by a plateau or table-land, upraised some two thousand or more feet above the sea, and intersected from east to west by a series of mountain ranges all but parallel to the Pyrenees. The principal of these mountain ranges are the Sierra Guadarrama, the Sierra Toledo, the Sierra Morena, and the Sierra Nevada. The table-lands between these ranges were formerly the beds of seas, of estuaries, and of fresh-water lakes, and are now traversed by rivers, in a direction parallel to the mountain ridges, which empty themselves into the Atlantic or Mediterranean. All the larger rivers, with the exception of the Ebro, direct their course to the Atlantic.

The main mountain chains of Spain are of primary formation, and constitute the basis of its geology. They emerged before the secondary strata which surround them, and are formed of granite, gneiss, crystalline schists, etc. Secondary rocks, represented by the trias triple, and also by the jurassic and cretaceous formations, occupy a vast area in the eastern and southern regions of Spain. In the table-lands, plains, and river-valleys, are found tertiaries, old and recent, nummulitic rocks, as also miocene and pliocene formations. Fresh-water miocene fossils are found at an elevation of two thousand five hundred feet, which shows how greatly the peninsula of Spain must have been raised in comparatively recent geological times.

Below this central table-land of Spain is the coast, sometimes a mere ledge or undercliff, like the Undercliff in the Isle of Wight, or the Genoese Riviera, but often presenting small alluvial plains of greater or less width, watered by rivers that descend from the mountains, and from the elevated plains of the interior.

Thus, Spain may be compared familiarly to a square dining-room table, with a narrow ledge of coast on the floor. Of course the climate of the upraised mountainous table-land, and that of the subjacent coast, must be, and are, very different. Although Spain lies far south, between the thirtieth and the forty-fourth degrees of latitude, an elevation of two or three thousand feet does not protect its interior from intense scorching heat in summer. The city of Madrid, which is two thousand seven hundred feet above the sea, in midsummer is one of the hottest and most burnt up cities in southern Europe. But this altitude, combined with the parallel chains of huge snow-covered mountains, gives in winter to central Spain nearly as low a temperature as that of northern Europe. That such is the case is evidenced by the vegetation, which is not more southern than the vegetation of the less favoured regions of England.

The coast-line, especially the south-eastern coast-line, presents very different physical conditions. Bathed by the warm Mediterranean Sea, exposed in full to the powerful south-eastern sun, protected from the north north-west and south-west winds by the entire bulk of the mountain land of Spain, it is really a southern region, as its vegetation testifies. There are other influences which tend to modify its climate. It is all but a rainless tract, and certainly the driest region in Europe. I have never met with a thoroughly satisfactory explanation of this fact, which most observers and writers announce without trying to explain. I was in Spain in May 1868, and previously to entering that country I had carefully explored Algeria, from Fort Napoleon in the east to Oran in the west, and from Algiers to the margin of the Desert of Sahara. The meteorological conditions there existing and recognised gave me, I believe, the key to this paucity of rain on the east coast of Spain.

The presence of the Pyrenees and of the mountain chains of central Spain at once explain the absence of rain on the eastern coast, with north, north-west, and even south-west winds. The rain-clouds are arrested in passing over these elevated regions, and their moisture is squeezed out. But why should not the north-east and south-east winds, which so frequently reign in the Mediterranean, and which pass over vast tracts of water before they reach the east coast of Spain, bring their burden of rain to the mountain-fringed shores of Spain? I be-

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

lieve that the explanation is to be sought for in Africa, in the Desert of Sahara. This immense tract of sunburnt sand, which covers a considerable portion of the continent of Africa, may be considered one vast furnace. The atmosphere heated on its surface is constantly rising up into the higher atmospheric regions, and thus creating a vacuum. To fill this vacuum, the Mediterranean winds, north, north-east, and east, are pulled down before they reach the coast of Spain, probably within fifty or a hundred miles of it. Thus diverted, they pass over the Algerine or Mount Atlas Switzerland; there deposit their moisture, making it in winter and spring a moist verdant region, to lose themselves in the great sandy desert.

That the boisterous winds which make the western Mediterranean so troubled a sea in winter, are thus diverted, is certain. The coast of eastern Spain is proverbially a calm sea. At Alicante there is a saying that their sea is "a sea for women and children." The steamers from Marseilles to Algiers pass between the Balearic Islands, about seventy miles from the mainland, and constantly in winter they have to contend with very bad weather. As constantly do they escape from it by steaming east to the Spanish coast. This is so much the case, that a detention on the Spanish coast going or coming from Algiers is a common, at some seasons a regular, incident of the voyage.

Whatever the explanation, the fact is certain that from Malaga to Barcelona, on the east coast, there is very little rain, not more than forty days in the year, often not that—much less than on the Genoese Riviera, also an exceptionally dry region. The winter temperature is also so exceptionally mild that there can never be more than a few degrees of frost, as evidenced by the flourishing existence of orange and lemon trees, of subtropical palms, and of other plants which cannot stand more than a few degrees of winter frost. I only found, however, at Malaga, flourishing in the open air, the cool stove plants, heliotropes, lantanus, pelargoniums, etc., which I and my neighbours grow in our gardens, unprotected, at Mentone and in the more sheltered parts of the Riviera. At Murcia and Valencia, these plants were grown in pots and placed under cover in winter. The conclusion which I legitimately draw is, that the winter temperature is as warm, indeed a shade warmer, at Malaga than at Mentone, but that, on the rest of the Spanish coast, the winter temperature is rather lower than at Mentone and the more sheltered regions of the Riviera. The climate, soil, and vegetation are, however, the same in both regions. Medically speaking, therefore, they are suited to the same morbid states, to all who require a dry, sunny, bracing, stimulating, mild winter climate. Malaga would, thus, be one of our most valuable resorts were it not for its filthy, unhygienic state, which renders it unfit for the residence of a healthy, and still more of an unhealthy person. Although most sincere in the expression of my convictions on this score, and most anxious to be impartial, it may be thought that a prepossession in favour of my winter home makes me a prejudiced witness. I therefore refer to the testimony of Dr. Madden, an enthusiastic admirer of the climate of Malaga. In a pamphlet entitled *The Climate of Malaga in the Treatment of Chronic Pulmonary Disease*, Dublin 1864, he says very graphically, and very explicitly:—

"The hygienic condition of Malaga is as defective as it can well be. In a great many of the houses there is no provision for sewerage of any kind; and even in the more civilised part of the city, in the hotels on the Alameda, the drainage is very bad indeed. The main sewers, which run under the principal streets, are choked up by the decomposing accumulation of years, and, being provided with immense square openings through which the dirt and rubbish is thrown into them, in the centre of the streets, the mephitic gases evolved below freely escape into the atmosphere of the narrow lanes of the city. The bed of the Guadalmedina is really the main sewer of Malaga; and as for nearly ten months annually it is little more than a wide dry bed of gravel, being dependent on the torrents in winter for its purification, the odour it exhales in warm weather renders a residence near it as disagreeable as it is unhealthy. The connexion between epidemic disease and bad sewerage is, I think, very well illustrated in Malaga, which has at all times been remarkable for the prevalence of zymotic disease. I have collected from the older Spanish writers notices of no less than twenty-two epidemic pestilences, some of which almost depopulated the city between 1493 and 1804. The earlier of these seem to have been epidemics of genuine Oriental plague, and the latter generally assumed the form of yellow fever. Of late years, since 1834, these pestilences have not appeared, but their place has been taken by Asiatic cholera, which has several times ravaged the town."

Such is the description of this favourite resort for consumptives, given by Dr. Madden, himself an ardent supporter of it. May I not ask, in cool, sober, common sense, whether it is not sheer insanity to send miserable invalids, young and old, already stricken with disease implying decay of vitality, lowered organic power, to a town where the de-

fective hygiene of the cities of the middle ages reigns supreme; where filth-engendered pestilence stalks abroad day and night, as in former days; where the Oriental plague is succeeded by yellow fever, and yellow fever by Asiatic cholera?

There are other towns on the east coast of Spain—Murcia, Elche, Alicante, Valencia, Seville—but in none of them is there any suitable accommodation for invalids. The hotels are merely inns of a third or fourth class, frequented by, and supported by, commercial travellers, and situated in the middle of these unhealthy cities. Tourists can put up with them, but they are not fit for real invalids. In the course of time, commercial enterprise will no doubt provide suitable accommodation in this really good and favoured climate of the east coast of Spain. But in the meanwhile, real invalids, who require a dry, bracing, sunny, mild, winter climate, had better keep to the Genoese Riviera. For further details on the subject of this paper, I must refer to the last edition of my work on the *Winter Climate of the Mediterranean*.

METEOROLOGY AND CLIMATE OF PLYMOUTH.*

By J. MERRIFIELD, Ph.D.

MR. PRESIDENT AND GENTLEMEN,—Believing as I do that climate and health are very closely interwoven, I must urge this as an excuse for bringing forward the subject of the meteorology and climate of Plymouth; and, as I am unaware of any other consecutive registers of meteorological phenomena kept in the neighbourhood, I beg to offer to the Association the few deductions that I have drawn from my own observations, although I could wish this honour had fallen into abler hands.

In speaking of the climate of any place, I must guard my hearers against using that term indiscriminately with weather.

Weather expresses the condition of the atmosphere at any particular time in a certain place.

Climate means the condition of a country with regard to its meteorological phenomena generally, or it is the mean or average of all weathers taken for a very long period. Weather is changeable; climate is uniform. Time enters as a factor in weather; from climate time has been eliminated. "Climates are different in different places; whereas the weather, though changeable in any one place, may be the same at the same time in many places."

My recorded observations extend over about seven years; viz., since October 1864, and the deductions I may draw should be received with all the caution due to the short time during which I have registered systematic data. Then, again, by using check instruments I have found reflected heat where I little expected, and hence sometimes too high a maximum has been recorded; and at others I have left thermometers exposed by night, when by radiation under a cloudless sky, with a small amount of vapour in the atmosphere, I have registered too low a minimum. As an instance of this, I have several times found ice formed on the top of my house, when a screened thermometer in the open air close by has not sunk lower than 35 deg. Fahr. The material of which the screen is composed, the colour of the paint used, and a countless number of so-called trifles, tend to introduce discrepancies between observers who are otherwise as careful as it is in man's nature to be. Again, among observers I believe proper allowance has not been made for the character of the soil near which observations have been taken: thus on Dartmoor, near the peat-bogs, the heat from the sun is absorbed by the black marshy soil, and is at once transformed into what scientific writers of the present day call "potential energy", by converting the water into vapour; but I have become sunburnt on the moor, when a shaded thermometer there has stood many degrees below one under similar circumstances in Plymouth, where the sun's heat has been reflected and radiated from our lime-stone soil. No doubt part of the effects of the direct rays of the sun was due to the small amount of vapour in the atmosphere on the high ground of Dartmoor, whilst in the air at Plymouth more vapour is found.

I have felt bound to make these introductory remarks; because, if any observer compare his observations with mine, attention to little matters may reconcile many apparent discrepancies.

In comparing my observations, I find the mean temperature of Plymouth to be 52.31 deg. Fahr. This mean would obviously be best found by recording for a long period twenty-four hourly observations and taking their average; but Mr. Buchan, the Secretary of the Scottish Meteorological Society, has shown that the mean between the maximum and minimum between every day in the year is too great only by a frac-

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

tional part of a degree; and this is the method which I have adopted. I find that the mean temperature corresponds to the mean of those taken at 8 A.M.; this, I believe, is much earlier than is generally supposed. The months of April and October give nearly the same means as the year.

Our hottest months are June, July, and August, when the averages are 61.01 deg., 64.5 deg., and 62.8 deg. Fahr., thus showing July to have the advantage. Our coldest months are January and March; the averages being 42.2 and 43.4 deg., the latter, on the whole, being colder than either December or February. Like every other place, we have some extreme readings; but these in Plymouth, as in all the south-western district, are comparatively rare. The maximum temperature in the shade which I have recorded is 93 deg. Fahr. on June 27th, 1866. The minimum is 14 deg. Fahrenheit, on December 27th, 1869. The maximum should be received with caution, because I am afraid heat must either have been reflected or radiated from surrounding substances. I have many instances of the temperature reaching from 85 deg. to 90 deg. I find that the maximum for the day is generally from 2.30 to 3.30 P.M.; but the time is modified from the effects of clouds, etc.; so much so, that I have occasionally found the maximum as early as 8 to 9 A.M., and as late as 7 P.M. Our mean maximum is 60.01 deg.; our mean minimum 44.61 deg. Fahr.

The average difference between our wet and dry bulb thermometers is 2.6 deg. Fahr. Very frequently at 8 A.M., and even throughout the day, we find our dry and wet bulbs indicating the same temperature; thus showing the atmosphere to be completely saturated with aqueous vapour. I take this to be a phenomenon common to the whole south-western district, because with a south-west wind coming from a warm ocean the air must be highly charged with moisture; and when it is cooled by contact with the land complete saturation takes place, and we get drizzling rain lasting for hours, perhaps days, and yet the rainfall for that time is comparatively small. Then, again, on June 22nd, 1865, I found 15 deg. between the readings of the bulbs; the dry being 78 deg., the wet 63 deg., and the barometer 30.336 inches. This would give the dew-point, or temperature at which dew will begin to be deposited, 52.6 deg. Fahr., the relative humidity 41, complete saturation being 100, and 4.3 grs. of vapour in a cubic foot, whilst it would take 6.0 grs. more of vapour to saturate the air. This is the least humidity I have ever observed in Plymouth, and was after several days of continuous easterly winds. In June month I find, as a rule, the least relative humidity, and in November the greatest. The readings of the dry and wet bulbs should be carefully attended to in all districts, as by means of such readings, with Glaisher's tables, the dew-point may always be calculated and the minimum temperature on the ground predicted very nearly. Knowing that this is of great value to all such as have tender plants which will not bear low temperatures, I may also point out that, with the aid of the hygrometer (as it shows the temperature and dryness or humidity of the air), an artificial climate may by very simple means be produced; and those whose circumstances in life or condition of health prevent them from seeking a climate suited to their peculiar constitution can, to a great extent, make up for the deficiency by the assistance of this instrument.

I am aware that the existence of the Gulf Stream has been questioned by many eminent men; but I have never seen another valid explanation for the finding of articles of West Indian produce on the western shores of the British Isles, France, and Norway. A few of these, by the kindness of the Local Secretary, Dr. Littleton, I am enabled to exhibit: these were, I believe, found on the coast of Cornwall. Then, again, Maury (one of the very highest authorities on this and kindred subjects) positively asserts that the water of the Gulf Stream differs from other waters "not only in colour, transparency, and temperature, but also in specific gravity". Again, by comparing temperatures, he proves that the ocean reaching the western shores of the British Isles is much warmer than the latitude would indicate without such a current; and Professor Wyville Thomson (one of the principals associated with Dr. Carpenter in the *Porcupine* Expedition of 1869), in his address delivered before the Meteorological Society of Scotland in July last, gives corroborative proof of this superior temperature of the ocean coming up from the south-west (*Nature*, vol. iv, pp. 251 *et seq.*) Until these observations are proved untrustworthy, I for one shall accept the deduction. Whether there be a Gulf Stream or not (but of whose existence I have no doubt), from the fact that the temperature of the ocean is higher than the latitude warrants, and from the great specific heat of water, our winters must be ameliorated and our climate rendered more humid than it otherwise would be, making us contrast very favourably in temperature with ports and watering-places on the eastern shores of Britain.

I find the greatest range of the thermometer to be in the summer months of June and July, when the average range is above 20 deg. Fahr. The least range is during the winter months of January and February,

when it is less than 10 deg. Fahr. I can account for this only by the fact that the vapour in the atmosphere during the summer months is far more attenuated or rare than in the winter months; and hence the heat-rays from the sun are absorbed more in winter than in summer, whilst radiation from the earth is prevented from the same cause during the same time. This is simply an illustration of Professor Tyndall's theory of absorption and radiation. The greatest daily range of temperature I have ever registered was on April 27th, 1865, when it was 44 deg.—viz., the minimum 42 deg. and maximum 86 deg.—and on June 20th and 22nd, 1865, and June 27th, 1866, when the range was 40 deg. on each occasion. In very many instances I have found it to be more than 30 deg. Fahr. As a contrast to these, on December 22nd last, 1870, I found the daily range to be but 2 deg. Fahr.—viz., the minimum 26 deg., maximum 28 deg. Fahr.—and on several occasions the daily range has been but 3 deg. Fahr.; the maximum being about 50 deg., and minimum about 47 deg. Great daily ranges are indicative of dry weather, whilst small ones show rain or great cold. The connexion between great daily ranges of temperature and health, as affected by certain diseases, would be an interesting problem for some medical man with time on his hands to solve; *i.e.*, whether great ranges of temperature on several successive days tend to increase the mortality caused by some diseases: if so, then the treatment at such times is obvious, and localities with small extremes of temperature for invalids with these diseases should be chosen. Another question is, do extreme temperatures, even if they last for some days, affect health as much as great daily ranges of temperature?

The atmospheric pressure, as shown by the barometer, has fluctuated between 30.822 inches, the maximum on 15th Dec., 1865, and 28.500 inches, the minimum on the night of 10th January, 1866; a difference of pressure amounting to about $2\frac{1}{2}$ inches of mercury. These readings are reduced to the mean sea-level at 32 deg. Fahr. I have found the pressure seldom to fall below 29 inches. This occurred on four mornings in 1865, two in 1866, three in 1867, three in 1868, three in 1869, and not at all in 1870. The month of greatest mean pressure is June, the average being 30.120; the month of least mean pressure is January, the average being 29.844. The mean pressure for the whole time is 29.953.

We next come to speak of the winds. I find in the six complete years of which I have records, that on 407 mornings we had wind from north to east, on 444 from east to south, on 671 from south to west, on 564 from west to north, and 97 mornings calm; whilst from sickness, absence, and other causes, no register was made for 8 mornings. These numbers give 18.58 per cent. for the wind from north to east, 20.27 from east to south, 30.62 from south to west, 25.74 from west to north, and 4.42 per cent. calm; thus winds with a westerly tendency or calm amount to 60.78, whilst those with an easterly tendency are only 38.25 per cent. The months in which we have the greatest amount of easterly winds are March, April, and May; those with the greatest amount of westerly winds are February and July; whilst those with most calms are April and September. The strongest winds blow almost invariably from south to west, and increase in violence as they veer—that is, as they follow the course of the sun. This, no doubt, is occasioned by the rotation of the earth. Plymouth is pretty well sheltered by high ground, except in the south, and is especially so from north to east; hence the full force of the wind from that quarter cannot be felt in the town, and the proverbially baneful east wind is robbed of its sting.

Rain next claims our attention. If not less than $\frac{1}{100}$ th of an inch fall in twenty-four hours, it is usually classed as a rainy day; it should be as a day on which rain falls. The number of days on which rain, snow, or hail fell was 189 in 1867, 168 in 1868, 177 in 1869, and 118 in 1870. The quantity in 1869 was 30.01 inches, and in 1870 was 24.11; and these are the only years in which I have kept a register of the rainfall.

From the last quarterly weather report issued from the Meteorological Office, taking the average of the five years from 1866 to 1870 (both inclusive), I find that the mean annual rainfall of Plymouth is 38.95 inches; January contributing 5.32 inches, September 4.92, and December 4.58 inches, these three months being those in which most rain falls. June contributes but .77 inch on the average, or only 2 per cent. of the rainfall, this being the least. We sometimes experience very heavy showers. These, in my opinion, are the results of electrical discharges. The heaviest shower I ever witnessed was on Saturday, July 29th, 1871, from 9.30 to 10 A.M., when in less than half-an-hour about three-quarters of an inch was registered. These very heavy rains are of rare occurrence. The humidity of a district should be judged more by the number of rainy days than by the quantity of rain which falls; because fine rain falling for several successive days, not amounting to nearly as much as a single heavy shower, will render a climate more moist than another where the rain falls heavily and then stops. I have the authority of Mr.

Scott, F.R.S., for saying that the amount of rainfall is well determined in scarcely a large town in England; and in Plymouth the gauges are peculiarly misplaced, being either on the tops of houses where the draught through the streets interferes considerably with correct results, or in sheltered spots. In my own case, the gauge is situate on the edge of a vertical wall twenty-six feet six inches from the ground, and is sheltered from S.S.W. to W. by N. by another house. Experiments conducted by Mr. Chimes of Rotherham, and published by Mr. J. G. Symons in his *British Rainfall*, show that the amount decreases with elevation; and for the height of my gauge about 16 per cent. should be allowed. From the Rotherham experiments, extending over fifty-six months, Mr. Strachan, F.M.S., has calculated that the mean inclination of rain is 42 deg. from the vertical (*Brit. Rainfall*, 1870, p. 53); and, as the highest part of the chimneys of the adjacent house makes an angle of 45 deg. with the vertical, there can be but little effect from its position, although with a strong wind some rain must be lost to my gauge. Then, again, I have observed that, when the rain accompanies a south-east wind, the latter strikes against the wall, is forced over it, and carries the rain away from the gauge. From these causes it would be manifestly unfair to draw comparisons between the amount as measured by me and the rainfall at other places. For example, at Tavistock, about fourteen miles due north, and nearer the moor, the measurement is many inches more than at Plymouth, whilst at Dartmoor prisons nearly double the amount is registered. Although so near the sea, and in the path of the counter trades, yet we sometimes, but rarely, experience a want of rain; for example, from March 18th to July 2nd, 1870, during which time, if we omit a thunder-shower on the 12th May, only 1.3 inches of rain fell in 106 days: in fact, the whole year was very dry, there being but $\frac{8}{13}$ of the average rainfall. We go many days in the year without a sight of the sun, the sky being completely overcast; and it is but seldom our atmosphere is free from cloud.

I have said nothing about the ozone at Plymouth, because I have kept no record of the amount; and until some method be adopted for measuring the amount of nitric and other acids in the atmosphere, with the quantity of air which passes over the test-papers, no reliance can be put in the amount of ozone measured by the colour given to these papers. When I speak of ozone, I mean that peculiar condition of oxygen which renders it more readily able to combine with other elements, and thus it neutralises what obnoxious gases the atmosphere may contain. From its powerful oxidising properties, it is generally considered an allotropic condition of oxygen; and Professor Tyndall

says it may be an aggregation of atoms of oxygen into molecules. Seeing that electricity is generated in such large quantities on the sea-shore, and more especially where the sea breaks in large rollers on the beach, and as it is known that ozone is produced simultaneously with electricity, no doubt we have a large amount in the south-west district. Then, again, it is known that sea-water holds from $\frac{1}{80}$ to $\frac{1}{40}$ its volume of air in solution; but the air in the sea contains 32 per cent. of oxygen, instead of 21 per cent. as the atmosphere over land does. By agitation, we may reasonably suppose a portion of this air surcharged with oxygen is given off, and during storms the quantity is most likely much increased and the effects on health are highly beneficial. This I take to be one of the chief reasons why a seaside residence is so conducive to improved health among invalids. Now in Plymouth and in the whole south-western district, we have the broad stormy Atlantic whence we draw our supply of this element; whilst on the east coast the storehouse is narrowed into the comparatively narrow North Sea or German Ocean.

The months of January and November seem to bring more severe atmospheric storms than any other months; but Plymouth appears to enjoy an immunity from electrical storms, thunder and lightning being but seldom known; thus whilst electricity may be generated on our coasts, and the sky often bears tokens of the existence of electricity in large quantities, yet it is generally carried inland before a violent discharge takes place. I have no doubt that a large quantity is silently discharged through our damp atmosphere, and is unperceived by us.

Our average barometrical pressure being 29.953, our temperature of the air 52.31, and difference in the wet and dry bulb thermometer 2.6, we have an average dew-point of 47 deg. Fahr., relative humidity, 82.4, and 3.7 grains of aqueous vapour per cubic foot in the atmosphere. Hence I conclude that our town is warm and moist, arising from the large proportion of westerly winds (the return trades) which blow over us; we have few extremes of temperatures, few electrical or atmospheric storms; a cloudy sky, but not a large rainfall.

The records and diagrams from which I have drawn my conclusions now lie on the table for the inspection of anyone who feels an interest in the subject; and I would particularly draw the attention of such to the illustration of the fact that, with a low barometer, we get a high temperature, and *vice versa*. One more illustration is worth noticing; that, when we have a fall of the barometer, and the dry and wet bulbs are far apart, wind is foretold; but if the readings of the bulbs approach with a falling barometer, then rain may be expected.

Averages of Meteorological Register, extending over Six Years, from 1865 to 1870 (both inclusive).

| MONTHS. | BAROMETER Reduced to mean sea level at 32° F. | | | TEMPERATURE. | | | HYGROMETER. | | | | | | | NO. OF DAYS ON WHICH WIND BLEW. | | | | | RAINFALL. | |
|--------------|--|--------------------|--------------------|------------------|------------------|----------------------|-------------------|-------------------|--------------------|--------------------------|--------------------------------|---|---------------------------------------|---------------------------------|---------------|---------------|---------------|-------|---------------------|------------------------|
| | Average Barometer. | Maximum Barometer. | Minimum Barometer. | Average Maximum. | Average Minimum. | Average Temperature. | Average Dry Bulb. | Average Wet Bulb. | Average Dew Point. | Elastic Force of Vapour. | Vapour in a Cubic Foot of Air. | Vapour more required to saturate a Cubic Foot of Air. | Degree of humidity. Saturation = 100. | From N. to E. | From E. to S. | From S. to W. | From W. to N. | Calm. | Rainfall in Inches. | Equivalent Percentage. |
| January .. | 29.844 | 30.660 | 28.500 | 46.92 | 37.50 | 42.21 | 41.38 | 40.09 | 38.48 | .233 | 2.7 | 0.3 | 89 | 4.33 | 6.67 | 12.33 | 5.83 | 1.33 | 5.32 | 13.7 |
| February .. | 29.972 | 30.679 | 28.602 | 49.30 | 39.49 | 44.39 | 42.96 | 41.65 | 40.08 | .248 | 2.8 | 0.4 | 90 | 3.00 | 3.50 | 12.83 | 7.67 | 1.17 | 3.65 | 9.4 |
| March | 29.887 | 30.676 | 29.005 | 49.99 | 36.71 | 43.35 | 42.39 | 40.14 | 37.39 | .224 | 2.6 | 0.5 | 83 | 9.50 | 4.67 | 6.33 | 9.83 | 0.67 | 3.48 | 8.9 |
| April | 30.000 | 30.494 | 29.164 | 60.95 | 42.76 | 51.85 | 51.88 | 48.73 | 45.52 | .305 | 3.4 | 1.0 | 79 | 6.67 | 7.00 | 7.67 | 6.50 | 2.00 | 2.17 | 5.6 |
| May | 29.928 | 30.410 | 29.113 | 64.26 | 45.37 | 54.81 | 56.01 | 52.35 | 48.91 | .346 | 3.9 | 1.1 | 77 | 4.83 | 10.83 | 9.33 | 4.83 | 1.17 | 3.15 | 8.1 |
| June | 30.120 | 30.574 | 29.280 | 71.56 | 50.46 | 61.01 | 63.34 | 58.36 | 54.15 | .420 | 4.6 | 1.8 | 72 | 5.83 | 5.83 | 7.83 | 9.00 | 1.50 | 0.77 | 2.0 |
| July | 30.001 | 30.438 | 29.270 | 74.46 | 54.54 | 64.50 | 65.54 | 60.81 | 56.96 | .465 | 5.1 | 1.8 | 74 | 5.00 | 5.17 | 9.67 | 9.50 | 1.67 | 1.89 | 4.9 |
| August | 29.968 | 30.320 | 29.396 | 72.39 | 53.19 | 62.79 | 62.88 | 59.44 | 56.46 | .457 | 5.0 | 1.4 | 80 | 4.17 | 6.67 | 9.17 | 10.00 | 1.00 | 2.50 | 6.4 |
| September .. | 29.895 | 30.534 | 28.877 | 68.70 | 51.56 | 60.13 | 60.20 | 57.74 | 55.58 | .443 | 5.0 | 0.8 | 85 | 4.83 | 7.00 | 11.00 | 4.67 | 2.50 | 4.92 | 12.6 |
| October | 29.903 | 30.516 | 29.057 | 60.38 | 45.76 | 53.07 | 52.80 | 51.31 | 49.81 | .358 | 4.0 | 0.5 | 89 | 5.83 | 5.33 | 7.50 | 10.67 | 1.67 | 3.51 | 9.0 |
| November .. | 29.993 | 30.640 | 28.840 | 52.55 | 39.46 | 46.01 | 45.15 | 43.95 | 42.56 | .273 | 3.1 | 0.3 | 91 | 7.00 | 5.17 | 9.00 | 8.17 | 0.67 | 3.01 | 7.7 |
| December .. | 29.924 | 30.822 | 29.034 | 48.63 | 38.50 | 43.57 | 42.93 | 41.70 | 40.22 | .249 | 2.8 | 0.4 | 90 | 6.83 | 6.17 | 9.17 | 7.33 | 0.83 | 4.58 | 11.7 |
| Totals .. | 29.953 | 30.822 | 28.500 | 60.01 | 44.61 | 52.31 | 52.29 | 49.69 | 47.1 | .324 | 3.8 | .86 | 83 | 67.82 | 74.01 | 111.83 | 94.00 | 16.18 | 38.95 | 100.0 |

AN ANALYSIS OF STATISTICS OF LATERAL LITHOTOMY.*

By the late WILLIAM KEITH, M.D., M.R.C.S.E.,

Senior Surgeon to the Royal Infirmary, Aberdeen;
Lecturer on Clinical Surgery; etc.

CASE CVII.—W. Thompson, aged 74, a mason, was admitted on June 28th, 1852, and was operated on August 14th. He was at the time, and had been for some time before, suffering from diabetes

mellitus. The stone weighed 4 drachms 1 scruple, and measured 1½ inches by ½ inch by 1¼ inches. Suppression of urine came on, and he died comatose on the 25th. At the *post mortem* examination, a considerable amount of effusion was found between the membranes of the brain and in the lateral ventricles. The lungs were healthy, except that they were somewhat emphysematous at the apices. The intestines and bladder were natural. The wound in the latter was nearly closed. The kidneys were both diminished in size and much diseased.

CASE CXVI.—W. Nicol, aged 79, miller, was admitted on November 11th, 1853, and was operated on February 11th, 1854, when four

* Concluded from page 322 of last number.

stones, weighing $4\frac{1}{2}$ drachms, and measuring each 1 inch by $\frac{1}{2}$ inch by $\frac{3}{4}$ inch, were removed. He gradually sank, and died from age and exhaustion of nature's powers by a small pelvic abscess, on March 11th, four weeks after the operation. The whole of the contents of the abdomen were natural, the only thing to account for his exhaustion being a small deposit of pus around the lower end of the rectum.

CASE CXXIV.—George Sanderson, aged 68, a farmer, was admitted on August 13th, 1855, and was operated on August 25th. Seven calculi were removed, weighing 1 ounce 3 drachms, and the largest measuring $1\frac{1}{8}$ inches by $\frac{5}{8}$ inch by 1 inch. He went on well till the morning of the third day, when suppression of urine supervened, and he died comatose at half-past seven on the evening of the 28th. The third lobe of the prostate had come away in the forceps at the operation. The kidneys were not much altered in structure; the bladder was thick and diseased; and the prostate enormous.

CASE CXXV.—John Connor, aged 64, a seaman, came under treatment on September 24th, 1855, and was operated on October 16th. The stone weighed 7 drachms, and measured $1\frac{1}{8}$ inches by $1\frac{1}{8}$ inches by $1\frac{1}{4}$ inches. He died of pyæmia, on October 27th, 1855, eleven days after the operation.

CASE CXXVI.—James Sangster, aged 74, farmer, came under treatment on October 20th, 1855, and was operated on December 4th. Two stones were removed, weighing 3 ounces 3 drachms, and the larger measuring 2 inches by 1 inch by $1\frac{1}{8}$ inches. He died on December 8th, exhausted by previous suffering.

CASE CXXVIII.—John Cockburn, aged 58, crofter, was admitted on June 18th, 1857, and was operated on July 4th. The stone weighed $4\frac{1}{2}$ drachms, and measured $1\frac{1}{4}$ inches by $\frac{7}{8}$ inch by 1 inch. He went on well till the evening of July 8th, when he complained of pain in the right knee, which persisted, spite of treatment. The whole leg became swollen; he gradually became weaker and weaker, and died on the morning of July 14th. At the *post mortem* examination, the only marked disease discovered was in the right knee-joint, which contained about two ounces of thick yellow pus, but showed no signs of previous organic disease.

CASE CXXIX.—James Moor, aged 62, sawyer, was admitted on June 22nd, 1857, and was operated on July 4th. The stone weighed $7\frac{1}{2}$ drachms, and measured 2 inches by $\frac{3}{4}$ inch by $1\frac{1}{8}$ inches. The day after the operation, he complained of a pain in the right iliac region, which persisted. He gradually grew weaker, and died on July 7th. At the *post mortem* examination, the intestines were found congested, especially in the right iliac region, where they adhered to the wall of the abdomen. Both kidneys were fatty. Pus was infiltrated into the cellular tissue around the entrance of both ureters into the bladder.

CASE CXLVI.—John Collie, aged 65, ropemaker, was admitted on December 15th, 1857, and was operated on December 24th. The stone weighed 1 ounce, and measured $1\frac{1}{8}$ inches by $\frac{7}{8}$ inch by $1\frac{1}{8}$ inches. He went on well till January 5th, when diarrhoea came on, followed by hiccough; and these, persisting, so weakened him that he died exhausted after a rigor on the evening of January 10th, seventeen days after the operation. No *post mortem* examination was allowed.

CASE CXLVII.—W. Mackie, aged 72, blacksmith, came under treatment on February 3rd, 1858, and was cut on February 10th. The stone weighed 7 ounces $5\frac{1}{2}$ drachms, and measured $3\frac{1}{8}$ inches by $1\frac{3}{8}$ inches by $2\frac{1}{8}$ inches. The case went on favourably for six days, when the urine became scanty; and he died on the eighth day (Feb. 18th) with symptoms of uræmia. No inspection was allowed.

CASE CXLIX.—Robert Garioch, aged 75, farmer, came under treatment on May 22nd, 1858, and was operated on May 29th. The stone weighed 1 ounce 5 drachms 1 scruple, and measured 2 inches by 1 inch by $1\frac{1}{8}$ inches. The internal incision was thought to be too small, and, though he was under chloroform, a remora was noticed before he could be put to bed. Yet he continued to go on favourably for a few days; but, in consequence of his using great freedom in getting up and going about, disease supervened in the pelvis, from the effects of which he died on the tenth day (June 8th). No inspection was had, as he was fifty miles from town.

CASE CLV.—John Pyper, aged 30, blacksmith, was admitted on December 13th, 1858, and was operated on January 8th, 1859. The stone weighed 1 ounce, and measured 2 inches by $\frac{7}{8}$ inch by $1\frac{1}{8}$ inches. Symptoms of inflammation of the bowels came on, though not very acutely; and he gradually sank, and died on January 16th, eight days after the operation. At the *post mortem* examination, a large quantity of pus, mixed with flakes of lymph, was found in the peritoneal cavity. The surface of the intestines was not congested, but had lost its usual glistening look. The kidneys were both much diseased; there were several small abscesses in each, and a calculus in the pelvis of the left kidney.

CASE CLVII.—George Gordon, aged 70, plasterer, came under treatment on June 22nd, 1859, and was operated on July 19th. Six calculi were removed, weighing $3\frac{1}{2}$ drachms, and the largest measuring $\frac{7}{8}$ inch by $\frac{3}{8}$ inch by $\frac{1}{2}$ inch. The artery of the bulb was cut at the operation, and was the cause of secondary hæmorrhage to a limited extent, though not seen in any marked manner at the time of the operation. Suppression of urine came on, and he died on July 21st, three days after the operation. At the *post mortem* examination, three calculi were found in the right kidney. Both kidneys were much diseased.

CASE CLIX.—Alexander Angus, aged 31, a farm-servant, was admitted on November 14th, 1859. His urine was albuminous, and he had pain in the lumbar region, present for months; but long rest in the hospital so improved his looks, so abated the pain and the presence of albumen, that the operation was ventured on May 12th, 1860. The stone weighed 1 ounce 5 drachms, and measured $2\frac{1}{8}$ inches by 1 inch by $1\frac{1}{8}$ inches. Neither pain nor pulse gave evidence of action being present in any unusual degree; yet he died on May 18th, six days after the operation, with symptoms of uræmia. There was exudation of pus and lymph on the left side of the pelvis, in no apparent way connected with the wound, yet in contact with the peritoneal coat of the bladder. One large and two small calculi were found in the right kidney, that organ being wasted almost to a cyst.

CASE CLXIV.—Alexander Davidson, aged 66, crofter, was admitted on January 28th, 1861, and was operated on February 2nd. The stone weighed 1 ounce, and measured $1\frac{1}{4}$ inches by 1 inch by $\frac{1}{2}$ inch. Previously to the operation, the urine was of specific gravity 1020, and there was no trace of albumen in it. Though the urine was at first scanty after the operation, yet it had become copious; and at 9 P.M. on the evening of February 7th he felt well and cheerful. At midnight he had a rigor, followed by convulsions, which ended in death at half-past four on the morning of February 8th. The right kidney weighed 9 ounces, the left 18 ounces; and both were filled with cysts, and disorganised. A renal calculus obstructed one of the ureters close to the kidney.

CASE CLXX.—Alexander Henderson, aged 47, crofter, was admitted on October 7th, 1861, and was operated on on the 23rd. The stone weighed 4 ounces 3 drachms, and measured $2\frac{3}{8}$ inches by $1\frac{1}{8}$ inches by $2\frac{1}{8}$ inches. He went on favourably till November 1st, when the tongue became somewhat dry. His pulse was quiet, and his belly natural; but he gradually grew weaker, and died at 11.50 P.M. on November 1st. The *post mortem* examination revealed purulent deposits behind the peritoneum, all over the left side of the pelvis.

CASE CLXXII. W. Gordon, aged 76, crofter, was admitted on March 26th, 1862, and was operated on March 29th. Three stones were removed, weighing $7\frac{1}{2}$ drachms, the largest measuring 1 inch by $\frac{7}{8}$ inch by $\frac{7}{8}$ inch. The prostate was enormous. He went on favourably for a fortnight, the urine coming almost entirely *per urethram*; but, on attempting to get out of bed without help on the fourteenth day, he fell violently on the floor, and was much injured by the shock. His appetite failed, which, in his wasted frame and feeble constitution, coupled with seventy-six years of age, sufficed to kill him. On *post mortem* examination, the kidneys were found of small size, but perfectly healthy in structure. The calculi removed were each shaped like a right-angled triangle.

CASE CLXXV.—James Fraser, aged 66, a mason, was admitted on July 17th, 1862, and operated on July 23rd. The stone weighed 1 ounce, and measured $1\frac{1}{4}$ inches by 1 inch by $1\frac{1}{4}$ inches. He died on August 2nd, from cellulitis in the pelvis and pyæmia. No inspection was had, in consequence of my absence from home.

CASE CXCI.—George Gauld, aged 73, farmer, came under treatment on July 15th, 1864, and was operated on August 16th. Twelve calculi, of the size of French beans, weighing 9 drachms, were removed. Diarrhoea, accompanied by hiccough, set in severely on the third day, without another unfavourable symptom; the urine being clear and copious; the belly soft and easy; the pulse 96, compressible, full, and soft; the tongue moist, though partly furred; and the appetite tolerable. Yet, in spite of treatment, the looseness continued; and he sank comatose at 6 P.M. on the 4th day (August 20th.) No *post mortem* examination was had, his residence being forty miles distant from Aberdeen.

CASE CXCI.—Robert Cran, aged 70, farmer, came under treatment on October 12th, and was operated on October 12th, 1864. The stone weighed 7 drachms, and measured $1\frac{1}{8}$ inches by $\frac{3}{4}$ inch by $1\frac{1}{8}$ inch. It being believed that there was one hour and twenty minutes' secretion in the bladder, and that more was flowing or entering, it was feared at the moment that the inner incision would prove too free, from cutting into an empty bladder; and so it turned out, the patient dying on the evening of the third day, from the effects of urinary

infiltration. No *post mortem* examination was had, in consequence of his residence being fifty miles distant from Aberdeen.

CASE CXCVIII.—James Clarke, aged 55, mason, came under treatment on March 6th, 1865, and was operated on April 1st. The stone weighed 2 ounces $1\frac{1}{2}$ drachms, and measured $2\frac{1}{2}$ inches by 2 inches by 1 inch. With a quiet pulse, and urine both clear and copious, he went on favourably for eight days, the tongue only being dry; yet his desire for food was natural. On the ninth day, the pulse quickened a little; but there was no tenderness or local symptom anywhere, and he still took his food. On the twelfth day, he became faint, after sitting up in bed; and, continuing feeble, he expired on the evening of the thirteenth day (April 13th). Inspection revealed a collection of thick pus in the cellular tissue around the wound and neck of the bladder. The viscera of the abdomen were quite healthy. The coats of the bladder were thick and chronically inflamed.

CASE CCIII.—David Stewart, aged 79, farmer, was admitted on July 7th, 1866, and was operated on July 14th. The stone weighed $7\frac{1}{2}$ drachms, and measured $1\frac{1}{2}$ inches by $1\frac{1}{2}$ inches by $1\frac{1}{2}$ inches. The patient was a large-built man, with a deep perinæum and a large cartilaginous prostate gland; yet the blunt gorget and chloroform made the operation easy. He went on well till the evening of the fifth day, when, after some freedom used in getting out of bed, he had a rigor, quickly followed by tenderness in the right pubic region, where a reducible hernia existed. The secretion of urine at the same time became nearly suspended. Leeches to the groin abated the pain and tenderness; but, although the general symptoms seemed at times cheering, the urine never came in natural quantity, and he gradually sank on the eighth day. Inspection revealed pus in the hernial sac, and a pinkish blush on the adjoining peritoneum. The liver was nutmeggy and friable; the kidneys were much diseased; the bladder sacculated and greatly hypertrophied.

CASE CCV.—James Sim, aged 75, farm-servant, was admitted on February 13th, 1867, and was operated on February 28th. The stone weighed 5 ounces 7 drachms, and measured 3 inches by $1\frac{3}{4}$ inches by $2\frac{1}{4}$ inches. He went on most favourably till the sixth day, when, the bowels not having moved, a moderate dose of castor-oil was given. It operated twice comfortably; but, from the moment it did so, he felt weak, the urine began to flow less copiously, and he became drowsy. Sinapisms were applied to the nape of the neck, and turpentine stupes to the loins. Brandy and spirits of nitre were given freely; but the secretion of urine never returned in quantity; the pulse, never before above 60, now quickened; his strength failed; and he quietly expired at 3 A.M. on March 7th. Inspection revealed no very unusual appearances in the wound or its surroundings. The walls of the bladder were thickened and rugous, and congested on its inner surface. The fundus of the bladder outside the cellular tissue looked as if exudation of lymph had taken place, and was undergoing the process of softening and becoming purulent; but no adherent or reddened spot could be detected on the intestinal or pelvic peritoneum. The kidneys were small and diseased; the ureters were as large as a man's thumb; and the pelves of both kidneys widely distended.

CASE CCXVI.—John Fraser, aged 67, crofter, was admitted on June 5th, 1869, and was operated on on June 16th, when a calculus weighing 1 ounce, and measuring $1\frac{3}{4}$ inches by $1\frac{1}{2}$ inches by $\frac{3}{4}$ inch, was removed. He died on the eleventh day after the operation, without one untoward symptom connected with the kidneys or bladder. Pain at the pit of the stomach, and latterly coffee-ground vomiting, preceded his death. *Post mortem* examination revealed cancer of the pylorus and ulceration of the mucous membrane of the stomach. It turned out, on inquiry, that he had laboured many months under that disease, but had studiously concealed it.

CASE CCXIX proved fatal two days after the operation. No details are given in Dr. Keith's tables, further than the weight of the stone and the date of death.

EMBOLISM OF THE CENTRAL ARTERY OF THE RETINA.

By C. S. JEAFFRESON, Assistant-Surgeon, Newcastle-on-Tyne Infirmary.

ALTHOUGH most ophthalmic surgeons must have seen cases of embolism of the central artery of the retina, they are still of sufficient rarity to be worth putting upon record.

R. M., aged 28, whilst following his usual occupation as a bricklayer, became suddenly conscious of the rapid approach of blindness in his right eye. He described the blindness as having commenced in the centre of the field of vision, and gradually spread towards the periphery

with such an amount of rapidity that, in a few moments, total darkness was produced. He left his work in great alarm, and the following day presented himself to me.

On examining the state of vision I found the left eye normal. In the right eye the whole field of vision was obscured, with the exception of a small portion in which it was highly amblyopic, recognising only obscurely the presence of the finger when held up. After his pupils had been thoroughly dilated with atropine, I examined him with the ophthalmoscope. The size, colour, and shape of the optic disc, the reflection from the fundus, and the condition of the vessels on the left side, were normal. On the right side, the optic disc was unaltered in colour, but the retinal arteries were reduced to the most minute threads, the veins congested, and for some distance surrounding the macula lutea there was a paleness of the fundus which made the redness of that spot stand out in prominent contrast. On searching for signs of cardiac disease, I found that, although there was no murmur of any kind, there was distinct evidence of hypertrophy, and that the heart's action was irregular and intermittent.

The chief peculiarities in this case are, the manner in which the blindness supervened, and the retention of a certain amount of vision in a very small portion of the field. The former I believe never before to have been noticed; and the latter, though noticed, not satisfactorily explained.

The only explanation I can offer of a portion of the field of vision still retaining sensibility is, that some spot in the retina must derive its blood-supply, partially, at least, from some other source than the retinal artery; and if vision improve, we must expect to find it increasing the area of this spot, where if any collateral circulation is established, we may most reasonably look for it.

WASP-STINGS.

By C. D. H. DRURY, Pulham St. Mary.

DURING the last fortnight or three weeks, I have been called upon to treat no less than seven cases of illness arising from the stings of wasps.

On August 21st, my cook, while making pastry, was stung in the forefinger of the right hand by a wasp. In less than half an hour she felt exceedingly depressed and weak, and complained of severe headache; and her hand was so swollen that she could not bend her fingers. The eyes were red and bathed in tears; the face puffy, swollen, and dusky; and she was completely covered with an urticarious eruption. I could not find any remnant of the sting in the finger, and only with difficulty the place where the sting had entered. I ordered her at once to bed, and gave her fifteen minims of aromatic spirits of ammonia every half hour. She dipped her hand in a strong solution of carbonate of soda, but this only increased the pain; poultices, however, gave immediate relief. The ammonia, too, seemed to do much good; for after two doses the headache abated, the rash began to decline, and she felt much better, although the local pain remained. She scarcely closed her eyes all night, and in the morning I found the arm much swollen as far as the axilla—where she now complained of most pain, although I could not detect that the glands there were increased in size. The lymphatics of the forearm were enlarged and hard. Poultices were continued, the hand was kept in a sling, and an aperient mixture with ammonia given during the next day. By this time the swelling of the arm had subsided, and on the morning of the following day she was sufficiently well to resume her ordinary duties.

Three days afterwards, she was again stung—this time at the back of the neck. In a very few minutes she felt so depressed, weak, and faint, that she had to be supported upstairs to bed. In half an hour her face was of a dusky, red colour, and swollen, and her body covered with an eruption, and she suffered from violent headache. I gave her a glass of brandy and hot water, and soon she felt much better. I saw her again in four hours. She then complained of urgent thirst, and was very restless—felt inclined to, but could not, sleep. Her throat felt hot and painful; and on examination, I found her tonsils red and swollen. Her pulse was quick and full. I ordered the neck to be bathed frequently and her throat to be gargled with hot water, and barley-water to be given to drink. I again saw her about five o'clock in the morning. Her throat-symptoms were somewhat relieved, but she was still very restless, and the eruption which remained was of a dusky hue, very like the rash of measles. There was well-marked coryza. In the course of the day she went home; and I heard from her frequently. The eruption lasted for three days and then began to fade; and now—six days from the date of the sting—she reports herself well, but weak.

On August 25th, my page and housemaid were both stung in the hand. The page had a swollen hand and arm, and much local pain for

about twenty-four hours. He found relief from the application of vinegar. The housemaid did not suffer for more than ten minutes, and felt benefit from the application of damp washing-soda.

On August 26th, my nurse was stung on the right upper eyelid, and felt immediately much depression, local pain, and severe headache. A little brandy and warm water and the local application of laudanum soon gave relief, but the eyelid remained swollen for two days.

I also visited about this time three patients (females) suffering with swollen arms and hands from wasp-stings. The swelling remained in each case about a day. In one, relief was obtained from ammonia liniment; in another, from vinegar; and in the last, from the application of a damp blue-bag, such as is used by washerwomen.

I have either heard it stated, or have read that, the poisonous matter of the wasp-sting has an acid reaction. This I doubt. It may be slightly alkaline, but I think probably neutral. The latter would account for many opposite and different substances giving relief. Many things have been recommended as local applications; for instance, compound camphor liniment, soap liniment, eau-de-Cologne, brandy, whiskey—and, in fact, all the spirits in common use—chalk, vinegar, spirits of sal-volatile, carbonate of soda, spirits of hartshorn, ice, honey, sugar and soap, ipecacuanha, poultices, etc. In this neighbourhood, the old women pin their faith on washing-soda or damp blue-bags.

I would suggest that the treatment be as follows. A careful examination of the wound should be made with a good pocket-lens, and any remnant of the sting removed with a pair of fine-pointed forceps. Laudanum should be applied by means of a cotton-wool swab for at least ten minutes, followed by warm water fomentations. Internally, brandy and hot water should be given at once, and twenty minims of aromatic spirit of ammonia every half hour as long as there is depression. If the mouth or throat be stung, warm flannels should be applied to the neck, and warm inhalations with ether employed. There is sure to be spasm of the rima glottidis in these cases. In no case that I have seen yet would I have given opium internally; I doubt anything but mischief from its use in any of these cases, but I am aware it has been recommended by medical writers. If local pain be not subdued by the application of the laudanum, then I think I would try the effect of a hyoscyamus poultice or tincture of belladonna sprinkled over a warm damp flannel, and applied to the wound.

CLINICAL MEMORANDA.

A CASE OF SPORADIC CHOLERA: EXTREME COLLAPSE: RECOVERY UNDER ELIMINATIVE TREATMENT.

I WAS sent for to a blacksmith of this town about 8 A.M. on August 29th. He had gone to bed well, and awoke about 3 A.M. with diarrhoea and vomiting. He became rapidly worse; and, when I saw him, he was suffering horribly from cramp all over the body, especially the hands, arms, and bowels. The evacuations from the stomach and bowels were like water with a sediment of rice. The pulse was small and thready; his complexion, naturally fair, was now of a dusky hue; his breathing was short, but not hurried; and he complained of constriction of his chest, "as if it were tied down." At 10 A.M., he was altogether worse; his pulse was not perceptible at the wrist; the surface of the body was cold, especially the extremities; the cramps were very severe. The purging and vomiting continued. At 11.30 A.M., the complexion was bluish; the surface quite clear. No pulse could be felt. Vomiting and purging occurred quite as often; the cramps were less severe. He was in a state of general apathy. Altogether the case seemed quite hopeless, and the patient moribund. At 4 P.M., slight reaction had set in. The general appearance was much the same, but the pulse could be felt. The cramps were only occasional and slight. Vomiting had ceased more than an hour. The bowels were still purged; the evacuations were the same as before. The improvement continued, and on the morning of the 30th the skin had resumed its natural fairness. He had passed some urine, for the first time since the commencement of the attack, early this morning; and the bowels had acted twice in the night; the motions were of a delicate pale yellow, and they continued so for more than a week. There was no check in his progress to complete recovery.

I attended very many cases in Monmouthshire, during the epidemic of cholera in 1849, with milder symptoms, which yet proved fatal under the treatment then pursued. I well recollect at the time thinking that we did more harm than good. I have been in the habit for many years of treating diarrhoea and English cholera with laxatives, such as rhubarb and magnesia with ginger and aromatic spirits of am-

monia, with an occasional dose of grey powder, and always with benefit; and, though I was thoroughly dissatisfied with the astringent method of treating cholera in 1849, yet I doubt if I should have treated this case on the principle of eliminating a poison—in fact, assisting Nature to effect a cure—if I had not read Dr. George Johnson's papers upon the subject. The prostration is so great, and apparently increasing with the drain from the system by the purging and vomiting, that we naturally strive to arrest the flux by astringents, and support the strength and restore the vital energy by stimulants. But his explanation of the cause of the collapse, by the impeded circulation through the lungs, quite convinced me. If the poison could cause such spasm of the minute arteries of the lungs, it would also cause the severe muscular cramps; while the purging and vomiting are merely an effort of Nature to get rid of the poison. So I determined, if I ever had to treat cases of Asiatic cholera, to carry out the eliminating principle of treatment; and in this case the only medicine I gave was a mixture of rhubarb and magnesia, etc., every two hours. I also used a strong turpentine fomentation over the chest and bowels, frequently repeated, and continued until the reaction had been established. I used the turpentine fomentation in consequence of the great relief that follows its application in severe cases of cramp of the stomach, and so trusted to its assisting to relieve the constricted arterioles of the lungs. The patient said: "The fomentation has saved my life; I felt as if a weight was lifted off my chest." Of course every care has been taken to prevent the disease from spreading.

I trust that the account of this case will interest the members of our profession, and induce those who may have the opportunity to try the eliminating plan of treatment. It will be seen that the discharges continued until reaction was completely established.

Kington, Hereford.

GUSTAVUS FOOTE, M.R.C.S., etc.

EFFECTS OF BROMIDE OF POTASSIUM.

IN reference to the question proposed by a correspondent in the last week's JOURNAL, regarding the possibly ill effects that may arise from the protracted use of the bromide of potassium, I furnish the subjoined account of a case that may shed some little light upon the subject.

On June 6th of this year, Mrs. H., aged 52, consulted me for epileptic attacks occurring once or twice a week, from which she had suffered for many months. These I could not attach to any distinct local mischief, so, at once and solely, I prescribed half-drachm doses of the bromide of potassium, to be taken night and morning. The patient returned to me on the 26th of the same month. She said she felt very well, had slept better since taking the medicine, and been free from any seizure. I told her to go on with the medicine for two or three weeks longer. She came to me again on July 25th. There had been no more epilepsy, but she exhibited an unwonted aspect and deportment. She had a sad and sunken expression of countenance, an unsteadiness of gait, a general atony—a sort of ataxia—of the whole muscular system, as if a general shaking palsy were imminent. I could not resist the conclusion that before me were the toxic effects of the bromide, which she had been taking for more than six weeks. I told the patient that she would soon be relieved, and that I would change her medicine. In fact, I prescribed a simple stomachic, rather as a placebo than for any effect other than negative; telling her to take it for two or three weeks, and then to see me again. She returned to me on the 28th August, stating that she began to improve very shortly after the last consultation, and that she was now (as she looked) quite well.

Manchester, September 16th, 1871.

DANIEL NOBLE, M.D.

EFFECTS OF BROMIDE OF POTASSIUM.

IN reference to the note under the above heading, I beg to say that I have used the bromide of potassium for some years past very largely in the treatment of insanity; and although, in occasional instances, temporary depression, loss of weight, and slight furunculoid eruptions have followed its use, yet its general effects have been most satisfactory, and untoward symptoms have manifested themselves with extreme rarity. In two cases, however—the one of mania, the other of acute melancholia—scruple doses, given three times a day, produced within a week extreme depression, rapid wasting, impairment of muscular power, dilatation of pupils, hesitation of speech, and great taciturnity, together with loss of mental power, amounting almost to "paralysis of thought"—a condition presenting the strongest resemblance to that which accompanies brain-exhaustion by whatever causes produced. In both these cases, suspension of the bromide was rapidly followed by the disappearance of its ill effects. Dr. Bazire makes the following remarks with reference to this remedy:—"Diminished sensibility, followed by complete anæsthesia of the soft palate, uvula, and upper part of the

pharynx, is the first symptom that the patient is getting under the influence of the drug. The sexual organs are amongst the first to be influenced, for there is soon produced failure of sexual vigour, and, after a time, marked diminution of the sexual appetite itself. Another frequent, if not constant, result of the prolonged administration of the bromide is an eruption of small boils in successive crops, chiefly on the face and trunk, and accompanied with troublesome itching." Dr. Bazire, whose death was so great a loss to the profession, also gives an exhaustive account of the action of the bromide, as a note to the lecture on epilepsy in his translation of Trousseau's first volume.

Dr. Ringer observes, in his excellent work on *Therapeutics*: "It also produces bodily and mental depression, and the patients become low-spirited, subject to gloomy ideas, are soon fatigued and unfitted for work. On the suspension of the medicine, all these symptoms and appearances soon subside."

FREDERICK NEEDHAM, M.D., Medical Superintendent.
The Asylum, Bootham, York, September 16th, 1871.

EFFECTS OF BROMIDE OF POTASSIUM.

I had a young lady under my care for nine months, suffering from epilepsy, for which I prescribed the bromide of potassium. She commenced with fifteen grains, and continued until she was taking forty-five grains, three times daily. She suffered, as the result of these large doses, from intense depression of spirits, great bodily weakness, and an eruption very much resembling ecthyma. She was very drowsy at times, and had a most offensive fetid odour arising from her breath, which was so bad that no one could stay in the room with her. Her memory was greatly impaired, and on one or two occasions her mind seemed a perfect blank. All these symptoms subsided on discontinuing the bromide, but, at the same time, the frequency of her epileptic seizures increased.

Congresbury, Bristol.

WILTON PROVIS, L.R.C.P.

EFFECTS OF BROMIDE OF POTASSIUM.

IN several cases, when administered in doses of several scruples in the course of the day, I have seen bromide of potassium produce symptoms of gastric disturbance, as indicated by pain after food, vomiting, and pain on pressure in the epigastrium. It also causes a great increase in the quantity of urine passed; but what I chiefly wish to refer to in this note is the case of a gentleman, aged 65 years, who has been taking bromide of ammonium for the last nineteen months. He had had epileptic fits, before I saw him, four times, and, as a curious coincidence, with an interval of exactly two months between each two attacks. He was then prescribed half a drachm of the bromide every night, which increased the interval to four months. I then increased the dose to forty grains, and ultimately to a drachm per day. He now began to show signs of great nervous disturbance, together with gastric irritation. He suffered from severe pain in the muscles of the leg and back of the thigh. There was great depression of spirits, almost amounting to melancholy. He was totally incapable of attending to any business. He slept badly. There was complete anorexia. There was also pain on pressure just above the umbilicus, with frequent vomiting, often hæmatemesis and melæna. He complained of much pain after food. The bowels were rather constipated. The pulse was 80, compressible. He had another attack of convulsions, and it was now decided to reduce the dose to half a drachm daily, when gradually the bad symptoms disappeared. He is still taking the same dose with the most satisfactory result, seeing that he has not had a recurrence of the fits since the resumption of the old dose—now fourteen months ago. He had no delusions. I did not observe the state of the pupils. There were drowsiness and slight failure of memory.

R. W. FOSS, M.D., Stockton-on-Tees.

BEQUESTS, DONATIONS, ETC.—Mr. Joseph Jackson, of Northumberland Park, Tottenham, has bequeathed £10,000 to establish in Shore-ditch a soup kitchen and cottage infirmary, to make up four beds, with paid housekeeper and surgeon.—Mr. M. B. Mullins, of Fitzwilliam Square, Dublin (in addition to the legacies to medical charities previously mentioned), bequeathed £500 to the Coombe Lying-in Hospital.—"R. M. H." has given £300 to the Halifax New Infirmary.—Mr. Samuel Morley, M.P., has contributed £100 towards Mrs. Gladstone's Convalescent Home.—The West Kent General Hospital, Maidstone, has received £100 under the will of Mr. T. R. Cutbush.—Messrs. Iliff and Mounsey's workmen have subscribed £23 : 7 : 8, and the North-Eastern Marine Engine Works' workmen £25 : 12 : 5, to the Sunderland General Infirmary.—Mr. Edward Wigan, of Hibernia Chambers, London Bridge, bequeathed £1000 to the London Fever Hospital, and £500 each to the London Hospital, King's College Hospital, and Charing Cross Hospital.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

HYDATID PREGNANCY ATTENDED BY PROFUSE HÆMORRHAGE.

(Under the care of Dr. EDIS.)

FOR the report of this case we are indebted to Mr. J. W. LANGMORE, M.B., Resident Obstetric Assistant to the Hospital.

C. T., aged 17, single, a tailor's wife, was brought to the hospital late on the night of August 12th, in a state of extreme syncope, and with her clothes saturated with blood. She was said to be generally a healthy girl, with fresh colour; but her face was now blanched, and the expression anxious; pulse rapid, small, and jerking. On examination, the uterus was found to reach one and a half inches above the umbilicus; the breasts were full, the areolæ very dark; thin milk could be expressed from the left nipple. No foetal movements could be felt, nor could the heart be heard. The placental bruit was weak and indistinct; it was best heard low down on the left side. The vagina was narrow, full of clots; the os uteri was high up, soft and dilatable; no cervix could be found. No presentation could be felt. There was a general soft, doughy feeling over the whole of the lower segment of the uterus; on passing the tip of the finger through the os, only clots were met with. Only an imperfect history could then be got from the mother. Many of the following details—e.g., the former flooding—were only obtained from the girl afterwards. The catamenia had been absent eight months. The patient had been taking pills and medicine to bring them on—i.e., to procure abortion; she had had some pennyroyal. On the 4th instant, she had a sharp attack of hæmorrhage from the vagina, while in the street. It came on suddenly without pain—one gush of blood. The patient was assisted home, close by, and the bleeding did not recur. This evening she went for a long drive in a cart, and had just returned, when she had a second, and much more severe, flooding. This also came on without the slightest pain or warning. She was at once brought to the hospital. As there was no recurrence of the hæmorrhage, the patient was suffering much from shock, and the nature of the case was not quite clear, it seemed better to allow her to rally a little, if possible, and not to attempt any operative interference unless it were absolutely necessary. She was, therefore, put to bed; the clots were removed from the vagina; cold was applied over the pubes and between the thighs, and a careful watch kept. Half an ounce of brandy every two hours was ordered.

Next day the patient was much better; had slept well. There were no pains; no hæmorrhage; the pulse was 76, soft and rather jerking. Examination of the abdomen and the vagina gave the same results. In the absence of Dr. Hall Davis from town, Dr. A. W. Edis was sent for. He confirmed the diagnosis of placenta prævia; and decided to induce labour at once. Barnes's dilators were introduced one after another, until the os was large enough to admit three fingers. A soft granular mass could be felt inside—apparently the placenta. Dr. Edis separated its attachment all round the os, first with the finger, then more widely with a thick sound; scarcely any bleeding occurred; still no membranes could be felt, and no presentation. As the pains were very weak and irregular, ergot was given, and produced a few efforts, but did not alter matters. Dr. Edis then explored the cavity of the uterus with a blunt hook, but met with nothing; on withdrawing it, however, two or three small white vesicular bodies were found adhering. The nature of the case was now clear. The ergot was repeated, and, by means of one blade of the small forceps, the uterus was emptied of a mass of hydatids, which nearly filled an ordinary hand-basin. Brandy had to be administered freely during the operations; the patient, however, bore them better than might have been expected.

She made a steady and comparatively rapid recovery. The breasts gave some trouble, the secretion of milk being very abundant and persistent. She was discharged quite convalescent on Sept. 12th.

ABERDEEN ROYAL INFIRMARY.

CASE OF DIRECT MITRAL OR PRESYSTOLIC MURMUR.

Under the care of Dr. BEVERIDGE.

(Communicated by Dr. JAMES F. GOODHART.)

THE subjoined case would always, from its own intrinsic interest, be well worthy of perusal; but a record of it is especially valuable at the

present time, because a most valuable paper, lately published by Dr. Fagge (*Guy's Hospital Reports*, vol. xvi, series iii, 1870-71, "On the Murmurs attendant upon Mitral Contraction"), has given a *résumé* of the various opinions held by different authorities in such cases, and the whole subject, it is to be presumed, is, therefore, still fresh with interest in the memory of many. For this reason, Dr. Beveridge has kindly allowed me to publish my notes of the case, and has further supplemented them with his own and those of Dr. Rodger, the pathologist at the Infirmary, who conducted the *post mortem* examination.

Jessie Anne H., a servant, aged 17, was admitted December 27th, 1870, complaining of weakness and partial loss of power over the limbs. Her body was much emaciated, and her aspect was dull and stupid; she was also languid, and disinclined to answer questions. She said that she was left an orphan at an early age, and had been subjected to hard treatment and poor living. She could give no history of rheumatism in her family, and she herself did not appear to have ever suffered from anything of the kind. She complained chiefly of severe headache, with partial anæsthesia of the left arm and thigh. The muscular power on that side was very slightly impaired. The cornea of the left eye was conical, and partially opaque; in other respects there was nothing especially noticeable on examination of the head or abdomen. Percussion over the chest was natural. The respiratory sounds were weak on both sides, but no abnormal sounds could be heard. The heart's action was quick, the stroke well marked and very apparent to the eye. There was a distinct presystolic bruit, absolutely limited to the apex; while over the lower part of the sternum, near its left margin, was a loud systolic bruit, different in character and time from that audible at the apex, being louder and harsher to the ear, and accompanying instead of preceding the heart's stroke. Pulse 90, weak; appetite impaired; urine scanty and high-coloured, but otherwise natural.

On examination, a few days after admission, I found very slight anæsthesia, if any, and no marked hemiplegia. She was very drowsy and stupid, and it was very difficult to obtain any account of her own feelings. The teeth were irregular, but there was no syphilitic notch. The lips were rather blue, and the finger-nails also. She looked rather cyanotic. There was no splenic enlargement; nor any marked increase of the precordial dulness. The impulse was diffused, and there was a strong thrill communicated to the chest-wall. The heart was beating about ninety per minute. On auscultation, there was a characteristic churning, strictly presystolic, *bruit* at the apex, which disappeared towards the axilla, but was plain towards the ensiform cartilage. At the base, there was a peculiarly sharp and high-pitched second sound, which was reduplicated, the second part being nearly as loud as the first. On passing down from the aortic valves to the apex a crumpling sound was heard, which at first I mistook for moist *râles* in the bronchial tubes. This almost disappeared now and again; and as the stethoscope passed down to the apex it apparently merged into the presystolic sound.

Under the use of bromide of potassium, the head-symptoms disappeared, but the general debility increased. On the 7th of January, a loud friction-sound was audible over the heart, which lasted four days and then disappeared. She gradually sank, the bruit becoming less audible, and died on January 18th.

Inspection Two Days after Death.—The præcordial space was enlarged, the lump but slightly covering the heart. The pericardium contained a little serum, but was healthy. The heart weighed eleven and a half ounces; its right side was dilated slightly, and the free edge of the tricuspid valve was rounded and thick as if from old endocarditis. The valvular orifice only admitted two fingers. The pulmonary artery was healthy. The left auricle was dilated without much hypertrophy. It was three-parts full of *ante mortem* clot, which began in front behind the auricular appendix (which was empty), and extended backwards and outwards to the posterior angle. The inner and back part was free, and formed a small channel from the pulmonary veins to the mitral orifice. On section of the clot, the anterior part was triangular, with its apex forwards, firmly united to the auricular wall. It was laminated and somewhat horny, the centre being yellowish, with a few points or centres of fatty degeneration. The outer layers (next the auricular wall) were calcareous; and Dr. Rodger notes that the endocardium was thickened from deposit in its substance. Behind this firm part, on its free surface, or part facing towards the cavity of the auricle, and joining on to it, was a much larger mass of soft papillated decolorising clot, and from this quite recent clot extended into the pulmonary veins. The valve itself presented two narrow openings, which scarcely admitted the point of the little finger, and which were formed by contraction and growing together of its flaps. The aortic opening was normal. The lungs were extensively solidified and splenised in the lower lobes from prolonged congestion, the right being the most diseased. The liver was small but healthy. The kidneys were anæmic, with slight

parenchymatous deposit. The spleen was small (four ounces and a half) and pulpy. The uterus and ovaries were healthy. The brain weighed forty-five ounces. Much tubercular deposit was found between the cerebral lobes on each side of the falx cerebri, also on the upper surface of the corpus callosum, with a few points of extravasated blood. At the base over the pons, there was also extravasated blood, in punctiform spots, and the membranes covering the space in front were thickened and opaque. Tubercular formation also existed along the fissure of Sylvius.

REMARKS.—The chief features to be noted in the case are, that during life the patient suffered from a slight, partial, and transient paralysis; that she had a somewhat cyanotic appearance; and that a presystolic *bruit* at the apex, and a double second sound at the base, were heard, as well as a systolic *bruit* towards the ensiform cartilage; while after death such conditions existed as to completely verify the diagnosis which had been made of "mitral contraction complicated with a tricuspid *bruit* and tubercular meningitis". But in attempting more closely to reconcile the observations recorded before death with the facts or conditions which existed at the necropsy, we meet with some difficulties. First, as to the origin of the presystolic murmur: the double second sound was heard most distinctly, and was succeeded by, or rather gave place further down towards the apex to, a crumpling noise; and this again seemed to graduate by inappreciable degrees into a well marked presystolic sound;—all facts tending, if the contraction of the auricle be the cause of the murmur, to prove the correctness of Dr. Fagge's theory, that the additional sounds are really produced by the early and prolonged auricular systole. On the other hand, against such evidence it may be reasonably objected that such a state of parts existed, viz., nearly complete filling up of the auricle, as would, one would have thought, have precluded the possibility of any contraction taking place at all; not only so, but along with the physical obstruction to contraction, there of necessity existed a loss of one great stimulus to contraction—viz., the periodical distension. In answer to this, however, it may be said that a heart, if removed from the body, would still for a time continue to contract in virtue of its own inherent rhythmical nutrition (as it has been called), and that this would probably enable it to supply the deficiency, or rather to accommodate itself to altered conditions and a less full distension. But still it is hardly conceivable that the heart could continue its action with one of its cavities completely paralysed; and, therefore, it is fair to assume that in this case a contraction of some sort, or perhaps, more correctly, an attempt at contraction, must have taken place. Probably the muscular fibre acted slightly, and in so doing kept up, in some measure, the normal rhythm. That scarcely any actual lessening of the cavity occurred is evidenced by the fact that the obstruction to be overcome was extreme, while at the same time the auricle was hardly, if at all, hypertrophied; whereas if any attempt had been made to overcome the obstruction, its muscular wall would by so much have increased in thickness; and even if at this time, tired out, it had ceased to act, the evidence of former effort would still have remained.

If, then, the auricular contraction causes the *bruit*, the mere attempt at contraction must have caused it in this case. But the sound was, it has been said, remarkably loud, whereas if, as I suppose, hardly any contraction occurred, there should have been but a barely audible *bruit*. It must be admitted, I think, that the muscular tension alone would not in this instance overcome the difficulty; but a sufficient explanation on the same theory may probably be found in the thickening of the auricular wall by very old organised blood-clot, and in its very intimate connexion with the lining membrane of the auricle. This lymph might be equivalent to the extra muscle of a hypertrophied auricle as far as vibration and tension only were concerned, while in the matter of contraction it would be of no use whatever—nay, more, it would be a positive impediment to the action of the muscle. In support of this view, the "crumpling" heard midway between the base and apex of the heart, which, if Dr. Fagge's theory be correct, must have come from the auricle, was just such a sound as might have been produced by the horny and laminated clot, with its calcareous particles.

We have next, without entering fully into the question as to whether or not the conditions under which the heart acts are such as to imply the necessary performance of a certain amount of work in a certain time, or, as an alternative, the failure of its action—a physiological necessity by no means to be demonstrated from the problems of disease—to inquire whether, if no contraction of the auricle took place forcible enough to be productive of good in maintaining the onward blood-flow, the round of the circulation could be carried on. The instance under consideration would appear to show that in such a case the circulation *could* be kept up, probably through the combined action of various accommodating circumstances—one being the partial failure of the heart's action, with the production thereby of engorgement of the viscera, having much the same effect upon the heart as would a general bleeding.

The amount of blood flowing towards the centre of the circulation being thus lessened by its detention in such organs as the liver, lung, and spleen, a less powerful contraction is brought about; and, inasmuch as there is already an excess of blood in the lungs and pulmonary veins, the diminished contractile force is still sufficient in passing the blood on towards the ventricle. As matters become gradually worse, both the amount of blood to be sent onwards and the muscular force decrease—the one in volume, the other in power—and then clotting takes place in the auricular cavity. By this means the closure of it during its systole is prevented, and the blood can be constantly trickling from the pulmonary veins through the left auricle into the ventricle. Some such process as this must have gone on in our patient to have enabled her to live on as long as she evidently had done. These are important points, because they seem to clear up a difficulty noticed by Dr. Hyde Salter, that if the auricular systole be prolonged it is hard to see how the auricle can have time to fill from the veins. But the probability is that in this case, and therefore in others like it, the auricle *could not* close, and, so no matter how soon it began to contract, the cavity that remained would still be able to receive blood. Given a heart in a state of health, and allow that the auricle is closed immediately on the cessation of the second sound, then no doubt the difficulty would be a real one; but it ceases to be so if any evidence can be adduced to show that in such cases the auricular cavity is not obliterated during its systole, and that it remains patent during the whole round of the heart's action; and if it does so remain patent, the truth of this remark is enforced, "that mitral contraction, when present in any marked degree, must necessarily alter the conditions under which the auricle works, much more than has hitherto been supposed". (Dr. Fagge, *op. cit.*, p. 338.)

Another point in the case is, that the patient was admitted with a transient hemiplegia, which, taken with the heart-disease, obviously pointed to an embolus as its cause. Tubercular meningitis, however, was present; and, no clot being found in the cerebral vessels, it must be held that the tubercle was a sufficient and probable explanation of the paralysis: still it is interesting to observe that in other cases, cerebral symptoms have been found for which after death no cause could be discovered. That embolism should be a frequent occurrence in this class of cases is a thing to be expected, when it is remembered that a condition closely simulating that of a fusiform aneurism exists, and the blood flows by somewhat narrow orifices into a dilated cavity, at the other extremity of which it makes its exit; also by a channel of smaller calibre than the cavity itself.

It is also to be noted that a pericardial friction-sound was heard a few days before death, but that the membrane was found to be healthy, with the exception of a little serum being contained in its cavity; and that the tricuspid valve apparently had undergone a similar change to the mitral, though in a less degree, no history of rheumatism or acute heart-disease being given to account for it in either.

Dr. Beveridge agrees with Dr. Fagge in thinking that the presystolic *bruit* is far from being uncommon, and that the mistake is frequently made, when two sounds are audible at the apex, to set them down without further examination as the first and second sounds of the heart, whereas they often are a presystolic *bruit* and the first sound. He also thinks that the presystolic sound is probably caused by the blood flowing through the narrow and roughened orifice. If, however, the opening—no matter how small—be smooth in its margins and surfaces, and the ventricle fill slowly, then there may be no sound, or none sufficiently loud to be audible; if the orifice be rough and the heart act quickly, then the sound is usually there. The observation made by Dr. Fagge, that the presystolic sound is much intensified by any thing that increases the rapidity of the heart's action, which is quite correct, also points to the same conclusion.

NEWCASTLE GENERAL INFIRMARY.

A CASE OF OYARIOTOMY.

(Under the care of Mr. RUSSELL).

J. B., unmarried, aged 23, the subject of ovarian dropsy for a period of eighteen months, was tapped in May 1870, and twenty-one pints of characteristic fluid evacuated. On March 3rd, 1871, paracentesis was again performed, and eleven pints of fluid drawn off. Mr. Russell now determined to perform ovariectomy, but wished to do so when the cyst was distended to about half the size it was at the last tapping. Accordingly, on the 28th of April, the patient having for some few days been kept upon a fluid diet, and the bowels having been efficiently relieved by means of gentle aperients, the tumour was exposed by an incision barely four inches in length. The cyst, a very tough and thickened one, was punctured with a trocar, and, there being no adhesions whatever, was readily drawn through the wound, together with two others, unevacuated, one of the size of an orange, the other twice as large.

The pedicle, broad and short, was secured by Mr. Spencer Wells's straight-clamp, and the edges of the wound were retained in contact by means of five silver sutures, made to pass through the peritoneum and abdominal parietes an inch on each side of the incision. The wound was dressed with lint, soaked in equal parts of carbolic acid and glycerine. A pillow made of lattice-lint, and stuffed with teased oakum, was firmly secured over the abdomen with a broad four-tailed flannel bandage: and, with the exception of a linseed-meal poultice occasionally taking the place of the pillow at night, this method of dressing was pursued for seven days, by which time the wound was entirely healed. The sutures were removed on the third, and the clamp on the fourth day. With the exception of ice to suck in small quantities, the patient was fed altogether by the rectum, receiving six ounces of beef-tea, with from one to three table spoonfuls of brandy, every four hours, till the seventh day, when solid food was retained, and the injections were gradually discontinued. The bowels acted spontaneously fourteen days after the operation, and the patient left her bed on the fifteenth day. A laxative was administered on the seventeenth day. During the after part of the day of operation, the patient complained of very acute abdominal pain, for which opium was administered freely by the rectum in the form of tincture, and suppository combined with belladonna, but without alleviation. Hypodermic injections of morphia quickly gave relief, and they were repeated twice or thrice daily for ten days. The patient left the infirmary cured on June 1st, and continues quite well, menstruating regularly.

EAST SUFFOLK HOSPITAL.

HALFPENNY IMPACTED IN THE LARYNX.

FOR the report of this case we are indebted to Mr. G. S. Elliston, House-Surgeon.

A few days ago, a man was brought into the hospital, having swallowed a halfpenny. It appears that, while playing with his children on the floor, he put the halfpenny into his mouth, and jerked his head back to prevent them from getting it, when it slipped down. At first there were pain in the throat and a difficulty in articulating. A probang was passed into the stomach, after which he vomited, but no halfpenny came up. The laryngoscope was then used; and with some difficulty, owing to the irritable state of the throat, a dark foreign body could be seen covered with mucus in the larynx, but quite out of reach. The use of the laryngoscope caused great retching, followed by dyspnoea and severe fits of coughing, during which the patient was forced with his head downwards on to his hands and knees, but without success. After half an hour the breathing became more difficult, and it appeared as if the coin were settling down more into the windpipe. He was directed to drink half a pint of warm water, and to slowly inflate his lungs. The fauces were then tickled, which brought on a violent fit of vomiting and retching, and the patient was again forced on his hands and knees with his head well down. After a prolonged fit of coughing, during which the man became livid in the face, the halfpenny dropped out, having been in the larynx nearly two hours.

REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

POROPLASTIC SPLINTS.

MR. JOHN COCKING, of Penzance, has submitted to us a new material for splints. It is truly described as elastic, light, porous, flexible, plastic, and economical. It is made in all required strengths and sizes, and consists of a felted substance in sheets; it is plastic when softened by heat, and becomes rigid when cold, and can be re-softened repeatedly without injury. It is rapidly and easily manipulated, the most difficult splint requiring but a few minutes to mould and finish; and it is very well adapted for metal attachments, and is thus a very valuable material for interrupted splints. There is no glue used in its application, and the gums with which it is stiffened are quite harmless. "To country and colonial practitioners, invaluable"—in the words of Mr. Jonathan Hutchinson, the Senior Surgeon to the London Hospital, where it was introduced by him with great success, and has been used for some time. By attending to very simple directions for use, the most perfect splint yet known may be made. A "hospital quality" is supplied by Messrs. Maw and others at 4s. per lb., in substances of about one-eighth of an inch, three-sixteenths of an inch, five-sixteenths

of an inch, and in sheets measuring about four feet by three feet ; and an "ordinary quality" at 6s. 6d. per lb. We earnestly recommend it to our army surgeons, believing that for field-hospital purposes it will supersede all others.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 23RD, 1871.

MINERVA MEDICA.

A VERY voluminous discussion has occupied recently the pages of the *Echo*, on the subject of midwives. The prevalent delusions on both sides have been freely aired ; and, except that free discussion is never altogether without good, we must express disappointment that the heart of the matter has been but little touched. It is not the fact that the medical profession either have felt or now feel any reluctance to see women enter upon this useful department of activity. Women have been very slow to do so, and seem to meet with very little encouragement from the ladies—much less than one would expect. This is possibly due to the fact that they have never gone unitedly and intelligently to work ; and very few women of education or respectable social position have been inclined to adopt the midwife's calling. It is, in truth, very trying ; on an average, poorly remunerated, and only to be carried on satisfactorily either by laborious women who smile at hardships, or by celibates. Of course, women who marry carry on the occupation under peculiar disadvantages, as compared with men, setting aside the original difference in capacity for exposure to all weathers, untimely night-expeditions, and long hours of unexpected physical exertion. The obstetrical hospitals have always been open to women ; and our best obstetric physicians, whether in London, Dublin, or elsewhere, have always been willing to teach them. What is really wanting to obtain for able midwives a status superior to that of the ordinary Sarah Gamp is the preliminary education of a lady, and willingness to submit to a satisfactory technical examination. If there are any number of them who believe themselves able, and who are willing, to fulfil these essential preliminaries, they have only to apply to the Obstetrical Society, and we are satisfied that that body will supply them with a board of examiners sufficiently impartial and eminent to give weight to their certificates.

One gentleman, we observe, states that the Female Medical College has met with unrelenting disfavour. Many well-wishers of women have, in fact, not shown it any favour ; and many sensible women desiring a complete medical education, such as Miss Garrett and the *septem contra Edinam*, have practically testified their opinion by keeping away from it. The main ground of disfavour is, we suppose, that it is not a medical college in the proper sense of the term. A medical college must fulfil certain conditions which all male medical colleges observe, and on which depends their recognition by the examining bodies, and their value as educational bodies. They must give a certain defined number of lectures on a certain complete series of subjects, each lecturer taking his own subject, and the lecturers being persons approved by the Colleges as of sufficient standing and ability. They must provide adequate means of instruction by preparations, museums of normal and pathological anatomy, etc. They must supply adequate means of clinical instruction. The ladies have not yet even attempted the no doubt difficult but certainly not impossible enterprise of supplying themselves with anything resembling a medical college and clinical hospital. In London alone, the male part of the community have founded for themselves twelve. If the ladies who desire medical education were at all numerous or much in earnest, they could not have much difficulty in founding one. They prefer to *battre en brèche* the possessions of the male, and to claim a seat by the side of the male students in the amphitheatre of surgery, in the deadhouse and the dissecting-room. The shortest route is not always that which is travelled most quickly ; and,

if the citadel of medicine is to be conquered by the fair aspirants, we doubt it must be taken in flank. The day that a Portia presents herself, pointing to an educated class of female students passing soberly through a complete and well ordered curriculum of medical study, such as is prescribed by the General Council of Medical Education and Registration, the battle will be more than half won, before medical opinion, so far as the conquest of the rights of the feminine sex is concerned.

Some very grave doubts remain ; and, sceptics as we are, we profess the most sincere incredulity that there are, or ever will be, any number of the sex able or willing to profit by the conquest. The obvious sexual limitation of the activity of female doctors excludes them from competing with men for all the ordinary and primary means of livelihood which are the support of the young man on entering the profession. It shuts them out from the army, the navy, the Poor-law Medical Service ; from resident hospital appointments (except for women and children) ; from the commercial marine ; from surgeoncies to mines or factories ; in fact, from the great bulk of the avenues by which the average practitioner enters practice. Even in ordinary, unshackled civil practice, they are, by the necessities of the case, confined to special departments of practice. Even here they will labour under great difficulties, from the peculiarities of the female constitution and the incidents of marriage. But here there is a plausible ground of preference in the minds of some. It does not seem to us that the few who desire to enter upon this field of activity, are bound to stop by reason of the argument (urged by Dr. Chambers, in his sequel to the Harveian Oration), that the profits which they may gain are, in fact, subtractions from the gains which men in marrying lay at the feet of the women whom they marry. Not all men or women marry. The individual who wishes to work is not to be repelled by the consideration that, in remaining idle, he or she would leave the field open to other workers. Besides, Dr. Chambers's argument would raise an equal objection to nearly all kinds of female work, whether in counting-house, shop, or telegraph-office. It is not tenable. Without a morsel of gallantry, therefore—which in such an argument is out of place—and with a deep-seated dislike for all propositions for mixed classes, or for any other arrangements which seek to sophisticate or efface the relations of the sexes, we desire, and we believe the profession at large desires, to see oppressive barriers removed from before ladies who wish to qualify for medical practice in obstetrics and diseases of women. The largest part of the work rests with themselves, and those who have their cause at heart. They must establish their own schools. It is quite evident, from the number of eminent physicians who have testified their sympathy with the past efforts of ladies, that this rests entirely with themselves. They will be readily enough admitted to obstetrical hospitals ; and, if they desire the use of a clinical hospital, they must find, or found, one not preoccupied by male students ; both can be done. The walls of our modern Jericho will not fall before the sound of a voice, however fluty or nicely modulate. But the gates will open to those who provide themselves with passports moderately in order, and with proper qualifications. The ladies have not yet properly occupied the field of midwifery, within the limits long since open to them. They still complain, and not without reason, that the best educated of them are undistinguishable from the unqualified pretenders. Primitive disorganisation still reigns among them. What have they done to remedy it ? Let them study the history of the corporation of Surgeons—at first, barber-surgeons ; of the Society of Apothecaries—at first traders. They will see that, in this country, great institutions have a vital growth, and are not turned out of a mould. They grow up by the natural process of differentiation : the efforts of the well-educated and right-minded classes to differentiate themselves, and to establish tests. The thing first, and the test afterwards. We have had amongst us for centuries midwives, bad, good, and indifferent. Let the good separate themselves ; they will find abundant help and countenance from the authorities of the medical profession.

THE LESSONS OF THE WAR.

STROMEYER, the surgical historian of four campaigns, and one of the most able and sympathetic of surgical writers, has published a translation, with copious commentary, of Mac Cormac's *Recollections of the Work of an Ambulance Surgeon in the Franco-German War*, which appeared last year in our columns.* Stromeier's clinical experience of the surgery of war dates back to 1848, when the revolution of the Grand Duchy of Baden filled his clinical wards with gunshot-wounds. Here he could study them with the greatest ease, and prepared himself for a larger field of observation during the two campaigns in Schleswig-Holstein in 1849 and 1850. In 1850, his first observations on gunshot-wounds appeared in an article on Gunshot Fractures in his *Handbook of Surgery*. The first edition of his celebrated *Maxims of Military Surgery* appeared in 1855; it has since achieved a wide popularity. His report on the battle of Langensalza appeared in 1867.

Dr. Stromeier, in his fifth and final war campaign, was first ordered to join the Crown Prince and the third Army Corps; afterwards he was attached as Consulting Surgeon to the Eleventh Corps, and remained at Versailles during the entire German siege, where his duties lay in the Hospital of the Chateau. He was present at the battle of Sedan, and caused an ambulance to be erected in the little village of Floing, just outside the walls, where the fight had raged fiercely. Stromeier gives an interesting and opportune account of the prompt manner in which the General of Division detached a corps of Engineers for his services, and how speedily the requisite wooden huts which formed the ambulance were erected; and he expresses the hope that a more extended use of those wooden temporary huts, improvised with such materials as are at hand, may be made. He greatly prefers them to tents, which he says may, as a complete English ambulance was, be blown away altogether, besides having other drawbacks.

On hospital hygiene generally, Stromeier makes some very valuable observations. He lays great stress on adequate heating of the wards, and details the deplorable effects which he witnessed during the war in consequence of the want of it. With great and sudden variations of temperature not properly guarded against, Stromeier observed in Schleswig Holstein, in 1849, that tetanus, angina, erysipelas, rheumatism, pyæmia, and metastatic abscesses were very common during the cold weather, and less so if the temperature were mild, or the wards kept properly heated. Indeed, throughout his observations, he instances cases where the effects of cold, even locally applied, produced bad results; as, for instance, in a case of penetrating wound of the knee, where the prolonged use of ice to the joint induced diarrhoea and extreme depression, from which the patient completely rallied on the removal of the ice. Indeed, he looks upon cold and draughts as almost as dangerous enemies to operation cases as overcrowding. "When I first came to Versailles", he says, "the weather was already cold and stormy; and in the hospital, which was not heated, it was observed that the wounds frequently became coated with a diphtheritic surface, which was attributed to pyæmic causes; and all sorts of means were employed to combat it, including excessive ventilation and carbolic acid *ad libitum*. It did not avail, and my expression of opinion was not attended to. I urged that we had to deal with atmospheric and not miasmatic influences. But I had the opportunity before long of demonstrating the correctness of my views. A wound, granulating perfectly after a Chopart's amputation, was in a single night covered with a thick white diphtheritic layer, and during the otherwise perfect well-being of the patient. It disappeared immediately after the patient was kept warmer, and with only a simple oiled dressing applied. It was thought that it must be some defect in the carbolic acid, but the terrible warning of the month of October caused a change. Eleven operations, per-

formed on the 21st of October, died--viz., seven amputations of the thigh, one of the arm, two resections of the shoulder, and one of the elbow. After this, the excessive amount of ventilation was moderated, stoves were introduced, and the beneficial effects will be made manifest in some tables by the chief surgeon of the Chateau, which will shortly be published, and which will give a comparative account of the mortality after operations during the different periods." In these times, when ventilation is considered a panacea, it is of great importance that an authority no less eminent than Stromeier should call attention to evils which during cold weather attend the unrestricted abuse of air-currents; and if we cannot agree that draughts of cold air are *per se* as dangerous as overcrowding, we can fully admit that warmth, as well as fresh air, is absolutely essential to the safety and comfort of the wounded, and especially those operated upon.

On the subject of probing gunshot-wounds, Stromeier says this should never be done in cases of fracture of the shafts of bones which are intended to be treated conservatively; and that in operation cases the examination should be made immediately prior to the operation, during the chloroform narcosis, and not twenty-four hours previously.

In his chapter on antiseptics, Stromeier betrays a considerable amount of scepticism in the all-sufficing value of carbolic acid. He recommends the use of comparatively weak applications, and confesses to a longing on some occasions to dispossess the carbolised dressings for the simple oil and water dressings of earlier campaigns. He also reproaches the unlimited irrigation of wounds, which, he states, often causes great mischief.

Stromeier thinks that nationality has considerable influence on the progress of wounds in different persons. A difference seemed to exist, he says, between the Danes and Germans, the Danes being more irritable, but easier to heal than the Germans; while Thiersch observed that even after severe injuries the Turcos readily got well. Stromeier, in speaking of injuries of the head, alludes to an expression of doubt by Mac Cormac on Brodie's doctrine that in an open wound of the head with brain-symptoms we should interfere by operation. Stromeier considers it far better to leave such cases alone. Mac Cormac, he says, is on the right way when he recommends them not to be trephined. Professor Fischer desired to find in the battle-field itself an asylum for what he styles the "disowned child of surgery," but Stromeier thinks that even there it has never been performed, and "that therefore it has had no opportunity of bettering its condition in the field of battle as did many an *enfant perdu* in days gone by."

"Torsion of arteries," says Stromeier, "has never been so thoroughly tried in the field as by Mac Cormac, who used it in more than one hundred capital operations with evidently good results, even for the largest arteries." Stromeier has remained faithful to the ligature.

Of secondary hæmorrhage and the results of the ligature of arteries for it in their continuity, Stromeier speaks despondingly, and endorses Mac Cormac's opinion as to the almost uniformly unfavourable results which attend such operations. He says he has witnessed twelve cases of ligature for secondary hæmorrhage, and only twice did the patient recover. "I think," he says, "we must decide to amputate oftener in cases of secondary hæmorrhage." He then gives some very interesting observations on spontaneous healing of injured arteries, and the means best adapted to procure healing of wounds of the large vessels. Some most valuable remarks are made on the subject of venous hæmorrhage or the bleeding caused by thrombus in the veins. Many pages are devoted to this subject. It is too long to give here, and we must refer our readers to the original, merely observing that many of Stromeier's deductions are of extreme practical value.

In reference to gunshot fractures of the shafts of bones, Stromeier lays down the important statement as a fact that, so far as is known to him, no patient died under conservative treatment. The great principle which he recommends in order to carry out this treatment efficiently is the principle of "no restraint"; and this principle is carried out so far as to maintain the position in which the fracture unites to be a matter of secondary consideration—union first of all; if with deformity,

* Notizen und Erinnerungen eines Ambulanz-Chirurgen, von William Mac Cormac, Wundarzt am St. Thomas Hospitale in London, etc. Aus dem Englischen übersetzt und mit Bemerkungen versehen von Dr. Louis Stromeier, Verfasser der *Maximen der Kriegsheilkunst*. Hannover: Hahn. 1871.

that must subsequently be cared for. He objects to powerful forcible extension, especially in fractures of the thigh, for which, as for the leg, he strongly recommends the position on the side, as adopted by Pott. In the first instance, the endeavour should be made by all means to save the life of the patient with fractured thigh; and after that is accomplished, to make the deformed limb, if possible, longer and straighter. The attempt to procure both at the same time often sacrifices life, while it does not guarantee absence of deformity. The following table shows how much better the results obtained by conservative treatment of fractures at Floing were than in the earlier wars.

| | | Deaths. | Mortality. |
|----------------------------------|----|---------|--------------|
| Schleswig-Holstein, 1848-50..... | 28 | 14 | 50 per cent. |
| Langensalza, 1866 | 25 | 15 | 60 „ |
| Floing, 1870 | 35 | 8 | 23 „ |

In the leg similar results were obtained. "Thus", says Stromeyer, "I have during the last campaign lived to see what I expressed a desire for in my *Handbook of Surgery* after the first. 'Above all things it appears to me to be necessary that cases of gunshot-fracture of the thigh should not be transported to a distance, but should be carried on a stretcher to the nearest house, and the treatment carried out there, even at the risk that the wounded should fall into captivity.' In Floing this happened by accident; but such opportunities should always be taken advantage of."

The chapter on resections is most valuable. Stromeyer is in favour of primary operations; and he does not appear to be a strong adherent of subperiosteal resection, whose advantages he considers exaggerated, especially as applicable to military surgery; and he strongly disapproves of what appears to have been the practice in the German armies of allowing cases for primary resection to drift into secondary, in order that they may be performed subperiostally—a proceeding naturally difficult, if not impossible, in healthy recently injured bone.

Interesting particulars are given respecting excision of various joints, which space does not permit us to detail.

In regard to amputations, Stromeyer strongly sets forth the importance of primary operations; and mentions that at Langensalza in one place nine amputations of the thigh were performed within twelve hours of the battle of Kirchheilingen; that of these but one died.

We cannot refrain from quoting finally the hearty and sympathetic words with which Stromeyer closes.

"Military Surgery", he says, "cannot dispense with international help and mutual understanding. All civilised nations must labour to this end; it knows no political limits. Civil surgery is the *alma mater*, military surgery the ardent daughter, whose progress is difficult, because of the new impediments constantly produced by warfare. The common question is always presenting itself: What use can we make of civil surgery in the field? And the constant answer is: All that is possible in the circumstances! To comprehend this, demands character rather than learning. The English and Americans are people who are full of character; and therefore military surgery has to thank them for much. In the development of character, there are among them two powerful elements—national feeling, and a liberal education. Of their work on the field of battle and in the war hospital, Mac Cormac's book gives us a picture, of which spontaneity might be regarded as the central light. Each man knows what he has to do, without an order. Therein lies the sympathetic character of the work; it is not the learning that asserts itself, but the philanthropic heart. It bleeds sometimes; but the clear head retains its sway.

"Farewell to the Anglo-American Ambulance! I send its members my most friendly greetings, far over land and sea! Farewell too to thee, military surgery, to whom since 1848 I have devoted so many hours by day and by night! I could not regret, because I felt beforehand, what befel Germany. It is over!

"A long, honourable peace, may reward its heroes: military surgery will not then perish." It has, as Mac Cormac says, no mysteries for the civil surgeon, if he stand on the height of his time!"

A BOARD of Health has been formed at Thame, Oxfordshire.

THE autumn registration at the Apothecaries' Hall commences on Monday, the 2nd, and terminates on Saturday, the 14th of October.

OLD King's College men will hear with regret the announcement of the death of their late able and respected Principal, the Rev. Dr. Jelf.

THE names of Peter Eade, M.D., and of G. W. W. Firth, Esq., have been added to the Commission of the Peace for the City of Norwich.

THE Ceylon Medical School has now commenced its second session. The benefits of such an establishment in the island will be great.

DR. SILVER has been appointed Physician to the Charing Cross Hospital.

DR. W. J. STOTT's salary as medical officer of the Haslingden Union has been augmented £35 a year.

DR. BUCHANAN, of the Medical Department of the Privy Council, has been appointed to make a special inquiry into sanitary matters in Birmingham.

A NAVAL medical professorship is about to be established at Netley Hospital, and seventeen additional students, nominated by the Admiralty, will shortly join the school in Southampton water. Dr. MacDonald Fox is spoken of as the new professor.

MR. H. W. JACKSON, senior assistant medical officer, has given a completely satisfactory answer to the charge of cruelty at the Surrey County Lunatic Asylum, to which we last week referred.

THE inquiry as to the Hampstead Small-Pox Hospital was postponed from Tuesday till Thursday. We give elsewhere an account from our own reporter of Thursday's proceedings.

WE hear that Mr. Harry Leach has been requested by the Thames Shipping Inspection Committee to sketch out a system of sanitary surveillance of the port of London in accordance with the recommendations of the Privy Council.

WE are assured that there is no foundation for the many statements which have been afloat as to the prevalence of contagious diseases at Harrow. It must be said, however, that the neighbouring districts are not in a satisfactory condition, especially Edgeware.

THE deaths registered in London last week were 1,422 in number, which was fifty-five above the average. The fatal cases of small-pox, which in the six previous weeks had been remarkably stationary, and had averaged eighty-four, declined last week to fifty-seven.

A CORONER's jury at Southgate, near Rotherham, has returned a verdict of manslaughter against William Collinson, a chemist at Rotherham, for causing the death of a young woman named Attley by an operation performed for a criminal purpose.

THE *Times of India* reports that news has been received from Zanzibar that Dr. Livingstone had again been heard of to the west of Lake Tanganika, whence he had sent to Ujiji, requesting his supplies to be forwarded. A young American was hurrying on by forced marches to Ujiji, in the hope of carrying relief to the traveller.

DR. HENRY ALLEYNE NICHOLSON, late lecturer on Natural History in the Medical School of Edinburgh, and author of a *Manual of Zoology*, a *Text-Book of Zoology*, and other scientific works, published by Messrs. Blackwood, has been appointed Professor of Natural History in the University of Toronto.

THE Secretary of State for War has appointed William Walter Weld, Esq., Surgeon-Major, to be Visiting Surgeon for Chatham, Gravesend, and Maidstone, under the Contagious Diseases Acts, 1866 to 1869, *vice* Francis Hastings Baxter, M.D., Surgeon-Major, appointed Physician and Surgeon to the Royal Hibernian Military School.

A RETURN has been published showing that 6,562 deaths occurred last year in the twenty-nine workhouses of the metropolis, and 413 inquests were held. Of this number more than one-half, 207, were held in St. Pancras. In only three other workhouses did the inquests reach 20. These were—Whitechapel, 41; Bethnal Green, 27; and Holborn, 20.

FEMALE MEDICAL STUDENTS IN MOSCOW.

It is officially stated that the Faculty of Medicine of Moscow, with the full concurrence of the Council of the University, have decided to grant to women the right of being present at the educational courses and lectures of the Faculty, and of following all the labours of the Medico-Chirurgical Academy. The tests of capacity will be precisely the same as for male students. The emperor has issued an order enlarging the existing institutions for instructing women in midwifery, and authorising them to act as surgeons, to vaccinate, and to be employed as chemists.

THE MIDDLESEX HOSPITAL.

FOR the vacancy in the appointment of Assistant-Surgeon to the Middlesex Hospital caused by the promotion of Mr. Lawson, several candidates have already come forward; but, as the election is quite an open one, no doubt other gentlemen will appear in the field. The following gentlemen are, we believe, candidates: Mr. Churchill, Mr. R. W. Parker, and Mr. Roberts.

GOVERNMENT GRATUITIES.

THE public vaccinators of Wolverhampton have received the following Government grants for successful vaccination, viz.: Mr. F. Dunn, £46 : 15; Mr. T. Steward, £49 : 12; Mr. G. N. Smith, £38 : 19.

THE BERKSHIRE CAMPAIGN.

WE are glad to state that the troops employed in the Berkshire manœuvres have been remarkably healthy; in fact, the hospitals at Aldershot have diminished as to the number of sick since the manœuvres commenced. All sick requiring treatment have to be transferred to Aldershot.

PROSECUTIONS UNDER THE VACCINATION ACT.

AT the last Bridgwater petty session, William Henry Roberts, coach builder, and Edwin James Bovett, veterinary surgeon, were summoned for having neglected to have their children vaccinated. Mr. Roberts said, in defence, that vaccination did not prevent small-pox, that it was a dangerous operation, and that compulsory vaccination was an infringement of the liberty of the subject. Mr. Bovett said he was afraid that if he had his child vaccinated it would be diseased. An order was made in both cases for the children to be vaccinated within fourteen days, and the defendants to pay costs.—George Newcomb has been fined twenty shillings and costs (second time) at the Middlesborough Police Court for refusing to have his child vaccinated.

THE HAMPSTEAD SMALL-POX HOSPITAL.

THE case of the child, Elizabeth Bellue, who was lost at the Metropolitan Asylums District Hampstead Hospital, again came before Mr. Justice Brett, at Chambers, on Tuesday, on an application to issue a writ of habeas corpus for the production of the child. Mr. Bridge, who appeared for the officials of the hospital, read affidavits giving a history of the origin and objects of the hospital, and stating that the ladies of the East Grinstead Sisterhood, a Protestant community, had attended the hospital. The child, he said, was not in the hospital, nor under the control of the authorities of it, and they had done, and were willing to do, all in their power to find it. A detective officer had been employed, who had traced out all the children of the age of Elizabeth Bellue who had been in the hospital, and had not succeeded in finding her. Those who had died in the place had been accounted for. The only inference was that when the door was open the child had got away. Mr. Wright, who appeared for the parents of the child, contended that his learned friend had proved the case for him. He

had been informed that there was an entry in the books of the hospital that the child was discharged on the 31st of May. The child might have been sent to some convent. His lordship asked whether it was supposed that some of the ladies who had attended at the hospital had given up the child to some convent; and Mr. Wright said such was the suggestion that he was instructed to make. Mr. Justice Brett said he should give the ladies time to answer the allegation, and ordered the case to stand over.

ASSOCIATION FOR PROMOTING THE EXTENSION OF THE CONTAGIOUS DISEASES ACT (1866) TO THE CIVIL POPULATION.

A BRANCH of this Association has just been formed in Hereford to aid the extension of the "principles of these Acts". Seven gentlemen in the profession—Dr. Bull, Messrs. Hanbury, Lane, Moore, Griffith Morris, Thomason, Vevers—have joined, and it is anticipated that others will send in their names, besides clergy and laymen. We hope that the subject will be brought under the notice of the local profession at their annual dinner, which will be held in Hereford on the 26th inst. Already the opponents of the Acts are busy at work in Hereford. We trust that since it has now become necessary to place the nature and scope of the Contagious Diseases Acts fairly before the public, prior to further legislation next session, many other towns will follow the example of Hereford, and also that the Branch Associations already formed will bestir themselves.

A NEW HOSPITAL TENT.

THE following description has been published of a new form of hospital tent, designed by Mr. Netten Radcliffe, of the Privy Council Office, and built by Messrs. Piggott, of 59, Bishopsgate Street Without, which seems likely to render valuable service in facilitating the isolation of persons suffering from contagious diseases. The tent is oblong in shape, sixteen feet long by fourteen feet wide, and thirteen feet high to the ridge pole. It has perpendicular canvas walls, three feet six inches high, and above these it slopes the remaining nine feet six inches. It is supported by a ridge pole and three uprights, of which the middle one might be dispensed with, and encloses 1850 cubic feet. At each end the canvas will roll back from the middle to the sides, and the walls also roll up under the flies, so that air may be allowed to sweep through the whole tent from end to end and from side to side. The 224 feet of floor space will allow comfortable standing room for four beds, which may be variously disposed, either one in each corner or parallel to each other, with the bed-heads against one of the side walls. By shifting the beds according to the direction of the wind it would always be possible to have three sides of the tent completely open. The whole tent, with poles, pegs, and guy-ropes complete, is supplied by Messrs. Piggott for £13 : 10. It weighs about a hundred weight, and can be completely fixed by three men in fifteen minutes. At a time when there is every probability that temporary cholera hospitals will be required in many places, and when the practice of isolating persons suffering from infectious disease is being much advocated and pursued, it is quite worth while to call the attention of local authorities to a tent far more convenient than either the bell tent or the old hospital marquee, and capable of affording so much accommodation for the sick at so cheap a rate. Mr. Radcliffe points out that a single tent may be regarded as an unit of temporary hospital construction, and that one may easily be fitted up as a nurse's dormitory or a kitchen or for any other administrative use, or may be subdivided by a partition so as to fulfil more than one purpose of the kind. Messrs. Piggott have made ample provision for ordinary ventilation in the sloping roof; and, against colder weather, they supply also a jean lining, at £9 : 10 additional. During the Crimean war Mr. Radcliffe had great experience of tent and most other forms of temporary hospital construction, and he has now sought to bring this experience to bear upon the supply of an urgent want. For severe small-pox or other cases in which the demand for fresh air is very great, he suggests that only two beds should be placed in each tent, but for all ordinary cases four may be regarded as the proper complement.

SALE OF POISONS.

AT the Clerkenwell Police Court on Saturday, Mr. Lloyd Rayner, a chemist, of New North-road, Islington, was fined £5 for selling oxalic acid in a packet labelled "effervescent citrate of magnesia." A shoemaker sent his son to the defendant's shop for a pennyworth of oxalic acid, an article which he used for putting a bright red on the heels of ladies' boots. When the boy returned, the man was surprised to see that the packet was labelled "effervescent citrate of magnesia." He immediately went to the defendant and asked him whether a boy had bought a pennyworth of oxalic acid at his shop that day, and he replied in the negative. The shoemaker handed him the packet of oxalic acid, and asked him whether the label containing the words "effervescent citrate of magnesia" had been sent out by him. The defendant examined the packet, and said it was very probable that some citrate of magnesia had been sold by him. When the shoemaker drew his attention to the fact that the packet contained oxalic acid, the defendant said it was a mistake likely to occur, and that it was very easy to make such a mistake, as the printer sent in the labels all together, and sometimes one got mixed with the other. Several medical gentlemen gave the defendant an excellent character for the last fourteen years, and stated that he was most careful in the performance of his duties. Mr. Cooke said it was much to be regretted that a man who had received such a high character as the defendant should sell oxalic acid and label it citrate of magnesia. It had been stated that the mistake had been made through the labels having been accidentally mixed by the printer, but if it was known that this was a frequent occurrence, chemists ought to be more careful. He should not be doing his duty if he did not inflict the highest penalty.

THE BRITISH INFIRMARY AT NAPLES.

BITTER laments are uttered in the political journals, by British residents at Naples, over the decadence of the British Infirmary for Seamen there, from want of funds and discouragement by the Italian Government. According to Miss Gallwey, by whose father, Captain Gallwey, it was established, this little hospital, supported by voluntary contributions, and generously attended by the local English medical men, has relieved thousands of our sailors, and worked untold good. Previously to its establishment, she says, all distressed British subjects, when ill, "had to be taken to the native hospitals, where operations upon patients were wont to be performed in their beds adjoining those occupied by other sick. Cries extorted by direst agony—there was no chloroform in those days—were brutally checked, and even punished, by the operating surgeons. Well aware of these horrors, Captain Gallwey, assisted by some of the English residents, never rested until the little Infirmary for British Seamen was established." She adds indignantly: "Will our country now suffer its doors to be abruptly closed, and the sick consigned to the tender mercies and ignorant treatment prevailing in Neapolitan establishments? I cannot think so, or I should even rejoice that my poor father has been spared the bitter knowledge that all his labours have been undone. Surely the Government of King Victor Emmanuel will not prove less tolerant than that of Ferdinand II." Miss Gallwey is not altogether just in her indignation, and we apprehend that her statements concerning Neapolitan surgeons are not founded upon personal observation; but she pleads well, if not wisely, and for a good cause; and we hope she will succeed.

CORONERS' JURIES.

SOME Holborn jurors grossly misbehaved themselves last week, and insulted the Coroner of Central Middlesex. He showed dignified firmness. We quote the following comment from the *Pall Mall Gazette*.

"There are few of our public functionaries to whom we have more reason to be grateful than our coroners. They are indefatigable in their performance of a very unpleasant duty, and frequently drag to light abuses which, were it not for their energy and acumen, might flourish unperceived for years, scattering misery and death far and wide. Indeed, as we have before pointed out, no better training could probably be devised for a young man about to enter political life, and

anxious to obtain some insight into the real wants of the people of this country, than to go through a course of inquests under the tutelage of an experienced coroner, by which means he would learn more of the grievances of the working classes in a month than if he attended Hyde Park and Trafalgar Square meetings for a century. We are glad, therefore, to observe that Dr. Lankester, who, when holding an inquest on Monday afternoon, met with insubordination and insults from some of the jurymen who had been summoned, upheld the dignity of his office by threatening to give the offenders into custody if they persisted in their misconduct. Inquests are far too solemn occasions for unseemly remarks and coarseness of demeanour; although they are generally held at public-houses, jurymen should endeavour, if only for the moment, to rise above the level of the pothouse, and remember that they are engaged in an investigation which, from its nature and importance, should at all events be carried on with some show of decency."

BABY-FARMING.

A SHOCKING case of baby-farming was investigated by Mr. Hardwicke at the House of Detention, Clerkenwell, on Saturday. The infant on whose body the inquest was held was the child of Agnes Anderson, aged 17, and now an inmate of the prison. It was stated that the father of the child never contributed a shilling towards the support of either the mother or the child, which was born in the workhouse. Three weeks after its birth it was placed by the mother with a Mrs. Baker, of 16, Colville Place, to whom seven shillings a week was paid for its keep, but it was afterwards taken to a Mrs. Smith, who had it for a week, and received six shillings and sixpence. The poor child was subsequently taken back to Mrs. Baker, and was there (according to the medical evidence) so neglected and badly treated that it died in the prison infirmary from starvation. Mrs. Baker, it was stated, lived in the front kitchen, which was damp and unhealthy, and totally unfit for the habitation of any human being. In this place seven persons lived. The mother had been in the habit of taking the child out at night, and representing that it was dead, and that she wanted money to bury it, and on more than one occasion had said, "That she wished the child would die." The officer who had charge of the case having stated that Mrs. Smith did not appear to be a guilty party, and that she would be a useful witness against the other prisoners, the jury returned a verdict of manslaughter against Anderson and Baker.

THE CULTIVATION OF IPECACUANHA.

PROFESSOR BALFOUR of Edinburgh has submitted to his fellow-botanists and physicians some observations on the cultivation of ipecacuanha in the Edinburgh Botanic Garden for transmission to India. As a curative for dysentery, the value of this plant is very great; and, in consequence of the partial failure, from various causes—such as the rashness and carelessness of collectors—of its cultivation in its native country (South America), its cultivation here for sending out to India has become a matter of much importance. A difficulty, however, till within a short time ago, stood in the way of this design, as it had not as yet been possible to get the perfect seed of the plant, and its propagation was accordingly but slow. A short time ago, however, Mr. James M'Nab of the Botanical Gardens discovered that, by cutting the root of the plant under the ground surface, numerous new shoots could be got, and the plant so propagated much more easily and plentifully. It had thus been possible to send out a number of healthy plants to India, which it was hoped would be there equally successfully cultivated. Mr. M'Nab had also been endeavouring, with fair prospect of success, to get the perfect seed of the plant; and if that can be done, the difficulty of propagation will, of course, disappear. There are now two varieties of the plant in the Botanical Gardens, one of which has been cultivated there for forty years, and the other has just been got from South America, through the kindness of Dr. Gunning and Dr. Christison. It is hoped, from the union of these two varieties, to get a perfect seed.—In the course of the remarks made on this discovery, Dr. Cleghorn, F.L.S., late Conservator of Forests, Madras, expressed his delight at seeing the satisfactory result of the ipecacuanha propagation. Every army-surgeon, he said, knew the great value of this remedy

the treatment of dysentery; and he hoped that the result of this experiment would be as successful as had been the introduction of cinchona. He thought much credit due to Professors Balfour and Christison and Mr. M'Nab in this matter.

REMARKABLE EPIDEMIC DISEASE IN PERNAMBUCO.

DR. VELLOSO writes to the *Gazeta Medica da Bahia* of August 15th, that for some months there had prevailed in Pernambuco, where he was in practice, a remarkable form of disease, having some resemblance to beriberi, but differing from it so far as to lead Dr. Velloso to regard it as an hitherto undescribed malady. It had attacked persons in various parts of the city, and was epidemic in the house of detention. In that institution, of forty-eight persons attacked in the course of a few days, fourteen died; and it was necessary to remove the remaining inmates in order to prevent the spread of the disease. The disease is described as generally appearing suddenly in persons in apparently perfect health. Sometimes, however, there has been slight oedematous swelling of the lower limbs. Oedema appears in the ankles, and rapidly extends to the abdomen, thorax, and face; the patient presenting the appearance of a person suffering from the effects of intemperance in alcoholic drinks. In some cases there is fever, occasionally of an intermittent type. There is mucous and bilious vomiting. The abdominal muscles become so rigid that in most cases it is impossible to examine the viscera. There is paralysis of the muscles of the lower limbs, with at the same time such intense hyperæsthesia that the patients cry out on the slightest pressure. One patient could not even bear the touch of the bedclothes on his legs. Sometimes the paralysis extends upwards, affecting the hands. The disease makes rapid progress; and, sometimes within twenty-four or forty-eight hours, there is a most distressing sense of constriction at the base of the thorax. The sufferings of the patient are extreme; but the mental faculties remain intact. The urine is normal, and does not contain albumen. In most cases the bowels are constipated; sometimes there is diarrhoea. The dyspnoea which attends the progress of the oedema passes into orthopnoea, generally accompanied with a suffocative cough and expectoration of greenish mucus streaked with blood. There is much anorexia from the beginning. The patients complain of slight formications in the course of the nervous plexuses; and, when slight convulsions set in, they die asphyxiated or comatose. On *post mortem* examination, the principal organs do not present any morbid change, with the sole exception of hyperæmia of the mucous membranes. There are effusions in the serous cavities, and much infiltration of the areolar tissue. In some instances there has been found sanguineous engorgement of one of the lungs—due apparently to the mode of termination of the disease. The etiology of the malady is obscure. It cannot be attributed to causes inherent in the house of detention; for, before it appeared there, several cases were observed in various parts of the city, in persons situated in apparently the best hygienic conditions. Dr. Velloso suggests that there may be some connexion between the disease and the excavations which have been carried on in Pernambuco, in the course of which some old cemeteries in various parts of the city have been opened. No treatment, either rational or empirical, has hitherto been found successful. The government of the province has nominated a commission of seven members to study and report on the disease.

THE ORIGIN OF ENEMATA.

WE referred lately, on German authority, to the astonishment of the Bavarian soldiers at the ubiquity of the "irrigateur" in French establishments, and the odd uses to which they put them. Frederigo Kernot of Naples, in a newly published *Storia della Farmacia*, describes "with true Southern liveliness," according to the *Pharmaceutical Journal*, the invention of the enema-apparatus, which he looks upon as an epoch in pharmacy as important as the discovery of America in the history of human civilisation. The glory of the invention of this instrument, so beneficial to suffering mankind, belongs to an Italian, Gateneria, whose name ought to find a modest place together with

Columbus, Galileo, Gioja, and other eminent and illustrious Italians; he was a compatriot of Columbus and professor at Pavia, where he died in 1496, after having spent several years in the perfection of his instrument. The enema-apparatus may be justly named the queen of the world, as it has reigned without a rival for three hundred years over the whole continent, besides Brazil and America. The enema came into use soon after the invention of the apparatus itself. Bouvard, physician to Louis XIII, applied two hundred and twenty enemata to this monarch in the course of six months; in the first years of Louis XIV, it became the fashion of the day; ladies took three or four a day to keep a fresh complexion, and the dandies used as many for a white skin. Enemata were perfumed with orange, angelica, bergamot and roses; and Mr. Kernot exclaims enthusiastically, "Oh! se tornasse questa moda" (oh, that this fashion would return)! The medical profession at first hailed the invention with delight, but soon found the application *infra dig.*, and handed it over to the pharmacist; but shameful invectives, sarcasms and epigrams, hurled at those who exercised the humble duty of applying the apparatus, made them at last resign it to barbers and hospital attendants. As a specimen of these epigrams, the author gives the epitaph on a tombstone of an ancient pharmacist:—

"Ci gît qui pour un quart d'écu
S'agenouillait devant un cu."

SCOTLAND.

THE foundation-stone of the new hospital for Lanark was laid last week.

WE regret to hear of the death of Mr. John Duncan, of the well-known firm of Duncan and Flockhart, Edinburgh. During his lifetime he enjoyed the esteem and respect of a large circle of medical men in the city.

SMALL-POX AND FEVER IN DUNDEE.

THE inhabitants of Dundee are somewhat alarmed at the increase of small-pox and typhus fever in their city. In the Infirmary there are about thirty cases of small-pox, and nearly ninety patients suffering from typhus fever. Steps are about to be taken to erect a temporary hospital.

IRELAND.

THE Mayor of Cork has had the Cross of the Legion of Honour conferred upon him in recognition of his services in connection with the succour of the French wounded in the late war.

FOOT-AND-MOUTH DISEASE continues to prevail amongst the cattle in some of the districts of Derry and Tyrone. It would be interesting to know if the inhabitants of the district are infected with the disease.

SANITARY PROSECUTIONS.

MR. JAMES KENNY and Mr. John Doyle were lately summoned for allowing two tenement houses to get out of repair. Dr. Mapother stated that the premises were dangerous to health and life. The Mayor allowed three weeks to put the place in repair.

ADULTERATION OF MILK.

ELIZA NIELL, Patrick O'Neill, and Mrs. Grenell, were summoned this week for adulterating milk. Dr. Cameron found thirty-three per cent. of water. Mr. O'Donnell observed that this system of adulteration deprived citizens of food and proper nourishment, and that he should inflict punishment according to the amount of adulteration. Fines were inflicted in all cases. Mr. Fitzgerald, sen., in conducting the defence, observed that the authorities at Liverpool are not quite sure whether they are legally empowered to punish those who sell milk watered to the extent of seventy-five per cent. The mixing water with milk, according to Dr. Letheby, is not adulteration. Water, he states, is *per se* wholesome. The *Irish Times* observes that "what is whole-

some for one may be deadly to another. The deaths of infants are numerous in London caused by the wretched milk retailed to the humbler classes. He who supplies milk watered seventy-five per cent. to an infant child really kills the child by starvation. The Liverpool authorities may safely punish the delinquents they have detected. They sold an article deleterious to human health, and should suffer the penalty."

SANITARY STATE OF DUBLIN.

THE "sanitary tour" of Mr. Benson Baker has produced a very wholesome amount of agitation. It has stirred up a degree of interest in sanitary matters which must be productive of good effects. Dr. Grimshaw has come forward to attest the accuracy of Mr. Baker's statistics of zymotic disease, which had been hotly impugned; and to support with his independent testimony the general truthfulness of the picture which he has drawn. The press generally has accepted, from its own knowledge, these statements of Mr. Baker as well founded. One journal has had the sanitary condition of Dublin specially investigated by a gentleman who accompanied Dr. Grimshaw through miles of streets, lanes, and alleys. The picture which he draws from the life is certainly not less darkly coloured than that sketched by Mr. Baker. The facts, indeed, seem indisputable, and speak for themselves. The natural situation of Dublin is admirable. Nature has done everything to make it healthy. Man is responsible for the filth which poisons the soil, air, and water; for the fever which is now the naturalised denizen of the city; for the "filth-bred" infections which mow down its population in unnatural numbers. The Corporation are slowly awaking to a sense of their past shortcomings; they are even attempting to remedy them after a fashion. Thus they have fined some persons for throwing filth into the streets, hitherto a venial offence; but, as they have not yet thought fit to compel landlords to make their houses habitable by providing receptacles (under the Towns Improvement Act), this is an illusory piece of activity. Meantime they are themselves the greatest offenders, inasmuch as the receptacles which they provide for the putrefying refuse of the streets are left to ferment and to breed stench and poisons in dépôts placed amidst crowded centres of population. We observe also some increased activity in reference to tenement houses which have fallen into a condition dangerous to health and life. All this small pottering will do little. Small spasms of temporary activity are indications of systemic feebleness rather than strength. To make a good beginning, let the Corporation act upon the powers given to them by the Sanitary Act of 1866, authorising them to employ and pay the dispensary physicians to assist in the sanitation of the city. Their daily work brings the dispensary physicians into daily contact with the zymotic diseases of the poorer classes (which spread, be it remembered, from the poor to the rich), and lays bare the material and removable causes of the disease. They alone can form an efficient and complete sanitary staff. The Corporation have evidently a dim sense of this truth, inasmuch as they have forwarded a circular with enclosed post-cards, asking for sanitary information from the dispensary physicians gratuitously. This is somewhat too strong a burlesque of activity to be sincere. Suppose they were to have attempted the census in the same way, and to have sent begging cards to a variety of gratuitous enumerators, there would have been good reason to doubt their desire to have a complete and satisfactory census. At any rate, it would have been clear that they had hit upon a very poor device. A great public work is not to be carried on by sending round the hat. It is particularly shabby to appeal to the feelings of the underpaid and overworked dispensary physicians, and to ask them to add gratuitous sanitary inspection and reports on a systematic scale to their heavy and ill remunerated labours. The Act gives the Corporation power to employ and pay the dispensary staff as sanitary officers. If they be in earnest, they will do so. At present, they spend more than twice as much on their fire-engines as on the sanitation of their city. No expenditure could be more economical than that which promotes health, arrests zymotic diseases, protects the lives of the innocent and the able-bodied bread-winners, purifies the city, and saves the rates.

NOTES OF A SANITARY TOUR THROUGH DUBLIN.

II.

THE fatal activity of milk, as a carrier of disease, has been most carefully and scientifically investigated by Dr. Taylor of Penrith, Dr. Ballard, Dr. Bell, and Dr. Thorne Thorne. It has been conclusively shown that typhoid fever, scarlet fever, and even cholera, have been communicated to people through the medium of milk. It is, therefore, of the utmost public importance to inquire into the sanitary condition of the cow-sheds and dairy-yards. In the most densely populated and fever-infected district, in close vicinity to the Corporation manure depôt in Marrowbone Lane, are to be found the cow-sheds and dairy-yards of Dublin. These yards, like the neighbourhood, are abominably filthy. Manure is allowed to accumulate in heaps, from which may be seen small black foetid streams flowing into the open streets. The effluvium from these yards is absolutely poisonous, and is only equalled by the atmosphere in the cow-sheds. In this district man and beast alike fall easy victims to preventable disease.

Dr. Cameron says that the loss from pleuropneumonia sustained by Dublin dairymen is at least 10 per cent., yet the dairymen cannot be convinced that the disease is contagious; and, therefore, unless under compulsion from the sanitary authorities, they never disinfect their premises after the removal of diseased animals from them. The vital powers of the cows are lowered by their constant respiration in close foetid stables. In some of the sheds the cubic space allowed for a large cow is less than the *minimum*—viz., 300 cubic feet of breathing room—allowed a man in a registered lodging-house. The cows were so close to each other that it was impossible they could all lie down together. On questioning the owner on this point, he facetiously replied, "Gorrah, sir, they take it turn about." This repartee might excite a laugh if the occasion of it did not inflict cruelty on the beasts, and tend to infect the people with disease. It is not surprising to learn that milk obtained from cows herded together in such unsanitary conditions not only conveys foot-and-mouth disease, but typhoid and other zymotics, to the consumers.

An enormous amount of diseased meat is sent into Dublin. The most ingenious devices have been resorted to to supply the market with diseased meat. All manner of vehicles are used; and on one occasion Dr. Cameron says that a hearse was employed; the contents, two bad carcasses of beef, were discovered.

During the past year, 388,380 lbs. of diseased meat were seized in Dublin, but it is very certain that a large mass eludes seizure. On visiting one of the rural districts within ten miles of Dublin, I elicited, by inquiry, that when cattle were found to be diseased the police had precautions taken for killing them: this being accomplished, their responsibility appeared to cease, and the carcasses were forthwith sent into Dublin, *ostensibly to the knackers*. An arrangement appears to exist that the metropolitan police should examine certain carts coming into the city, and a few are told off for this purpose. Those carts that are caught bringing diseased meat into the city are of course going to the knackers, but those that succeed in running the blockade find a ready and profitable market for their diseased freight, which is sold to the poor for food. During the past year four persons were imprisoned for selling bad meat, and forty-two were fined for the like offence. The penalty inflicted is so inadequate, when compared with the criminality of the act and the injury inflicted on the poor, that as yet it has had but a small deterrent effect. A woman, who was an old offender and frequently before the Lord Mayor's Court, was let off on the payment of ten shillings, so that she may again follow the nefarious but profitable trade in unsound meat. It is strange, but none the less true, that you may poison with diseased meat and be let off with a fine varying from a shilling to a pound; but commit the like offence with a vegetable or mineral poison, and you will be tried for wilful murder or manslaughter, or the administration of a deleterious substance.

Dr. Cameron has stated that during five years before the appearance of lung-distemper, the annual deaths from phlegmons averaged five per 20,000 deaths from all causes; whilst during the ten years ended in 1856, the mortality from these diseases rose to 162 per 20,000 deaths. He further observes, that measly pigs are very common in Ireland—much more so than in either England or Scotland. Measly pork is likely to be used in the preparation of sausages. It is not a pleasant reflection that when eating a sausage we may be possibly introducing into our body the embryo of a tapeworm ten yards long. Even kitten pies are innocent compared with diseased meat that may introduce tapeworm, or worse, the

trichina spiralis, which may prove fatal to the consumer. Why should measly pork be more common in Ireland than elsewhere? May it be due to the fact that pigs are kept in such close proximity to the dwelling-houses, and that these cysticerci are thus constantly changing their habitat from the animal to the human subject, and *vice versa*?

The sanitary arrangements for Ireland require to be recast. It is necessary to have a revision and consolidation of sanitary laws. It is a well ascertained fact, that local boards are more inclined to be obstructive than to cheerfully and efficiently aid the health-officer in carrying out what he knows to be of paramount importance to the health and well-being of the citizens. This is a result of opposite personal interest and division of authority. The chief responsibility of the breakdown of sanitation must be laid on the system which establishes no real regulative and controlling authority over various corporate boards and local commissioners. Nothing will efficiently be done for Ireland until a ministry of health shall be established, which shall co-ordinate the various departments and authorities that at present direct the sanitation of the State.

The appointment of a medical health-commissioner for each of the four provinces, and two engineers, associated with the Poor-law Commissioners, with authority to control local corporate and other authorities, and with power under sealed order to enforce necessary sanitary work to be done, would doubtless in a few years produce results as economical and humane as that which has issued from the admirable working of the Irish Dispensary and Medical Charities Act. This board would be for Ireland a single central authority for the prevention and cure of disease, as well as a board of appeal for the various local boards.

Under a new *régime*, the appointment of the dispensary-physicians as the health-officers of their respective districts would be of the greatest possible advantage. They possess the earliest knowledge of preventable disease; they are daily in contact with those who suffer most. I witnessed their efforts to educate the people on the necessity of vaccination; and admired their short pointed lectures on dietetics and personal hygiene. My friend Dr. Maunsell has forcibly observed that the execution of sanitary measures comes naturally within the province of Poor-law administration, since disease in any shape tends to create distress and destitution, the relief or prevention of which is, or ought to be, the especial object of every poor-law. But the powers to enforce their execution must rest in some other hands than those of local authorities, who may themselves be interested parties. The Poor-law medical officer, by virtue of his office and duties, will be the most likely person to detect nuisances—the first to know the existence of epidemic, and the proper person to ascertain its cause. But as long as the medical officers are appointed and paid by boards of guardians—and consequently under their control—it will not be their interest to call attention to the existence of nuisances, which may perchance bring them into antagonism with the board, or individual members of the board, of guardians. The consequence is, that both the detection of nuisances and the enforcement of nuisance-law have come to a dead lock; and one of the results is, that 25 per cent. of our total mortality is due to preventable disease.

When the Poor-Law Service shall be placed on a similar footing to that enjoyed by our brethren in the army and navy, then will the service be efficient. Let admission to the ranks be through the portal of competitive examination. Let it be a *sine qua non* that a competent knowledge of medicine, surgery, midwifery, and state medicine be adduced by all the candidates. In state medicine, the University of Dublin has taken the initiative. This university has read the signs of the times, and is prepared to lead in the van of advancing sanitary science. The Poor-Law Medical officers must be paid entirely out of the Consolidated Fund, with increasing pay for length of service, and a certain superannuation if incapacitated through disease or age. There should further be promotion from the ranks to borough or county health officer, and to that of provincial commissioner. This would be a strong and efficient incentive to active sanitary exertion in this department of the Civil Service. In Ireland there appears to be a special provision for the appointment and payment of the dispensary physicians, as health-officers, under the Sanitary Act of 1866, which says:—"Whenever, in compliance with any direction or regulation of the Poor-Law Commissioners, which they may be empowered to make under the laws for the time being as to the public health, if any medical officer of a union or dispensary district, or any other medical practitioner specially employed by the guardians for the purpose, shall perform any extra medical service in any union or part of a union, it shall and may be lawful for the guardians of the union to determine, subject to the approval of the said commissioners; and if they shall not approve the amount determined by the guardians, for the said commissioners to fix by order under their seal, such remuneration proportioned to the nature and extent of such services as aforesaid, as to them shall appear

just and reasonable; and the amount of such remuneration shall be paid to such medical officer, or other medical practitioner, by the guardians of the union out of the rates raised for the relief of the poor." By this act the description of sewers and nuisance authorities in Ireland, are for the city of Dublin the right hon. the Lord Mayor, aldermen, and burgesses, acting by the town council; for towns corporate, with the exception of Dublin, the mayor, aldermen, and burgesses, acting by the town council; for towns and townships having commissioners, the town and township commissioners; and for such part of each union as is not under another sewer or nuisance authority, the guardians of the poor of each union. That the sanitary law is not carried out as efficiently as it ought to be can hardly be questioned; and this is in all probability due to the fact that the nuisance authorities are both too numerous and irresponsible, and that the duties are in general performed by a policeman, a relieving officer, or some other amateur in hygiene, while the medical officer is the last person thought of with regard to sanitary arrangements, or if he is asked to report on the matter, he is expected to do so gratuitously.

There can be no doubt that, in the small towns and rural districts in Ireland, the dispensary physicians could, in addition to the attendance on actual disease, discharge the duties of health-officers, under provincial health-commissioners; but that, in places with a population like Dublin, Cork, Belfast, etc., it would be necessary to appoint in addition a gentleman, debarred from private practice, with an adequate salary, to devote himself entirely to the sanitation of the people, aided by the dispensary physicians.

BENSON BAKER, District Medical Officer,
Christ Church, Marylebone, etc.

THE HAMPSTEAD HOSPITAL INQUIRY.

ON Thursday morning the special commissioners of the Local Government Board, Mr. Henley and Dr. Buchanan, opened an inquiry at the offices of the Metropolitan Asylums' District Board, Norfolk Street, Strand, into the charges made of mismanagement of the Hampstead Small-pox Hospital. These charges were first made, it will be remembered, in a letter signed by three gentlemen who had been assistant medical officers in the hospital, and affected particularly Dr. Grieve, the medical superintendent, although, of course, the whole management of the hospital was affected by the charges.

The complainants in the case, Mr. Greaves and his fellow-assistant medical officers, were represented by two counsel, Mr. Bucknill and Mr. Collins; the father of the missing child, Bellue, was represented by Mr. W. Wright; and Mr. Hammond represented the committee of the Hampstead Hospital and the Metropolitan District Board.

Mr. HENLEY, in opening the proceedings, stated that the course he and his colleague would adopt would be to take the charges made by the three medical officers first, and to go into them fully; then to follow with any other charges which might be made. He thought that, as he and his colleague were not trying the case, counsel would do well not to make addresses, though, of course, he should not bind them on this point.

Mr. W. WRIGHT applied for leave to cross-examine the witnesses relative to the child Bellue.

Mr. HENLEY, after a lengthened discussion of the point, decided to tell Mr. Wright the course he should adopt in that matter on the next day.

Mr. ATKINS then opened the case, by relating the statements made by the complainants.

The first witness called was evidently not of the poorer class for whom the hospital was intended. This was

James Henry Wills, of Dorset Place, Pall Mall, who stated—I was taken ill with the small-pox, and was taken to the Hampstead Hospital, on the 28th of February last. First, they would insist upon calling me "Wells" instead of Wills. When I was taken in I was run in on a trolley in my own shirt and guernsey, instead of hospital clothes. Soon after my admittance I was tied down in the iron bedstead, and I have the marks on my ankle now where I was tied down. It was about three days after my admittance that I was tied down. The persons who tied me down were a convalescent patient, who was acting as a nurse, and a nurse, a paid one, who gave me an "extra screw," which "extra screw," I believe, caused the mark on my ankle. The nurse who gave me the "extra screw" was a day-nurse, for a night-nurse would not have been able to do it, she being old and generally "screwy." I suppose the nurse came to give me the "extra screw" because I got loose, but that is as far as my memory serves me, for I was rather delirious. I don't remember how long I was tied down. It may have been twenty-

four or forty-eight hours for all I know. I think sheets were used in tying down, and I never saw anything else used for this purpose. I think Mr. Greaves untied me, and he said he did not agree with the tying down. After I was thus tied down I was in a most fearful state, as anyone may think, for I had not been moved for several days, and I was changed—that is, my things were changed. I was wiped, not washed, and put into the sheets. It was then that I was put into hospital clothes. While I was in No. 9 ward I saw several persons tied down, perhaps four or six, during four weeks I was in that ward. There were generally convalescent patients, who assisted as nurses, who tied down. This was in the acute ward. In regard to the food given to the patients, I saw that the nurse, when asked for drink, would walk away without answering. I have been kept for hours without drink, but not a whole night. The drink given was milk well watered—it was watered before it came to the hospital, and it was watered afterwards, so it was “double distilled” by the time it came to us. I have heard other patients complain of not getting drink. Then meat was served not fit for pigs. I could not eat it, and then I was served with what was called “boiled mutton,” on an ice-cold plate, without knife or fork. The potatoes were bad, but not badly cooked, and the bread was good, but very scarce. There were only two paid nurses to No. 9 ward, for the day, and one old woman for night, with thirty-seven patients; but sometimes they used to get a youngster from No. 4 (the convalescent) ward to assist, and this both at night and day. After I had been in No. 9 ward for some time I had an attack of erysipelas, and I was transferred from No. 9 to No. 12, which was a fever ward. There the nurse used to lower the gas, and bid us “good night,” and we had no attendance except that some one used to come in to keep the fire going. One night a poor fellow was taken very ill, and I got one of the patients off for assistance, but he was gone a long time, and I had the consolation of sitting up in bed, and seeing the man die. This must have been about the beginning of April, and the hour was between twelve and one o'clock in the morning. About five minutes after the man was dead the patient I had sent to obtain assistance came back, and Sister Frances came ten minutes after, and she asked my brother patient to assist her to lay the body out; but it was in such an offensive condition that he refused. The body was not removed until five o'clock in the morning. I cannot give the name or date. I don't know the name of the patient who refused to lay out the body.

The CHIEF COMMISSIONER said it was rather a vague charge for the hospital authorities to answer, for there was no name or date.

Mr. COLLINS said they had not the power to see the books, or even the complainant's own reports.

Mr. HAMMOND said he had offered all facilities with regard to the books, but the reports of these gentlemen had been kept back for obvious reasons. These gentlemen were going to be examined, and he had advised that their reports should be kept back.

Mr. COLLINS asked if he was confined to the charges made in the letter in the *Times*.

The CHIEF COMMISSIONER replied in the affirmative.

The witness's evidence was then read over, and he added to his former evidence, that the food supplied was “most vile, and not fit for paupers.”

Examined by Dr. BUCHANAN, he said the nurses were extra to the sisters, and he further stated that when the nurse left on the night when the man died, she told him she did not think the man would live. He did not know the name of the nurse, the date of the night, the name of the man who died, or the name of the man who refused to lay the body out.

Cross-examined by Mr. HAMMOND, the witness allowed that he had never complained to Dr. Grieve, whom he saw often, to Mr. Wyatt, or to any of the sisters, or to any one else, but he thought he mentioned something to “Dr.” Greaves. He allowed that when he was taken ill he had no one to attend him, but sent for the relieving officer, who sent him to Hampstead in the parish ambulance.

John Hunter, a publican's assistant, was then called, and he deposed that he was taken to the hospital on March 16th, and was discharged on April 27th. He then deposed to having been tied down at a time when he was delirious, and to finding himself tied down when he recovered his senses. He also declared that there was an insufficient supply of milk for the patients, and that he had often been disregarded when he asked for milk. Then the food was bad, and was insufficient in quantity, both meat and potatoes; and if he could have sent out for any food he would have done so. He had also seen vermin in the heads of patients. He had seen a boy with scurvy in his hands, and witness had seen maggots in the boy's hands. The witness said he was retained in the acute ward because he had abscesses, and, therefore, he could only speak as to one ward. He had not complained to Dr. Grieve, or to any one else, beyond Mr. Greaves.

Cross-examined, he said he had spoken to Dr. Grieve to complain of some stamps which were sent to him in correspondence, and Dr. Grieve listened to him, and made a note of the complaint. Even after that he did not complain to Dr. Grieve, nor did he complain to the superintending nurse, Sister Frances. He confessed he was admitted on a relieving officer's order; that he had gone away with the discharged nurse Sullivan; that he had taken her to his house; had given her a present; and had met other patients, who had assembled at his house, and would be called as witnesses.

Mr. Edwin James Barter, the son of a medical galvanist, of 5, Upper Montagu Place, Montagu Square, a clerk in the Ottoman Bank, City, stated that he became admitted to the hospital on May 24, and left there on June 19. While there he had seen persons tied down, and one particularly. This one was a delirious man, who tried to get out of window, and who, on getting loose, fell out of bed and cut his head. The witness said the food was not good, and was insufficient; but he had no complaint to make of want of drink at the nights. He complained of the potatoes being bad, and the meat being hard, insufficient in quantity, and badly cooked. He complained, too, that the bath-room was heaped up with dirty things, and that the patients emptied their dirty water into the bath.

On cross-examination, the witness allowed that he made no complaints to any one connected with the hospital, either while he was there or since he had left, about how affairs were managed. He acknowledged, too, that when he was discharged he asked Dr. Grieve to allow him to stay longer, and the doctor kindly allowed him to do so. He complained to his own father, when his father told him that the parish authorities had requested he should pay for his keep in the hospital.

Thomas Hatcher, now a waiter at 324, Strand, stated that he was an inmate of the hospital from the 2nd of March until the 2nd of June. He had seen persons tied down. He had had enough to drink; but he had complained to Mr. Kynaston of the quality of the meat. He had not complained to Dr. Grieve, though he often spoke to that gentleman, nor to Mr. Wyatt, or to other gentlemen of the committee, whom he often saw. He had seen the patients in that part of the building only have two towels among eighty-four of them, and these towels had vermin on them. These people washed in the kitchen.

Questioned by Dr. BUCHANAN, the witness allowed that there was an excellent lavatory a short distance off with good supplies of everything, and no one objected to the patients using it. Witness had the cutting up of the meat, and if there was not sufficient sometimes more was got from the kitchen, or a little was taken from each ration to make up the number of rations.

Cross-examined by Mr. HAMMOND, the witness admitted that he had solicited Dr. Grieve to permit him to stay in the hospital beyond the time when he was discharged. He did this because he could not have got a situation if he had gone out, as his face had not healed, and he was very grateful to Dr. Grieve for permitting him to stay.

The case was here adjourned till Friday.

DISINFECTANTS.

A GOOD deal has been written lately on this subject in the public papers, by gentlemen whose knowledge is evidently not of the most sound or extensive character. Dr. A. J. Bernays, Professor of Chemistry at St. Thomas's Hospital, treats the subject magisterially and ably in the following memorandum.

In employing a disinfectant it should be borne in mind that we sometimes have to deal with bodies in a state of decomposition, evolving gases more or less known to chemists; at other times with matters not so advanced, in a solid state, but not volatile.

The gases evolved from putrefying animal matter, and those of most injurious quality, are generally hydrogen compounds. Now, these should be dealt with by volatile disinfectants; if possible by gases. Now, there is no gas to equal chlorine; there is none so cheap, so thoroughly effective in altering the character for good of noxious gases, and none so easy of application. As long as it is in excess, or, in other words, preponderates over the injurious hydrogen compounds, it can be recognised by its odour. There is only one serious objection to chlorine—its smell. But, if it be properly used, and not wasted, this objection is reduced to a *minimum*. Except in the case of closets, where it is best to dust a small quantity in the pan above the reach of water, a solution of chloride of lime, in the proportion of one pound to ten pound of water, is most adapted for disinfecting air. A rag as

large as an ordinary handkerchief steeped in such a solution, wrung out and suspended in small rooms, will sweeten the air for twenty-four hours. The chlorine, slowly evolved, acts partly in decomposing injurious hydrogen compounds, partly in evolving ozone; chlorine is, therefore, a grand oxydising agent.

I will not occupy your space by mentioning other gases, such as sulphurous and nitrous acids, but would only venture to point out that chloralum cannot be substituted for chlorine—a fixed, non-volatile substance cannot take the place as a disinfectant of volatile substances. When we come to disinfect decomposable matter, when it is our task to prevent such matter from decomposing, then we have generally to do with solid bodies. Here is my difficulty. How can I in a few words give an intelligible description? The compounds so capable of mischief are those which contain nitrogen, sulphur, and phosphorus; the best type of them we have in albumen, such as constitutes in a pure state white of egg. These albumen-like compounds form, doubtless, the germs about which so much is written by medical men. If, then, germs partake of the character of albuminoid bodies, for such there can be no better disinfectant than carbolic acid. Anyhow, as these bodies give rise to the most fetid gases; as they are abundantly present in all decomposing animal matters; and as they are completely coagulated by carbolic acid, it is very difficult to understand why carbolic acid is to be substituted by disinfectants which have no such power. The evil of carbolic acid is not in its poisonous nature; many more have been killed by chloride of zinc, which is nearly equal to chloralum. No, rather is it to be sought in the deceptive character of common carbolic acid. The impurities give the disagreeable and often disgusting smell, and the odours attaching may give quite a false notion of security. Sprinkled against bricks in a sewer, out of reach of water, all the smell supposed to proceed from carbolic acid may continue to be evolved for months, whereas nothing in the way of disinfection is being accomplished. A purer article at a much higher price would be really cheaper, because effective.

In conclusion, carbolic acid is readily diffused through air; chloralum is not. Both are good in their place; but the latter can no more pretend to take the place of carbolic acid than carbolic acid that of chloralum. Carbolic acid may coagulate germs and render them harmless; chloralum could do nothing of the kind.

THE GERM-THEORY OF DISEASE.

THE following is extracted from a manuscript paper read six years ago before the Medical Society of Middlesex Hospital, by Robert Liveing, M.D., on the Pathological Relations of "Fever." I have assumed throughout that the diseases under consideration all depend on some poison introduced into the system from without; it is merely an assumption, as we have no definite proof that such is the case (except, perhaps, with regard to small-pox). But, admitting the truth of it, we are led unavoidably to the conclusion that this poison is capable of increase when introduced into the animal economy. This, at least, must be true with regard to the contagious fevers, for the opposite supposition will obviously involve anomalies the most improbable; for example, that the *whole* amount of virus which has been introduced into a new population, previously existed in the individual who brought the infectious disease into the country.

If, then, the virus is capable of increase, it seems almost certain that the *mode* of increase must be by *growth*—in short, that the poison must be an *organised poison*, each organic particle of which must have a definite period of existence, and then die a natural death; and, indeed, we may go further, and say that, in all probability, only during a comparatively short period of its existence can the ultimate organic particle of the virus propagate its species. The history of vaccination will fully bear me out in this supposition. The fixed period of incubation and definite course which most of these fevers run, also favours the same conclusion.

It may be said in answer, that the same arguments which would prove the organised nature of the poison in contagious fever, would apply to such diseases as gout and rheumatism, which we have other reasons for believing to be associated with, or dependent upon, some unorganised poison. In reply, I do not admit that a fair parallel can be drawn between such diseases as gout and rheumatism, and the contagious fevers. In the former, the poison is evidently generated in the system itself, and is not introduced from without (or, at least, not in the same way as in the contagious disorders); it is probably the result of malassimilation and defective excretion; and it may even yet be doubted, in spite of some experiments to the contrary, whether the poisons of gout and rheumatism may not themselves be organised. I do not wish, however, to imply that I believe such to be the case.

With regard to the malarial poisons, it is more difficult to prove their organised nature; it is not so obvious that they increase after introduction into the human body, and, therefore, arguments based on such a foundation fall to the ground. But there are other facts which lead us to the same conclusion: the localisation of the malarial poison to certain districts; the necessary condition of a certain elevation of temperature for its development; and, what appears to me the strongest argument of all in favour of this view, namely, the apparent incompatibility of the co-existence of this poison with certain congregated forms of animal life, such as the central part of well populated towns. It seems as if the congregating together of inhabited houses effectually excludes or destroys the vitality of the malarial virus of intermittent fever. In no place is this better seen than in Rome; the central part of this city is perfectly free at all seasons of the year from malarial poison, although it abounds in a concentrated form almost within a stone's throw of those spots which are perfectly healthy; while it will apparently traverse ten times the distance of country without losing any of its injurious effects. This fact is accounted for satisfactorily only on the supposition that the malarial poison is organised, and of vegetable origin.

ELEGANT PHARMACY.

OUR American colleagues take more pains than we do to disguise the unpleasant flavours of medicines, and to prescribe them in elegant forms. This and other causes have led to an inconvenient extension of the habit of prescribing proprietary elixirs and preparations of known composition, but varying according to the taste and skill of the makers who introduce them. The Newark (New Jersey) Pharmaceutical Association has issued a formulary of elixirs and non-official preparations, by which they propose to dispense all such compounds, unless specially directed otherwise by the prescriber. One or two are worth notice, as the following.

Wine of Beef and Iron.—℞ Extracti carnis (Liebig's) 1 oz.; ferri citrat. 96 grs.; vini Xerici 16 oz.; syrupi 2 oz.; pimentæ (contus.) ½ dr.; Aquæ q. s. ft. 24 oz. Dissolve the extract of beef in 4 oz. of water and add the allspice; after standing ten hours add the wine and syrup, then the citrate of iron, previously dissolved in 2 oz. water; filter. Each fluid ounce contains: fresh beef, 1 oz.; citrate of iron, 4 grains. Dose—one tablespoonful.

Nutritive Wine. Liebig's Extract of Beef and Wine.—Prepared same as above, omitting the citrate of iron.

Elixir Aromatic.—℞ Cort. aurantii 4 drs.; sem. coriand. 2 drs.; sem. angelicæ 2½ drs.; Cocci cacti 1 dr.; Spts. vini deod. 12 oz.; Aquæ 10 oz.; glycerinæ 5 oz.; Syrupi 5 oz.; Percolate 2 pints. A pleasant vehicle for administering nauseous remedies.

Elixir Val.-Ammonia.—℞ Ammonia valerianat, 96 gr.; fl. ext. vanil, tinct. cardam. comp., aa ½ oz.; tinct. xanthoxyl. 2 drs.; syr. aurantii cort. 6 drs.; aquæ 4 oz.—Dissolve the valerianate of ammonia in the water, and add the other ingredients, previously mixed. Two grains val.-ammon. to each drachm.

THE CHOLERA.

A SHIP has arrived at Hartlepool from the Baltic ports with two cases of Asiatic cholera on board. One patient died in a few hours; the other has been removed to a cholera hospital.

THE fatal cases of cholera during the week at Königsberg ending the 17th inst. exceeded all previous returns. Over 300 deaths occurred, the usual proportion of 50 to 60 per cent. of deaths having risen to 70 to 80 per cent.

ACCORDING to the latest official returns from Berlin, September 19, the number of individuals attacked by cholera in the Baltic Provinces amounted to 2,517 civilians up to the 10th inst., and 84 soldiers. Of these, 1,273 died, 620 recovered, and 708 remained under treatment.

A NOTICE appears in the *London Gazette* of Tuesday, stating that as the cholera now prevailing in Russia may be introduced into the ports of Europe, the masters and owners of vessels despatched from English ports must be provided with a bill of health, *viséd* by the French consul, if they wish to avoid being subject to a quarantine of observation.

THE deaths from diarrhoea in London, which had been 487, 353, and 293, in the three previous weeks, further declined to 268 last week; these, however, exceeded by 149 the corrected average number in the corresponding week of the last ten years. Of the 268 last week no less than 244 were of infants under two years of age, and 13 of persons aged

sixty years and upwards. The deaths referred to cholera and choleraic diarrhoea, which had ranged between 40 and 20 in the four previous weeks, declined to 15 last week, only 5 being adult cases; of these 4 were certified as choleraic diarrhoea and 1 as English cholera.

UP to the 15th instant there had been no cases of cholera in Vienna; and it is hoped (says the *Wien. Med. Presse*) that the recent change of temperature will remove all danger of the occurrence of the disease for this year at least. Our Vienna contemporaries urge continued energy in carrying out within the city the sanitary measures agreed on some weeks ago (see BRITISH MEDICAL JOURNAL, September 2nd). It would seem that in Vienna itself there is some laxity; while in some at least of the suburbs active preparations to meet the disease are being carried on. In Sechshaus, for instance, the suburb is parcelled out into sections, to each of which a committee and physician are appointed for the purpose of making house-to-house visitations, remedying sanitary defects, and ordering the cleansing and disinfection of the sewerage. For the latter purpose, phenate of lime is the agent mostly used. The *statthalter*, Baron von Weber, is specially mentioned as being most energetic in the organisation and carrying out of sanitary measures.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting is appointed to be held at Rochester (at St. Bartholomew's Hospital), on Tuesday, September 26th, at 3.30 P.M.; Dr. BURNS in the Chair.

Papers on clinical subjects by A. W. Nankivell, Esq.; by J. H. Lyddon, Esq.; and by Dr. Bell, are promised.

Dinner will be provided at the Bull Hotel at 5.30.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, September 11th, 1871.

EAST YORK AND NORTH LINCOLN BRANCH.

THE half-yearly meeting of the above Branch will be held at the George Hotel, Barton-on-Humber, on Thursday, September 28th, 1871, at half-past three o'clock precisely.

The following papers are promised:—Variola Hæmorrhagica; by G. F. Elliott, M.D.—Injury to Eye from Gunpowder Explosion; and Two Surgical Cases; by W. H. Sissons, Esq.—A Case of Abscess of the Lung; by J. B. Moxon, Esq.

The dinner will be provided at five o'clock. Tickets for dinner and dessert, 5s. 6d. each.

Members of the profession are invited to attend both the meeting and the dinner.

Gentlemen intending to dine, are requested to inform the Secretary on or before the 25th instant.

ROBERT H. B. NICHOLSON, *Honorary Secretary*.

21, Albion Street, Hull, September 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

A MEETING of the members of the above District will be held at the Castle Hotel, Hastings, on Friday, the 29th instant, at 2.30 P.M. (not on Wednesday, as hitherto notified); the Chairman to be chosen at the time.

Dinner at 4 o'clock. Charge 5s., not including wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

Such as propose to stay to dinner, will much facilitate the arrangements by informing me on the previous day.

G. F. HODGSON, *Hon. Sec. to the South Eastern Branch*.

52, Montpellier Road, Brighton, Sept. 20th, 1871.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch will be held at the Railway Hotel, Taunton, on Tuesday, October 3rd, at 5 P.M. Dinner on the table at 5.15 punctually. Tickets 3s. 6d. each, exclusive of wine and waiters.

The following resolution was passed at the annual meeting:—"That with a view to obtaining from members of the Branch their opinion, and to this extent, authority on especial points of interest, a notice be sent to each member, at least one month before a general meeting of

the Branch of a question on a medical or allied subject to be proposed by the Council, on which at the said meeting each member will be expected to express his opinion; but having regard to the number of opinions it is sought to elicit, no argument in supporting an opinion shall exceed five minutes in delivery, whether read by the writer, or deputed, or spoken extemporaneously."

The following question has been settled by the Council as the one on which opinions should be now asked:—"Does the application of Carbolic Acid favour the healing of wounds?"

Gentlemen intending to be present at the dinner, or to read papers afterwards, are requested to give notice to the undersigned, so that he may make the necessary arrangements.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, September 11th, 1871.

SOUTH MIDLAND BRANCH.

THE next meeting of the above Branch will be held at the Town Hall, Wellingborough, on Tuesday, October 10th, at 2 P.M.

Gentlemen who intend to read papers or cases, are requested to forward the titles of the same forthwith.

J. M. BRYAN, M.D. } *Honorary Secretaries*.
WM. MOXON. }

Northampton, September 11th, 1871.

CORRESPONDENCE.

SANITARY AFFAIRS IN DUBLIN.

SIR,—As examples of injuries from sensational sanitary letters in newspapers, let me mention two statements from Friday's Dublin papers.

1. A "Commissioner" sent to accompany Dr. Grimshaw through the worst parts of the city, reports:—"Farther on in the Coombe we pass by the old Coombe Lying-in Hospital, which has just been abandoned. Though not exactly connected with my special task, I cannot help turning aside to mention a ghastly fact connected with this grimy-looking building. It is one of the oldest houses in Dublin, having been at one time the residence of the Earls of Meath. From the confined nature of the rooms and their long use as lying-in wards, they became saturated with the subtle poison of that dreaded disease—puerperal fever. The result was that the patients were decimated by this terrible scourge; and yet it is only the other day the plague-house was abandoned." Dr. Ringland has proved that the eight statements of which the above consists are all untrue.

2. A Poor-law Guardian is reported to have said that there had been last week a case of cholera on board a Russian vessel in the Liffey, and that Dr. Harty, County Coroner, had been sent to the ship by the Port and Docks Board. The man did not die. No item of this is true. No such case occurred; the County Coroner is not a medical man; he could not hold an inquest in the city, nor anywhere on a living man; and, lastly, the Port and Docks Board do not act in such cases.

Newspapers in dull times readily publish such statements, which frighten the public and throw discredit on the profession.

I am, etc., E. D. M.

POOR-LAW MEDICAL OFFICERS AND HEALTH-OFFICERS.

SIR,—As a Poor-law medical officer, I must take exception to that part of Dr. A. P. Stewart's address in the JOURNAL of August 26th, where he says "The proposal to constitute the Poor-law medical officers throughout England and Wales officers of health is most objectionable. A more fatal gift to the Poor-law medical officers in their own interest and that of the public could not be made." I fail to see anything objectionable in the proposal, or fatal to our own interest or that of the public. On the other hand, I, in common, I believe, with every other medical officer, look upon the proposal (if carried out) as a means of improving both our *status* and incomes; and I think you will admit that we should be the best judges of our own interests.

I submit that the very nature of the duties we are every day called on to perform especially fits us for officers of health, as in our visits to the hovels of the poor we are brought face to face with those very conditions which I presume it is the duty of a medical officer of health to remedy—such as overcrowding, filth, bad ventilation, bad drainage, etc.

If these few remarks should be the means of drawing the attention of such gentlemen as Dr. Rogers and other Poor-law medical reformers to this subject, my object will be gained.

I am, etc., S. GOURLEY, M.D.

OBITUARY.

WILLIAM NISBET, L.F.P.S. Glasgow, EGREMONT, CHESHIRE.

MR. NISBET died at Egremont on September 12th, aged 63, after having practised as a surgeon for nearly forty years in the parish of Wallasea. He was born in Paisley in 1808, and received his diploma from the Faculty of Physicians and Surgeons of Glasgow in the year 1827. He was then for a time in the service of the Honourable East India Company, and made two voyages to India in medical charge of troops. In 1833, he settled in practice in Wallasea, on the shore of the Mersey, opposite Liverpool, and remained there until his death. He had much openness of character and activity of mind. Mr. Nisbet had made for himself a lasting place of honour in the memories of all who knew him. He was unable to take food during the last weeks of his life, but there was no suffering. The necropsy showed the cause of death to have been cancer of the liver.

JOSEPH BIRT, M.B.

WE have to lament the early death of Mr. Joseph Birt, M.B., which occurred recently at his father's house at Leamington. His medical education was conducted at Sydenham College, Birmingham, where he was a distinguished pupil. Having passed the College of Surgeons and the Hall, he graduated with honours at the University of London, and was shortly afterwards elected House-Surgeon to the Stourbridge Dispensary, where the kindness of his manners and the assiduity with which he discharged his duties gained him the respect and regard of all with whom he came into contact. But it is not merely on account of his personal qualities and domestic worth that special notice is here recorded. In him the medical profession and the community at large have, there is reason to believe, sustained a real loss. Mr. Birt was devoted to his profession, both as a science and a practical art, in no ordinary degree; and as his abilities were much above the average, a distinguished career for him was confidently anticipated by all who had opportunities of judging of his talents. In his case there is reason to fear that

Science self-destructed her favourite son,

and that his unremitting studies and zeal in the pursuit of professional knowledge, acting on a frame not habitually strong, contributed to his end, if not by directly inducing disease, at any rate by rendering his constitution less fit to resist its attacks.

JOHN WILLIAM IRVINE, M.D.

DR. IRVINE was the eldest son of Dr. James Pearson Irvine, who for a quarter of a century practised his profession in Lancaster. He was educated in the Royal Grammar School, Lancaster, and afterwards at the University of Glasgow, where his distinguished career in anatomy especially led to his appointment as Curator of the Leeds School of Medicine, at which place he finished his medical studies. He obtained his diplomas of L.R.C.S. Edin. and L.S.A. Lond. in 1859; and in 1862 became a Doctor of Medicine at St. Andrew's, passing his examination with high honours. His success in Liverpool, where he commenced practice, was rapid. He was at once appointed Honorary Surgeon to the Liverpool Caledonian Schools, and subsequently Honorary Surgeon to the Liverpool dispensaries. In 1864, he was elected Visiting Surgeon to the West Derby Union Hospital. All these appointments he held up to the time of his death. He was also an Assistant-Surgeon to the First Lancashire Rifle Volunteers. By gentlemanly bearing and scholarly attainments, Dr. Irvine had won the confidence of all who knew him, and had gained a promising position. With a kind word and a willing ear for all, he won from suffering humanity a love which is better than any stone man can raise over the grave, and left on the hearts of his fellows a better epitaph than pen can write. There are none who knew him who will not truly regret his untimely death. Dr. Irvine contributed to the medical papers essays on Fever in Liverpool, and on Resection of the Clavicle, with Formation of the Entire Bone. At the time when his illness overtook him, he was engaged on a paper for the *Liverpool Medical and Surgical Reports* on Amputation at the Hip-joint, that paper being the result of three successful hip-joint amputations after failure of resection of the knee-joint and disease of the femur.

Last spring, Dr. Irvine suffered from relapsing fever, the attack having been probably favoured by his unremitting labours in the wards of the West Derby Hospital during the late fever and small-pox epidemics. He never thoroughly recovered his strength, though he still supervised

the wards of his hospital with but short intermissions. In the beginning of August, by the strong advice of his medical friends, he was induced to undertake a voyage to Canada, on board the steamship *Germany*. He suffered on the second day from severe sickness, which prostrated him so much that, on the fifth day after leaving Liverpool, he died quietly and painlessly of exhaustion, at the early age of 33.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, September 14th, 1871.

Popham, Francis William Home, Gowler, South Australia
Thomas, John Howell, Carmarthen

The following gentleman also on the same day passed his first professional examination.

Meredith, William Henry, Queen's Hospital, Birmingham

MEDICAL VACANCIES.

THE following vacancies are announced:—

BIRMINGHAM LYING-IN CHARITY—Two Honorary Surgeons.
CHARING CROSS HOSPITAL—Assistant Physician.
CULROSS, Perthshire—Parochial Medical Officer.
DUMBARTON—Surgeon to the Prison.
GAINSBOROUGH DISPENSARY—House-Surgeon.
GLANFORD BRIGG UNION, Lincolnshire—Medical Officer and Public Vaccinator for the Messingham District.
GREAT WESTERN RAILWAY—Surgeon for the Leamington District.
GREENWICH UNION—Dispenser.
GUEST HOSPITAL, Dudley—Resident Medical Officer.
HAWARDEN UNION, Flintshire—Medical Officer for District No. 2.
KENT AND CANTERBURY HOSPITAL—Assistant House Surgeon and Dispenser.
LIVERPOOL INFIRMARY FOR CHILDREN—Honorary Assistant Medical Officer.
MANCHESTER, Township of—Dispenser at the Male Infirmary at the Workhouse at Crumpsall.
MAGHERAFELT UNION, co. Londonderry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bellaghy Dispensary District.
MANCHESTER ROYAL INFIRMARY—Physician's Assistant.
MAYO INFIRMARY—Surgeon.
MEDICAL AID ASSOCIATION, Bradford District of the Manchester Unity of Odd Fellows—Surgeon.
MIDDLESEX HOSPITAL—Assistant Surgeon; Resident Physician's Assistant.
NARBERTH UNION, Pembrokeshire—Medical Officer and Public Vaccinator for District No. 3.
NORTH DISPENSARY, Liverpool—Honorary Medical Officer.
NORTHERN HOSPITAL, Liverpool—Physician.
OAKHAM UNION, Rutlandshire—Medical Officer for the Empingham District.
ORSETT UNION, Essex—Medical Officer for the Grays District.
PEMBROKE UNION—Medical Officer for District No. 5.
QUEEN ADELAIDE DISPENSARY, Bethnal Green—House-Surgeon.
STOCKPORT INFIRMARY—House-Surgeon.
TENTERDEN UNION, Kent—Medical Officer for the Halden District.
UNST, Shetland, Parish of—Medical Officer.
WARMINSTER UNION, Wilts—Medical Officers and Public Vaccinators for the Corsley and Warminster Districts and the Workhouse.
WARNEFORD HOSPITAL, Leamington—Surgeon.
WARRINGTON DISPENSARY—Resident Surgeon; Apothecary.
WESTERN GENERAL DISPENSARY, Marylebone Road—Resident Surgeon and Apothecary.
WESTMINSTER HOSPITAL—House-Physician.
WHITCHURCH UNION, Southamptonshire—Medical Officer for the Overton District.
WIMBORNE and CRANBORNE UNION, Dorset—Medical Officer for District No. 2 and the Workhouse.
WORKSOP DISPENSARY—Resident Surgeon.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

DUCKWORTH.—On September 21st, at 11, Grafton Street, Bond Street, the wife of *Dyce Duckworth, M.D., of a daughter.

DEATHS.

BALL, John, Esq., Surgeon, at Walker Street, Liverpool, aged 88, on August 26th.
CUTCLIFFE, Charles Elworthy, Esq., Surgeon, at Silverton, Devon, aged 59, on September 10th.

MITTON, Michael John, Esq., Surgeon, at Wildbad, North Germany, aged 31, on September 4th.

*NEWBOLD, Edward, Esq., Surgeon, of Macclesfield, on Sept. 8th, at Worthing.
PHILLIPS.—On September 13th, Margaret Anne, the infant daughter of *T. R. Phillips, Esq., Surgeon, Treorchy, Pontypridd.

THE "DR. HATTON" LIFE-BOAT.—A new life-boat, bearing the above name, has been given to New Romney, with its equipments and boat-house, at a cost of £680, by the widow of Dr. John Hatton, formerly of Manchester.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

A MEMBER can procure information respecting the Jacksonian Prize Essay for this year, from Mr. T. M. Stone, of the Royal College of Surgeons of England, Lincoln's Inn Fields, W.C.

W. S. (Bristol) will observe that the advertisement leaves the post open to all professions.

CORONERS AND MEDICAL WITNESSES.

SIR,—A man was found dead in a river. A gamekeeper was found dead in his preserves, with shots through his head. A man was run over, and died next day. In all these cases, inquests were held by a neighbouring county coroner, but medical evidence was ignored, the surgeon who had attended not even being notified of the inquests. Is this the intention of the Legislature or "Crown's 'quest' law"? I am, etc.; ENQUIRER.

Faversham, September 1871.

*** It does not accord with either.

THE INQUEST AT BATH.

DR. MEERES' letter arrived last week on Friday, and therefore after publication of the JOURNAL. We had, however, already taken the view which it suggests. We cannot see that any blame whatever attaches to Dr. Meeres. The sad occurrence was one which might well have happened to the most eminent and skilful of practitioners. He adopted a well known and much used application. An especial constitutional susceptibility appears to have existed on the part of his little patient, which could not be foreseen. Equally sad accidents sometimes follow the application of a blister. We are glad to see that the medical press generally has taken the same view of the facts; and Dr. Tilbury Fox has shown a creditable manliness in personally assuming the share of responsibility which falls to him as having recommended the application in his work.

DUTIES OF CORPORATIONS.

SIR,—I have read Mr. Benson Baker's letters respecting the sanitary state of Dublin with great interest. His ideas are so novel, that the writer must have come from Laputa. He evidently supposes that the duty of the Corporation is to attend to the cleansing of the city and the health of its inhabitants. It is no such thing. As a gentleman is elected to be a member of that august body solely on account of his political attainments, so it is his duty to devote himself to politics. Unless, therefore, Mr. Baker can prove his complaint to involve a seditious-political question, it is not a proper subject for consideration. I am, etc., FREEMAN.

UMBILICAL EXCRESCENCE IN AN INFANT.

SIR,—A child, about eighteen months old, has a small pea-like excrescence at its navel, which is ulcerated to a small extent at its summit, and from which exudes frequently a drop or two of blood. There seems to be no pain caused, as the child has frequently allowed it to be cauterised, touched with the strong solution of perchloride of iron, etc.; nor does the system seem to be much affected. The child thrives, and has done so since its birth, from which time the mother states that the bleeding has gone on. Tonic treatment has been tried since it came under my care some months ago. I find, however, that it has improved most under the compound syrup of phosphate of iron (Parrish's), the part being touched each morning, when required, with the strong solution of perchloride of iron. When this plan is persevered with, there probably is no discharge for three weeks or a month at a time; but as soon as it is given up, the scab falls off, or becomes removed, and again there is a return of the old symptoms. As the case presents some difficulties, I shall be obliged if you or some of your readers will kindly instruct me how to act in the matter. The child is of rather strumous appearance; its father is decidedly nervous; the mother is healthy; and there is no history of hæmorrhagic diathesis. I am, etc., J. L. R. E., M.D.

September 18th, 1871.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

DR. GREENE (London) will, we believe, be correct in giving credit to the gentleman mentioned in his letter for the best motives and a pure desire for the public good.

DR. EDMUNDS complains that, the whole context of his speech being omitted, the observations last quoted are not sufficiently qualified in the quotation. Reading his whole speech, we do not, however, appreciate the point of the complaint. He states, by way of explanation:

"I was unexpectedly compelled to travel over the ground I did by the complaints of a reverend gentleman who preceded me, and bitterly referred to his experience of reclaimed drunkards who had been induced again to take intoxicants by their medical advisers, and had, as a direct consequence of that advice, relapsed into drunkenness and ruin. That complaint was omitted from the newspaper reports, as also was much qualifying matter that accompanied my own remarks. Doubtless, on the spur of the moment, I spoke warmly; and especially so, as I had just been disgusted by reading the twaddle about drink and tea that had been emitted by gentlemen supposed to represent the British Medical Association on an important occasion at Plymouth."

Dr. Edmunds's disgust appears to have led him to employ violent language against the profession, which, no doubt, he regrets, and which he might advisedly retract.

DAMAGES IN RAILWAY CASES.

G. C. C. asks: "In the case of damages obtained by a patient against a railway company, does the medical man receive his account direct from the company, or through the patient? That is to say: Has he to get it by legal means, if not paid?"

*** The question is rather legal than medical; but the claim is evidently upon the patient. He receives his damages on the faith that he owes a stated sum to his doctor, which he either has paid or is about to pay; and that is included in the sum granted by the verdict. The claim of the doctor is, however, equally valid upon the patient, whether the latter is entitled to and receives compensation or not.

DISPUTED MIDWIFERY FEES.

SIR,—I notice in our JOURNAL a question from "A Member" as to "Disputed Midwifery Fees." I have had two cases in which my fee was refused, when I took proceedings and recovered the fee with all legal costs. The proceedings were taken in the first case in the County Court at Gooles; in the other, in the County Court at Malton—both in Yorkshire. In both cases judgment was given for me, on the ground that my fee was due to me from the moment that I was engaged, having held myself in readiness to attend; that, in fact, "it was a retainer." The circumstances of the two cases were rather different. In the first I was engaged to attend, they did not send for me, moved from the place, and sent for some one else rather nearer. In the second I was not engaged, but was sent for; I started in my carriage, but was met about a quarter of a mile from the village, saying I need not go, they had got some one else. I demanded my fee, and was refused. The judge, however, ordered payment, with costs, on the same general rule that the order to attend was a "retainer", that my not attending was not my fault, and that therefore I was entitled to my fee.

I am, etc.,

R. GILLARD, M.R.C.S. Eng.

60, Clapham Road, S.W., September 15th, 1871.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The New York Medical Gazette, Sept. 16th; The New York Medical Record, Sept. 9th; The Boston Medical and Surgical Journal, Sept. 9th; The Madras Mail, July 8th; The Shield, Sept. 16th; The Philadelphia Medical Times, July 31st; The Philadelphia Medical Independent, Sept. 2nd; The Birmingham Morning News, Sept. 15th; The Lancashire Guardian, Sept. 9th; The Glasgow Daily Herald, Sept. 8th; The Carlou Post, Sept. 9th; The Devizes and Wiltshire Gazette, Sept. 7th; The Dumbarton Herald and County Advertiser, Sept. 14th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. C. Handfield Jones, London; Mr. G. Elder, Nottingham; Dr. Patrick Nicol, Bradford; Dr. T. Beatty, Dublin; Mr. A. H. Hunt, Romford; Mr. Wm. J. Square, Plymouth; Dr. Meeres, Melksham; Dr. J. Russell Reynolds, London; Mr. James Haworth, Filey, Yorkshire; Dr. R. W. Foss, Stockton-on-Tees; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; M.D.; Dr. Henry Browne, Manchester; Dr. James Russell, Birmingham; Dr. Edmunds, London; Mr. F. Le Gros Clark, London; Dr. Robert Barnes, London; Dr. Needham, York; Mr. Lara, London; Our Dublin Correspondent; Dr. Nicol, Bradford; Mr. Benson Baker, London; Our Edinburgh Correspondent; Mr. John Calder, Liverpool; Dr. Wm. R. E. Smart, Penge; Dr. G. H. Philipson, Newcastle-upon-Tyne; Dr. Wahltuch, Manchester; Dr. H. Cripps Lawrence, London; Dr. C. Kidd, London; Mr. J. T. Illingworth, Bradford; Dr. Webb, Wirksworth; Dr. Page, Newcastle-upon-Tyne; Dr. W. Provis, Congresbury; Mr. Hornby, Barmby Moor; Dr. R. L. Campbell, Stourbridge; Dr. W. Ogle, Derby; Dr. Mapother, Dublin; Scrutator; Dr. J. Henry Bennet, London; Dr. E. Long Fox, Clifton, Bristol; Dr. Wade, Birmingham; A Member; Mr. Berkeley Hill, London; Mr. Terry, Northampton; Dr. J. M. Bennett, Liverpool; Dr. Clifford Allbutt, Leeds; Mr. T. R. Phillips, Treorchy, Pontypridd; Mr. F. Dunn, Wolverhampton; Mr. F. W. Wright, Derby; Mr. R. J. Harvey, Würzburg; Mr. Edwards, Ipswich; Mr. Wilson, London; Mr. W. Roberts, Pont Blyddyn, Mold; Mr. William Adams, London; Mr. T. Morgan, Madeley; Mr. J. H. Wathen, Fishguard; Mr. Hodgson, Brighton; Dr. Day, Torquay; Dr. Haddon, Eccles, Manchester; Dr. Kitchen, Middlesborough; Dr. J. C. Hirschfield, Edinburgh; Surgeon-Major Atchison, Tenby; Dr. Corfield, London; Mr. C. E. Cutcliffe, Silverton; Mr. Haviland, London; Mr. Vasey, London; Mr. R. Gillard, London; Mr. P. H. Holland, London; Dr. Meeres, Melksham; Dr. W. T. Greene, London; etc.

CLINICAL LECTURE ON HYPERÆSTHESIA.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

BESIDES the classical disorders of the nervous system, which well-instructed students like you are supposed to know all about—such maladies, for instance, as epilepsy and tetanus—there are a great many forms and varieties of morbid action which are less recognised and described, and scarcely find a place in a regular nomenclature, with which yet it is very desirable for you to be acquainted. Many of these belong to that debatable ground where it is difficult to decide whether we have to do with diseases or with symptoms. I shall now proceed to notice sundry instances of one very common kind of morbid action, as it manifests itself in different localities; and conclude with some remarks on its nature, relations, and treatment.

1. In the *cutaneous surface* we very often meet with a condition which betrays itself by no objective change yet discovered, but solely by an abnormal sensitiveness. The tactile faculty of the skin is not really increased; it is not a more efficient organ of touch than it was before, but quite the reverse, as its nerves are incapable of tolerating the necessary contact with bodies presented to them. Such a condition is conveniently termed hyperæsthesia; and this name I shall continue to use in what I have further to say about it. This state of hyperæsthesia is met with very frequently in sufferers of the quasi-hysterical class, both male and female. One poor fellow assured me that his skin had been so sensitive that he could not bear the least touch anywhere; the pressure of a stethoscope in auscultation was intolerable; and the touch of a crinoline-hoop against his leg in a railway-carriage caused him terrible pain. These complaints were made quite gravely; and though we can hardly avoid smiling at them, yet we must admit that to the sufferer himself such a state of things was no joke. Think what you would endure yourselves, if all ordinary contact were a cause of continual pain. The reality of such suffering is materially confirmed by the fact that, in some cases of structural disease of the cord, certain parts of the cutaneous surface manifest intense reflex excitability, though ordinary sensibility is much impaired. In a most workman-like report in the *Transactions of the Clinical Society*, vol. i, p. 102, on a case of locomotor ataxy, it is mentioned that an area of skin on the outer side of the right leg, about two inches and a half square, was, and had been for about two years, in a condition of extreme sensitivity to impressions capable of exciting reflex movements—such that the patient had frequently been thrown into convulsions, and had dropped down in the street, from the mere brushing of a woman's dress against this part. Even when he touched this spot himself, either with his hand or his trousers, whilst dressing, slighter convulsive movements often took place. At these times he felt an odd kind of sensation in the part, which then diffused itself rapidly throughout the body. In such hyperæsthesia as this the sensorium is but little concerned; but there is evidently no improbability that the cerebrum might be the seat of such disorder, as well as the cord. In fact, this is actually the case in many instances of arachnitis. If you object, that I am now speaking of coarse structural lesions, this will not apply to the case of rickets, where the nervous centres are often exempt from evident lesion, and yet the general tenderness is such that the child cries if he be but touched.

The hyperæsthesia which affects the region of the spine, or, more exactly, the line of the spinous processes, needs to be somewhat specially noticed, because it has been much dwelt on, and is often accepted as a sign (with others) of meningitis or myelitis. Brown-Séquard speaks decidedly on this point; he says that "it is almost always found that pressure upon the spinous process of the vertebræ (sometimes even a slight one), when made at the upper limit of the inflammation, causes an acute pain" (*Lancet*, July 14th, 1860). Dr. Radcliffe, on the other hand, is inclined to the view that this pain is mostly absent, at any rate, in uncomplicated myelitis. My own experience leads me to look for it as a nearly constant symptom, but not in that degree of acuteness which characterises the neurotic disorder. This, at any rate, is certain: that pain in the back *per se* is no evidence whatever of inflammation being present in any of the component structures, any more than headache is of the cranium and its contents being so affected; and, indeed, the two dysæsthesiæ are in many respects homologous. Spinal hyperæsthesia extends sometimes over the skin on one side, and

not at all on the other; sometimes light pressure is painful, and firm relieves; sometimes the latter is the worse. In some cases, I believe, the bones are involved in the neuralgia, without being at all inflamed.

2. The *lingual and buccal mucous membranes* are sometimes the seat of extreme and most distressing hyperæsthesia. The affected parts may appear quite natural, or at most there may be undue redness and insufficient development of epithelium, giving a "beef-steak" appearance, but not at all more than I have often seen in patients who were quite free from this hyperæsthesia. The following case is a good example of this happily infrequent disorder. Mrs. C., aged 73, was seen August 28th, 1866. She had been suffering the last five weeks with her mouth, which was so tender that she could bear nothing in the way of food but lukewarm milk and sopped bread. Cold things gave her pain, as well as hot. The buccal membrane was very red, especially that of the lower lip. The whole surface, including that of the tongue, was extremely tender; but I saw nowhere any breach of surface, nor anything resembling an ulcer. There were certainly some superficial fissures on the dorsum, but they were no more than often exist without causing any suffering, and they did not appear to involve the corium. The tongue was perfectly clean and moist. Pressure on the mucous membrane did not render a spot pale even for an instant after its removal. The bowels were regular; pulse 84, of good force. The appetite was very good, but she felt quite exhausted from being unable to take food. She got very little sleep, from the distress caused by her mouth. She had suffered much from rheumatism, and felt the changes of the weather very much. My notes extend over more than four months, and show scarce any change to have occurred during the whole of that time; and I am tolerably certain that she continued to suffer in the same way, though less severely, to the close of her life, or till about April 1869. She constantly kept a piece of soft rag in her mouth, which afforded her some solace. On one occasion, I took the temperature of her mouth, and found it as high as 100.4 deg. F. The membrane of the buccal cavity always presented the same appearance of considerable hyperæmia. At one time, a little eczematoid eruption appeared at the margin of the lips, but it never extended internally. The suffering she endured must have been terrible; she described it as that caused by a burning fire, and declared she was enduring a living death. Her temperament was by no means excitable, and I do not think she exaggerated her griefs in the least. Many remedies were used; but none were of material efficacy, except a nightly opiate to procure sleep. The pathological condition was, I believe, one of neuralgia and hyperæsthesia, blended, as sometimes happens, with vasomotor paralysis, which latter produced the hyperæmia. The neurosis may have been of gouty origin.

3. The *throat* is liable to suffer with such disorder as we are considering, which it is important not to confound with common inflammatory, as the treatment required is materially different. The following case is an illustration. Mrs. N., a young-looking, recently married woman, was seen by me on September 8th. She had been suffering four days with swelling and neuralgia of the right side of the face. Her throat had become sore, so that she had much difficulty in swallowing. On the previous day, she could not get down a piece of sopped bread. There was some nausea and vomiting. The throat appeared normal, but with the laryngoscope I could see that the laryngeal membrane was much congested. Her voice, however, was not altered. She had soreness and tenderness at the sides of the neck, lower down on each side than the tonsils. She expectorated a little reddish mucus. She had some difficulty in getting her breath. Her sleep was disturbed; she woke up restless and feverish. She felt very weak. The urine appeared normal. I advised diligent steaming of the throat, sinapisms to the sides of the neck, fifteen grains of chloral at bedtime, and two grains of iodide of potassium and an ounce of effervescing mixture of citrate of potash three times a day. On the 9th, she slept two hours with the chloral, then woke in great uneasiness, and only dozed the rest of the night. At noon, I found her suffering much. The throat was very sore. She had not been relieved at all by the steaming; swallowing was very painful. She had much pain and tenderness in her neck; more, however at the sides of the muscular part than in the larynx, which I could handle and move pretty freely. Her throat felt dry. Tongue coated; pulse 93. I ordered twenty grains of muriate of ammonia with ten minims of tincture of belladonna in water every four hours, hot fomentations to the neck, and aconite liniment. She also had immediately fifteen minims of chlorodyne, which gave her two hours' sleep; and at 9 P.M. I found her decidedly better, though she had a good deal of strange pain, hardly describable, on both sides of her head. The dose of chlorodyne was repeated at 10 P.M., and in the course of the night she had fifteen grains of chloral; but she was in high fever and delirium all night long. The room seemed whirling round; she felt as if she must get up and go out—as if she should fly.

She saw numbers of persons in the room, with great heads and little bodies; etc. At 9.30 A.M. on the 10th, when I saw her, her throat was much better; she took some toast. The catamenia had reappeared, which had stopped, after a day of normal continuance, on September 3rd. I ordered a drachm of tincture of cinchona flava four times a day. On the 11th, the throat was much better; she had still dysæsthesia about the head, and a large patch of urticarious erythema had appeared about each elbow. On the 12th, she was so well as to call on me and take her leave before setting out for the North. She had sweated copiously the preceding night, had a good deal of eruption on the legs and thighs, but made no complaint of her throat. The attendant neuralgia, the peculiar distress, the nocturnal delirium, the urticaria, and the "juvantia", all go to prove the neurotic character of the disorder, and that it was no common sore-throat, but one where the hyperæsthetic greatly predominated over the inflammatory element. The abrupt cessation of the catamenial flow may have had to do with the supervention of the disorder; but I think the most essential factor was influenza.

4. From the throat we descend to the *stomach*; and among the woes of this much-enduring organ we may well expect to find hyperæsthesia. In fact, this condition, in a greater or less degree, is of very frequent occurrence, and constitutes the chief disorder in those cases to which the term "irritative dyspepsia" is appropriate. In many of these, hyperæmia and catarrh exist also, but as secondary complications, rather than as primary maladies. The hyperæsthesia, I believe, as a paralytic neurosis, is prone to implicate the vaso-motor nerves, and impair the tone of arteries and the retentive power of capillaries. Such disorder may be simple—i.e., dependent on the state of the general nervous system; or it may depend on reflex irritation, as in pregnancy. In some of these states, pain is the more predominant symptom; in others, vomiting; in others, both are present in a marked degree. Andral relates a case where the tongue was natural, and the patient distressed by a very acute hunger; but the lightest food given to her was thrown up by vomiting, or, if it was retained, caused indescribable suffering. The hyperæsthesia was overcome by cold affusion and persevering administration of food. Here the disorder was simple; and such seems to be generally the case, though in some instances, as in the hyperæsthesia of pregnancy, the influence of reflex irritation is evident. Nitrate of silver is a really valuable remedy in cases where pain is distressing; and, as it need only be given for a short time, you run no risk of spoiling your patient's complexion. It may be seconded, however, or replaced, very frequently, by subcutaneous opiates. I have employed them myself with the best effects. Dr. Clifford Allbutt writes strongly in their praise. One of his cases was that of a merchant who regarded himself as a hopeless dyspeptic, dreaded his meals, and especially his nights. He was cured (at least for the time) by one-fifth of a grain of morphia subcutaneously at 3 P.M. and 10½ P.M., followed by rest, during ten days, with one-fourth of a grain at night only for ten days more. I prefer myself to make these injections at the epigastrium, but this is not necessary. When the hyperæsthesia expresses itself in immediate vomiting without severe pain, I have great faith in strychnia, administered in doses of one-twentieth of a grain in not more than half an ounce of water. Let me cite the following instance. A slight-made female, aged 22, married four months, subject to indigestion, and weakened by a miscarriage, was brought to me with severe sickness of ten days' duration, no food having been retained the last three. I gave her, in my room, one-twentieth of a grain of strychnia, and made her lie down. After she had retched a few times ineffectually, she became much better, "did not feel at all sick", and took successively four teaspoonfuls of milk before she left. I saw her again in ten days, when she was greatly better, had only been sick once, and was able to take chicken.

6. That the *tracheal* and *bronchial* mucous surface is liable to hyperæsthesia, cannot be doubted. There are coughs of the most vexatious and obstinate character, which are either unattended with *râles* or expectoration, or where these are out of all proportion insignificant to the severity of the cough. Some of them are of reflex origin, as in Graves's case, where the expulsion of a tænia put an end to a most violent cough, that went on night and day, and resisted all remedies. Some are due to toxic matters in the blood, as is probably the case in pertussis, and in some cases of gout, where, as Graves says, the cough is dry, annoying, and often very obstinate. Some, again, are simple neuroses, as in the case related by Trousseau, of a young lady who was of an hysterical constitution, but was exempt from catamenial irregularity, and from other nerve-disorders, except a continual cough, which proved refractory to all remedies, but yielded immediately to change of air. The treatment which appears to me most rational and satisfactory in pertussis is that recommended by Dr. E. Smith, of producing and maintaining moderate narcosis by means of small doses of morphia;

and this is quite accordant with the view that the paroxysms depend upon a specific toxic hyperæsthesia. There is another form of bronchial hyperæsthesia with which it is very important for you to be acquainted—viz., that which occurs in certain instances of pneumonia, where after a time the respiration becomes inordinately frequent, perhaps 80 in the minute, without any corresponding increase in the pulmonary lesions or lividity of face. In these cases, the hurry of respiration is a mere neurosis, and yields to opium and a due amount of support.

7. The *heart* enjoys no exemption from hyperæsthesia. Cases are not at all rare where there is more or less præcordial uneasiness or pain, with rapid, vivid action of the heart, unduly forcible impulse against the chest-wall, and loud sharp sounds. The radial pulse may be small and weak, contrasting strongly with the apparently forcible efforts of the heart. Such diseases are often seen in young persons, and are sometimes mistaken for instances of cardiac hypertrophy; from which, however, you may easily distinguish them by observing that the dulness-area is not increased, and the apex-beat not lowered nor displaced to the left. Toxic agents, such as tea and tobacco, reflex irritations, as of the gastric mucous surface, and primary failure or disorder of nerve-force, may all be incriminated in different instances as efficient causes. In the latter group, it seems most probable that the nervous filaments distributed to the endocardium are unduly impressible, and, being thus over-stimulated by the moving blood, keep the muscular fibres in a state of rapid action. Anæmia, though a very common cause, is by no means necessarily present. In Da Costa's account of the curious cardiac malady frequent among American soldiers in the late war, he mentions, as symptoms, constantly recurring attacks of palpitation and pain, whose chief seat is near the apex of the heart, and combined very commonly with excessive cutaneous sensibility. In some of his cases, the disorder supervened on fatiguing marches; in others, it occurred after fevers or diarrhoea. He tells us in his recent paper (*American Journal of the American Sciences*, Jan. 1871), that digitalis or digitaline had more influence on the cardiac disorder than any other drug resorted to. Belladonna internally he also found a most efficient agent, particularly valuable in instances of irregular action. Aconite reduced the force of the heart, and lessened the tension of the pulse; it was most suited to cases of commencing hypertrophy. No special commendation is bestowed on other sedatives; and gelsemin, which is reputed to be a cardiac sedative, disappointed him much; for the most part, it had no effect at all. Morphia hypodermically relieved the cardiac pain almost invariably, and so did atropia; but the effect was only temporary. Tonics were often most excellent adjuncts to treatment, but availed little by themselves. Zinc and iron accomplished most. Da Costa's experience has convinced him that there is a real connexion between the functional disorder, cardiac irritability, and the organic one, cardiac hypertrophy; that, in fact, "the one grew out of the other." Dr. Walshe admitted the same connexion several years ago. I cannot refuse to admit the doctrine held by these high authorities; but my own experience would not lead me to rate this cause of hypertrophy highly. I am sure that a weak and irritable heart may simulate very much a condition of hypertrophy, and yet, under suitable treatment, subside into a condition apparently healthy. A belladonna plaster is a remedy that generally does good service, and is to be preferred, I think, in most cases, to the subcutaneous opiate, which, in two cases where I tried it, produced more syncope than was at all agreeable to witness. Dr. Clifford Allbutt, however, assures us that subcutaneous injection of morphia in small doses is very valuable in so-called irritable heart, whether this be due to weakness of the organ or instability of its nerves. The first dose administered in this way should not exceed one-tenth of a grain.

8. A sort of diarrhoea, which I have occasionally met with in elderly persons, seems to me attributable with much probability to hyperæsthesia of the *mucous lining of the rectum*. The *fæces* appear natural enough in all respects; but the lower bowel is intolerant of their presence, and, in a fidgety petulant manner, insists on expelling them much more frequently than is at all convenient. Belladonna has appeared to me of some service in this condition of things, and still more, perhaps, cold sponging of the anus directly after defæcation.

9. Nocturnal incontinence of urine is an instance of hyperæsthesia affecting the *bladder*, to which it may be sufficient to allude. Let me, however, add that recently Dr. Barclay has praised syrup of iodide of iron as unfailing in this disorder. Belladonna in gradually increasing doses, you know, is the most approved remedy; but there is no reason why both should not be employed. A tonic will sometimes quell hyperæsthesia better than a sedative. Hyperæsthesia of the *urethral lining* is a marked feature in many cases of spermatorrhoea, and its removal by means of repeated catheterisation is reputed beneficial.

10. Hyperæsthesia of the *testis* is a very distressing neurosis; it reacts very injuriously upon the mind, and has in several instances in-

duced sufferers to insist on the removal of the affected organ, which in three cases was found healthy by Sir A. Cooper. He considers it of centric origin; but it may be of reflex peripheral origin, as in the following case. A. C., aged 23, was admitted Nov. 13th, 1870. He was in good health until five days previously, when he was suddenly taken with pain in the left testis; it was severe, and the testes began to swell. In a day or two the right became painful also. These symptoms were succeeded by pain in the loins and head. The pain now affected him only when he stood up, or when the testes were pressed. There was very little swelling of either testis. He had some tenderness of the hypogastric region, and a good deal of straining at stool. He had no sleep at night. Temperature 103.5 deg.; pulse 80. He had thirst and anorexia. On the 15th, he experienced a kind of tearing sensation at both external abdominal rings, going down into the testes. On the 16th, the temperature was 97.2 deg.; pulse 60, weak. The bowels had not been open since admission. His extremities became very cold the previous night; and he then became very hot and burning, and afterwards perspired profusely. He could not stand without support; the room and everything appeared to turn round with him. His testes were small, soft, very tender when touched, and the pain shot up along the cords. The bowels were now well opened by castor-oil, and afterwards an opium suppository of one grain was introduced. The testes ceased to be painful about four hours after the bowels acted, before he had the suppository. On the 17th, they bore handling well; he was also less giddy, could walk, but not very steadily. He had no pain anywhere. He was now taking tincture of cinchona and carbonate of iron, and by the 23rd was getting quite well. The hyperæsthesia and pain of the testes in this instance were mainly dependent on the irritation caused by fæces in the lower bowel; but the action of this cause was probably much promoted by the existence of influenza enfeebling the nervous system.

11. We should be disposed, *à priori*, to expect that an organ with such extensive and powerful sympathies as the *uterus*, would be prone to suffer from sensory disorder, and such appears to be the case. The affection originally termed "irritable uterus" by Dr. Gooch is regarded by him, Churchill, Mackenzie, Tilt, and Ferguson, as essentially a neurosis. The latter expressly says "the local changes have been the fluctuating, the nervous affection the constant, element". The tenderness is so great and constant that great suffering is experienced if the patient incautiously sit down upon a hard seat, or if coition be attempted. One of the seats of this neuralgic malady is the vagina itself, which is so exquisitely tender as to render intercourse intolerable. Here I think we cannot fail to recognise hyperæsthesia as the essential morbid element—at least if we accept the *dictum* of Dr. Ferguson above cited, confirmed as it is by Churchill's authority, to the effect that in the cases seen by him there was no ground whatever for the supposition of inflammatory action. Associated with hyperæsthesia, there may be, as we have before seen, more or less of hyperæmia and inflammatory congestion; but this is not in any degree the cause of the sensitiveness. Dr. Mackenzie's statement is of practical importance, that this neurosis may be of reflex origin, and dependent on gastro-intestinal irritation. In most cases, however, it seems to be primary, and to result from some cause of nerve-exhaustion, as great fatigue, acting no doubt on a weakly organised nervous system. The *retentissement* of this neurosis on the higher centres seems to be very pernicious; the natural emotions and faculties become miserably perverted, and all nobility of character is lost in absorbing selfishness. Sedatives, locally applied by pessary or enema, subcutaneous injections, and tonics, are our best pharmaceutical remedies; but change of scene and place, and a suitable climate, may be still more important.

12. Hyperæsthesia of the *female breast*, attended with more or less enlargement, is a well known phenomenon. It may suffice for me to have named it, and to cite Mr. Erichsen's authority for its not being unfrequently dependent on uterine irritation.

13. Hyperæsthesia of the *joints* is well known to surgeons since the publication of Sir B. Brodie's work on local hysterical affections, which I advise you all to read. The most constant symptom is morbid sensibility of the joints and adjacent parts, which is associated sometimes with more or less general tumefaction, apparently from a turgid state of the small vessels. I have known a condition of this kind, attended with sanguineous vomiting, yield to carbonate of iron, after an offer of amputation had been (fortunately) declined. I hope none of you will ever make such a *faux pas*.

14. As regards the nerves of special sense, I cannot doubt—taking first the *optic*—that, even putting aside the case of strumous ophthalmia, where it might be contended that the photophobia was dependent on irritation of the filaments of the fifth nerve distributed to the cornea, there is really such a disorder as retinal hyperæsthesia. Mr. Soelberg Wells states that in this affection there is intense photophobia, though

the eye is quite normal. There is often great ciliary neuralgia, the pain extending to the face and corresponding side of the head. One point which he mentions appears to me of especial interest—viz., that the peripheral portion of the retina is anæsthetic, while in the central vision is perfect and hypersensitive. This is very indicative of the true character of the disorder, of its affinity to paralysis. The causes are such as impair the general health or strain the retina; and the correct treatment is to rest and soothe and recreate nerve-power.

The *auditory nerve* also is liable to hyperæsthesia. Sir T. Watson mentions having observed this in a man moribund from cholera. Dr. Russell Reynolds affirms that hysteric girls do sometimes seem to hear through stone-walls. Intolerance of sound is an occasional symptom in the early period of meningitis, and is not unfrequent in nervous headache, and in azoturic sufferers. The only thing common to these various conditions is a lowered degree of vital power.

15. That the *cerebrum*—the great centre where impressions are consummated into perceptions—is liable to pass into a state closely analogous to that of a tertiary centre and sensory nerve when these are hyperæsthetic, seems to me not doubtful. Gooch mentions the case of a deranged lady, whose prominent belief was that her husband was unfaithful to her. The notion, so far from being unreasonable, was, he believes, true, and she had known it for many years without any unnatural disquietude, but now it engrossed all her thoughts: she neglected her ordinary pursuits, took a dislike to her friends, felt no interest about her children, and sat silent and motionless from morning to night. After continuing deranged several months she recovered, although she retained the same opinion. Gooch justly says her insanity consisted not in her ruling idea, but in its overwhelming influence over her feelings and conduct. A modern pathologist would probably express this by saying that her brain had become enfeebled and hyperæsthetic, and was, therefore, intolerant of the idea it had previously endured. The following occurrence is similar. A religious student, who was much harassed by petty scruples and fancies, and well aware of their pernicious effect, observed after a time that he was always more plagued by them while preparing for an examination; *i.e.*, when his cerebral power was most exhausted. The essence of hypochondriasis seems to be a special hyperæsthesia to corporeal impressions emanating *ab interno*. How much the tyranny of these may depend on enfeeblement of the great centres, is shown by P. Frank's account of his own sufferings from the dread of aneurism, induced by mental exertion, and removed by recreation. This is much too large a subject for me to attempt to handle now: all I can do is to commend to your attention the notion of cerebral hyperæsthesia as essential to the due comprehension of many common phenomena.

How far the *seat* of the action giving rise to hyperæsthesia may be purely peripheral, is difficult to say. In the great majority of instances, some nervous centre is probably engaged; but some facts—such as the removal of severe neuralgia for some months after section of the nerve, and the cessation of suffering after amputation of the testis—incline me to believe that the morbid action may have its chief *locus* at the periphery, and that without any apparent structural change in the affected part.

Pathological Change in Hyperæsthesia.—You may be disposed to ask me what this is. I wish I could tell you; but our knowledge of this matter is very scanty. All that we can say is, that it is undoubtedly a condition of imperfect nutrition, inasmuch as it may be generated by deprivation of blood, by injuries to nerves, by miasms in the blood, by remote irritation—in short, by all sorts of things that are injurious. Some particulars under these heads deserve to be mentioned. Hyperæsthesia of the most intense kind is produced sometimes by obstruction of the arteries with fibrinous deposit. Dr. Fuller describes a case where the first symptom was acute pain, associated with such exquisite tenderness of the whole limb that the slightest touch caused intolerable suffering. The hyperæsthesia continued until mortification set in. At the necropsy, all the larger arterial trunks, from the iliacs downwards, were found blocked up by firm light-coloured coagula of long standing. No other cause existed for the hyperæsthesia in this case, except the deprivation of blood. In Dr. Waller's experiments on refrigeration of the ulnar nerve, the ultimate effect produced was anæsthesia in the course of the nerve, but this was preceded by hyperæsthesia. It can scarcely be thought that the latter was, under the circumstances, anything but the first stage of the former; and, therefore, the conclusion seems necessary that it implies not an exaltation, but a deterioration of vital power. Again, there is a case on record where, during the gradual recovery of the brachial plexus from an injury, the skin of the upper part of the arm possessed natural sensibility, another (probably the mid part) was morbidly sensible, while that immediately beyond was quite insensible. Here, again, the conclusion seems inevitable that hyper-

æsthesia implies a damaged state of nerve-tissue, though not so severe as that which exists in anæsthesia. Much other clinical observation is to the same effect; the same morbid alteration of sensibility (cutaneous) is met with in typhus and typhoid fever, in influenza, in rickets, and in epidemic cerebro-spinal meningitis. On the other hand, there is not the least proof that real increase of functional energy renders an organ less tolerant of its natural stimuli: in fact, the evidence tends quite the other way. A vulture's eye, which can discern a carcass at an extraordinary distance, can easily endure the full blaze of tropical daylight, and is evidently altogether in a different condition from the eye of a photophobic invalid. Several similar instances might be cited; and, on the whole, the general truth of the view here taken seems to me established. In a recent lecture on Experimental Physiology in the *Lancet*, February 11th, 1871, Dr. Rutherford has noticed this point without explaining it. He says, "the curious point, is that a nerve whose nutrition is to some extent defective should discharge its energy more readily than one whose nutrition is perfect." In what respect defective nutrition changes the nerve-tissue, I have said we cannot tell; but we may, I think, exclude œdema; for Buhl affirms as the result of his observations of continued fever, that the presence of much fluid in the subarachnoid and ventricular spaces corresponds with stupor or unconsciousness. Patients dying of delirium tremens have commonly wet brains, and they die for the most part in stupor. However, if we adopt, as I am much inclined to do, Dr. McDonnell's theory of nervous action, the detection of some material change may not perhaps be the most important matter. He assumes that the various impressions are propagated by undulations, the wave-length of which varies, so that the same conductor may be able to transmit several impressions. Now, on this view, it might be that undulations of a certain length and rapidity produced normal sensation, those of a less extent gave rise to hyperæsthesia, while a still further reduction of the undulations caused pain, and their total arrest anæsthesia. This may seem the more probable, as there is undoubtedly a close connection between the three just-mentioned morbid states. They often occur together, acknowledge the same causes, and are removed by the same remedies. Another connection of hyperæsthesia is less frequent, but is extremely well marked in rickets, viz., that with vaso-motor paralysis. I use the latter term hypothetically, for the phenomena actually observed are hyperæsthesia of the cutaneous surface and profuse sweating. The latter, however, as I have argued elsewhere, seems to be distinctly traceable to defective contraction of vessels from a parietic state of their nerves; and if this be so, then the connection is as I have stated. Admitting this, it is difficult to see in the hyperæsthesia anything else than a species of paralysis very similar to that which affects the vaso-motor nerves, and which may itself depend on defective molecular movement.

Allied, however, as these morbid states are, there are differences between them, which are important as regards treatment; thus anæsthesia is more connected with prostration, and is more benefited by stimulants than hyperæsthesia is. The latter is sometimes intolerant of these, and yields better to remedies of the sedative class. Thus in a case of pain with anæsthesia, bark, ammonia, and wine suggest themselves; whereas if hyperæsthesia be in the ascendant, bromide of potassium or chloral, or subcutaneous opiates, seem more hopeful remedies. Yet we must not strain this rule, for it admits of numerous exceptions. Neither must we ever omit a careful inquiry into the cause of the hyperæsthesia, for the knowledge of this may be all important. It is idle to go on administering tonics or sedatives if a focus of irritation need to be removed, or if the disorder be dependent upon poisoned blood. Here is much room for the exercise of *real* diagnostic skill, not that which contents itself with affixing a name to a given case of disease.

VACCINATION.—Several persons were summoned on Monday at Dartington. In the cases of the Rev. T. H. Gordon, Messrs. G. S. Gibbs, T. B. Spence, Alexander Wheeler, and James Metcalfe, orders were made to have vaccination performed. The summons against Mr. M. Fooks was adjourned for two months. Mr. Spence refused compliance because three of his children had, he said, died from vaccination.

BEQUESTS, DONATIONS, ETC.—Mr. Richard Dixon, of Brighton, has bequeathed £200 to the Hospital for Diseases of the Chest, Victoria Park, £200 to the Asylum for Idiots, and £100 to the Royal Hospital for Incurables, besides legacies to numerous non-medical charities.—Mr. William Lord, of Clapham Road, has bequeathed £200 to the Hospital for Consumption at Brompton, and £200 to the City of London Hospital for Diseases of the Chest.—Mr. William Peckover, of Wisbeach, has given £100 to the Norfolk and Norwich Hospital.—The Queen's Hospital, Birmingham, has received £100 under the will of Mrs. Smart.—Mr. Giuseppe Silvani, of Brighton, jeweller, bequeathed £50 to the Sussex County Hospital, Brighton.—"A. B." has given £100 to the Salisbury Infirmary.

SEWAGE-IRRIGATION CONSIDERED IN CONNECTION WITH PUBLIC HEALTH.*

By WILLIAM HOPE, Esq., V.C.

It was with great pleasure that I responded to the invitation of my friend, the President of this Section, to read a paper on this branch of the sewage question, as I have no doubt that in the discussion which follows I shall receive much instruction and assistance in the practical carrying out of a reform which, I venture to think, will do more for the public health of this country than almost any other which has yet been suggested; and this I feel no hesitation in saying, because, although a very ardent advocate for sewage-irrigation, I do not of course profess to be in any way its originator; but I should say that I have come here also from a sense of duty, because sewage irrigation, or sewage utilisation, in whatever form, is a problem which not only demands the co-operation of chemists, engineers, and agriculturists, but ought to receive both the assistance and the jealous supervision of those members of the medical profession who more especially devote their attention to questions of hygiene.

I do not propose on this occasion to trouble you with a long dissertation on sewage utilisation by means of irrigation as distinguished from all the other methods which have from time to time been suggested to effect the same end; but I may perhaps be permitted briefly to allude to the other methods suggested, because I feel sure that there are certain fundamental considerations involved, which have only to be mentioned in order that the other systems may be condemned by every student of hygiene.

All other systems of dealing with the sewage question may be classed under two heads. First, there are the suggestions similar to that of an indefatigable and most praiseworthy reverend gentleman, whose name must be familiar to you all—Mr. Moule—who proposes to deal solely with the solid excreta of human beings, together with that small portion of urine which can be simultaneously dealt with. I am aware that there are many persons enthusiastic enough to believe that the average British housemaid, or the average working man's wife, could be trained to carry out a duplicate system of slop-collection with two kinds of slop-pails—the one for the reception of urine *only*, and the other for the reception of dirty water *only*. Possibly when all the various branches of physical science which have been suggested by the different school-boards as *extra* studies shall have become *compulsory*, and shall have been taught for several generations, such subjects as we are about to discuss will be as well understood by Mary the housemaid, and Mrs. Hodge the ploughman's wife, as they are at present by the British Medical Association. But it is obvious that, until Professor Huxley and Mr. Ruskin shall have completed Mary's education and that of Mrs. Hodge, no system for the disposal of sewage ought to receive your sanction which does not make due allowance for the present imperfect intellectual development of the instruments through whose agency the system has to be carried into effect; and even when we, or rather when our great grand-children, shall be blessed with scientific housemaids, I doubt whether the British Medical Association of the future will even then be disposed to sanction any of the systems coming under this first head, because none of them make any attempt to deal with the vast, most noxious, and fever-producing refuse of other kinds coming from human habitations: I mean soapsuds from bedrooms and washhouses, slops from the washing of floors and passages, and kitchen-refuse, including the water in which fish and vegetables are boiled, waste vegetable and animal fibre, grease, etc. It is true that Mr. Moule talks about a small area of land for subterranean irrigation as an adjunct to his system for the disposal of this part of the sewage; but it is perhaps impossible to conceive anything much more thoroughly mischievous and thoroughly unscientific than such a suggestion. A very large area might perhaps lead to no actual mischief, if to no good; but a small area, intersected by porous pipes, through which the stuff has to percolate under pressure, is, looked at physically and chemically, simply a series of small elongated *leaking* cesspools, which would eventually silt up, and by which, until choked up, the subsoil would be kept continuously saturated with unoxidised solutions of animal and vegetable matter, containing all those vibrios, bacteria, and other suspicious organisms which Dr. Bastian believes to originate spontaneously in such a pabulum, which Dr. Crace

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

Calvert declares he has only succeeded in boiling to death at a temperature of 400 or 500 deg. Fahr., and which Sir W. Thomson would now have us believe rode over here from the tail of a comet on a red-hot meteoric stone. You are all familiar with Dr. Frankland's ingenious experiments with what he calls, very clearly, "intermittent downward filtration". You recollect how he showed that the effluent sewage, escaping from intermittent downward filtration, through six feet of soil, which had been thoroughly aerated, escaped in a completely oxidised condition, while that escaping from upward filtration came away—clarified, no doubt, to the naked eye, but still containing all the elements dangerous to human life—in an entirely unoxidised condition. Now Mr. Moule's leaking elongated cesspools would simply produce the same result as upward filtration, because the soil would necessarily be kept saturated, as it could not be drained, and the sewage would indeed enter it at a point where there is already a large diminution in the size of the air-spaces, owing to superincumbent weight, and where it would also be *below* most of the feeding rootlets of vegetation, although this would be to some slight extent counteracted by capillary attraction; therefore this subterranean irrigation would necessarily pollute any springs or wells that there might be within reach of the area of land operated upon, while the effect upon health of raising the level of water in the subsoil is so well known to the British Medical Association that I need not touch upon it here.

Now we come to the systems which may be classed under the second head; viz., those which attempt to deal with town-sewage when manufactured by all the usual appliances of water-closets, sinks, drains, and sewers, by means of some chemical or mechanical process, or of some process which my friends Dr. Letheby and Mr. Hawksley so strongly advocate and so firmly believe in, termed by them a "chemico-mechanical" process, which unfortunately has yet to be discovered. For this reason, namely, that it has yet to be discovered, I do not propose to touch upon the latter system at present; and I think that we may in this section of the British Medical Association speedily dismiss all the mechanical and all the chemical processes. No doubt, if some very perfect filter were discovered which would reduce the effluent water to the same *physical* state as that of freshly distilled water, it would probably be completely successful; because we have no reason to suppose that the nitrogen which would be present would be in itself unwholesome, whether it were present as nitric acid in nitrates or nitrites, or even as ammonia itself, excluding, as I assume would necessarily be the effect of such a theoretical filtration, *albumenoid ammonia*.

But no such filter at present exists, and it must be perfectly obvious to every practical man that it must for ever remain a physical impossibility to pass such enormous masses of sewage as we have to deal with in the case of London and other large towns, through a filter so theoretically perfect as I have supposed; and I am sure I need not argue here against the admission into rivers to be drunk by human beings at lower points on their course of matters containing *albumenoid ammonia*, and all the curious and little known organisms which the microscope reveals in such solutions as town-sewage. Then, as to the chemical processes which might be assumed to take up the matter where the mechanical processes leave it, there is not one of them which touches to any appreciable extent the ammonia in solution; and if we consider what an exceedingly attenuated solution of ammonia town-sewage is, containing only from two or three up to ten or a dozen parts of ammonia in 100,000, we must feel that to invent any chemical process for seizing this ammonia which could be practically worked in dealing with *millions* of gallons of sewage at a time, is an attempt to achieve what is necessarily impossible. It is like squaring the circle.

We must, therefore, necessarily fall back, along with every Royal Commission or Parliamentary Committee which has ever yet sat on the subject, on irrigation as the *only* means of dealing with the sewage question in *all* its bearings with a fair chance of success. I say "with a fair chance of success," because I am always perfectly ready to admit in argument that there may possibly be difficulties and dangers in sewage-irrigation, even when practised in the most perfect manner that it is possible to devise, which dangers have not yet been discovered or suggested. But as I do not believe that it is possible that no method of dealing with the sewage question can succeed at all, I should call for the most complete and unassailable proof before I admitted that any such dangers were necessarily part and parcel of sewage-irrigation.

Many persons, I know, and especially medical men, have, however, a strong antipathy to sewage-irrigation acquired from some one particular instance where they have seen it at work, and could see that dangers did palpably exist; but this only shows us how careful we should be in drawing general conclusions from particular instances. A physician is not an engineer; and although he cannot be blamed if he do not see how such dangers as I have alluded to, and which I shall hereafter touch upon more fully, can be avoided, yet I do blame him if he con-

demns sewage-irrigation in the abstract, because he happens to see that, as carried out in a particular place, it involves danger. Rather let him point out the danger and call upon the engineer to remedy it.

Now, one danger was suggested as possibly attendant upon sewage-irrigation, which was susceptible of absolute proof or absolute disproof; and as it was one which I myself readily admitted as a theoretical possibility, while entirely disbelieving in its actual existence, and as it one, moreover, which cannot fail to be peculiarly interesting to the members of the medical profession, I will take it first, although it is perhaps a little out of order. I mean the danger suggested by my friend Dr. Spencer Cobbold, F.R.S., of the possible communication of entozoic disease, both through vegetables grown by sewage and eaten raw, such as lettuces, celery, etc., and through oxen and sheep fed upon sewage-grown produce. It is an undeniable fact that a certain percentage of the inhabitants of every town suffer from various forms of entozoic disease; and it is a necessary consequence that the sewage of every town must contain a certain number of ova of various kinds of worms, even if we exclude the echinococcus of the dog and the other forms which do not inhabit human beings. To Dr. Cobbold it appeared a certainty that the spread of all these ova over the surface of land by irrigation would be the surest of all means for propagating entozoic disease. He therefore condemned sewage-irrigation. He was right to point out the danger, and to call upon the engineer to disprove its existence if he could; but I venture to think that he was somewhat hasty in coming to the conclusion that it really did exist.

Negative proof is, of course, always a very difficult thing to attain to; but this danger, if it exist at all on a properly laid out and properly managed sewage-farm, must exist to such an immense extent that there ought to be no difficulty in filling an ox in a short time with the larvæ of the common tapeworm (*Tænia Solium*). So I sent over to my Romford farm a bullock bred by myself from sewage-fed parents (both of which I had saved from rinderpest by carbolic acid); and having shut him up, I fed him for twenty-two months continuously on sewage-grown produce exclusively, and very often upon refuse lettuces, outside cabbage-leaves, and the rakings of Italian rye-grass. During all this time, however, he was watered from the house-well instead of from the horse-pond.

On the 15th of July last, this animal was slaughtered, and carefully dissected and examined by Dr. Cobbold himself and Professor Corfield, Professor Marshall also being present during part of the time. This examination was conducted as a regular piece of business for the Committee of the British Association, and not at all in an amateur way, but thoroughly and exhaustively. The following is the report of Dr. Cobbold.

"*Report to the British Association Committee on the Treatment and Utilisation of Sewage.*—Your Committee having invited me to examine the carcase of an ox fed for two years past on sewage-grown grass, at Mr. Hope's Farm, near Romford, I have to report the perfect freedom of that animal from internal parasites of any kind. I attribute this marked negative result to the following circumstances. First, the animal did not graze on the farm, but was fed exclusively upon vegetable products cut and carried from the land. Secondly, the porous nature of the soil and subsoil alike would rapidly carry off the sewage, and thus ensure the passage of parasitic germs into the soil itself. Thirdly, I noticed on the irrigated portions of the farm a remarkable absence of those molluscan and insect forms of life which frequently play the part of intermediary bearers. Fourthly, the only molluscs I detected were examples of *succinea putris*. These were obtained from a small pit of water to which the sewage had no access; and when examined after death were not found to contain any cercarian larvæ. Fifthly, the flaky vegetable tufts collected by me from the sides of the furrows occupied by sewage-currents, consisted chiefly of *batrachospermum moniliforme*, in the filaments of which were numerous active free nematodes, but no ova of any entozoon. Sixthly, the sewage had a strong smell of beer, suggesting the presence of sufficient alcohol to destroy the vitality of ordinary parasitic germs, though it was abundantly manifest that the free nematodes had suffered nothing in consequence. As some guarantee for the efficient manner in which the carcase of the ox was examined, I may mention that the superficial muscles, with their associated areolar and aponeurotic coverings, were particularly investigated; portions of certain muscles, such as the scaleni and sterno-maxillaris, being dissected through and through. All the viscera were likewise scrutinised, especially the brain, lungs, liver, bladder, kidneys, paunch, reed, cæcum, and other natural divisions of the intestinal canal. The animal was not excessively fat, whilst the muscles were well developed and of a deep carneous lustre."

This, I look upon as a complete triumph; and, in order that you may not suppose that it is a result which I had not solid philosophical grounds to anticipate, I will ask your permission to read part of a letter

that I published last winter, in criticism of Dr. Cobbold's paper, read to the Association of Medical Officers of Health.

"That the ova of parasites are to be found in town-sewage, and must sometimes be carried by it over the fields to which it is applied, no one can deny; but it is a rash assumption to say that therefore parasitical diseases must be increased by that means. Before the ova can arrive on a field in this manner, they must go through a marvellous amount of friction, rolling, and jolting. What proof is there that, after descending through the pipes of houses, and passing through, in most cases, several miles of sewers, performing one complete revolution in say, every inch—that is, in every 100 diameters,—they would arrive on the land in a state of fertility? But, supposing this to be proved, how long would it be before they could be taken into the stomach of a cow? All Dr. Cobbold's arguments were based on the assumption that nothing but grass can be grown on a sewage-farm. Let us, therefore, take the case of grass. A crop is obtained in, say, four weeks. One dressing of sewage is given immediately after the previous crop, or at the beginning of the twenty-eight days, and three other irrigations would be given at intervals of about five days. This would bring us down to the fifteenth day, leaving thirteen days for the crop to mature, and the soil to dry, before mowing, carting, etc., after which, as a rule, another twelve to twenty-four hours would elapse before the grass would be actually eaten. Therefore we are safe in saying that more than ten days would always elapse between the last irrigation and the consumption of the produce. Then, assuming that the ova survived all the perils of their journey from town to country, and farther escaped all the various obstacles which might retard their progress through the irrigating channels—against which 'double event,' however, the odds would be considerable,—to what beneficial or inimical influences would they be subjected during those ten days? To alternations of sunshine, rain, cold wind, warm wind, and, above all, the consequent fluctuations in their condition of moisture.

"Now, Dr. Cobbold laid great stress on the rapidity with which the ova of some parasites develop into their larval condition under the influence of moisture, accompanied—I presume, although he did not say so—with a certain minimum temperature. But if the temperature is lowered and the moisture abstracted during the processes, what then?

"It will be observed that I have here taken only the most favourable case for Dr. Cobbold; for, if he could establish the soundness of his theory under the most favourable conditions, it would go far to condemn sewage irrigation. But it is only fair to ask how he proposes to preserve fertility in the ova which I spread over my Romford farm last January?

"Let us go still a little deeper. The sewage flows, or, perhaps I should say, oozes gently, over the edges of my carriers, and for a few, very few, minutes trickles through the roots and lowest quarter or half-inch of the stems of the rye-grass, and, driving out from the soil the air which bubbles up through it, sinks down to fill the pores from which the air has been displaced, and carries with it into the surface pores all minute particles in suspension. The upper stratum of soil is, therefore, the natural place to look for the ova, and *not the grass*. The scythe, moreover, as a rule, does not descend as low as the height to which the sewage rises on the stems. I except, of course, all improperly managed sewage farms, such as Croydon, because the best agricultural result can only be obtained in conjunction with the best sanitary result, or, in other words, with economy of sewage and cleanliness. And if by exception an ovum did come into contact with a stem of grass above the scythe-line, by what law in physics would it be held suspended on the side of the smooth polished stem? And when the latter was cut, why should the vibration not shake off the ovum? If the ovum which has gone through so many adventures scatheless is to be safely conveyed to the haven of the cow's stomach, it has still to hold on to the grass during the alarming processes of raking, pitchforking, carting, uncarting, and distributing. Poor ovum! Can any one calculate the chances against each individual ovum that leaves its bearer during the three hundred and sixty-five days in the year ever attaining, through the medium of grass, to the proud position of a cysticercus?

"Whatever the chances are, they must at once be multiplied by 8 or 10; for, as a sewage-farmer, I venture to say that, when sewage-farming is properly understood, not more than 10 or 12 per cent. of the acreage of each sewage-farm will be under grass. And no one will pretend that ova can climb up the stem of a cabbage or a lettuce; while as to other produce, potatoes they equally could not reach, and to carrots, turnips, or mangold wurtzel, they would not have access for some weeks before harvesting—and they would be more obstinate than I take them to be if they resist 'pulling', scraping, washing, 'pulping', etc."

You will see that in this letter, and before I had any actual proof of the truth of my views, I nevertheless guarded myself from taking under

my protection *all* sewage-farms; and the truth is that, fortunately and curiously, but still in accordance with all that we know of the working of the laws of Nature, the same conditions of sewage-farming that are safe from any danger of spreading entozoic disease, are, as I hope I shall presently satisfy you, safe from other dangers; and, conversely, the same conditions which are dangerous for the one are also dangerous for the other.

I have heard my friend Dr. Letheby say with great unction, and with that peculiar air of conviction which makes whatever he says impressive, that all sewage-farms are "*pestilential swamps*"; and I believe that this is a very accurate description of many, and I even fear of most, sewage-farms. Sewage-farms are laid out, as a rule, by civil engineers, who have never condescended to study agriculture, and who, like many persons in every occupation of life, lose sight of the end in the means. The engineering works for the conveyance of sewage from a town into the country are only the *means*; the agricultural utilisation of the sewage is the *end*; and the means must be subordinated to the end. To take only a few of their mistakes: the equal and uniform distribution of water over the surface of the land by irrigation during the night is a problem of such extreme practical difficulty, that it is not too much to say that it is a thing which cannot be done; yet, as a rule, no provision is made for storing sewage at night. Again, no farmer thinks of applying over a term of years more manure to his crops than he thinks they can consume; and, if he be in any doubt, he endeavours, directly or indirectly, to get a chemist to advise him how much to put on. Yet, because one hundred is an easy number to remember, it is the fashion among engineers to lay out only one acre to receive the sewage of every hundred persons, and to decree that the plants upon that acre shall consume all this tremendous quantity of nitrogen. I have proved that Italian ryegrass (*Lolium Italicum*) can only make a certain number of efforts towards reproduction, or, in other words, yield a certain number of crops in its lifetime; and also that the most vigorous of these, to the number of nine or even ten, may, by proper management, be crowded into one season. Yet it is the fashion among engineers to lay down an entire sewage-farm with nothing but Italian ryegrass, ignoring the practical necessity for rotation. All botanists and all farmers know that the most valuable of cultivated plants will not flourish—in some cases will not even grow—in waterlogged land, but must have a good porous well aerated soil; yet engineers in large practice will argue at length against draining land which is to be irrigated with sewage.

But, if sewage be run on in a dark night in quantities in excess of the requirements of the plants, on soil that is waterlogged, covered, or rather partially covered, by plants that are exhausted, the necessary result is a "swamp"; and, if it be not "*pestilential*", it ought to be. Dr. Letheby should not, however say that, because the sewage-farms which he has visited were all, as a matter of fact, "*swamps*", and also, in his judgment, "*pestilential swamps*", therefore *all* sewage-farms must be the same. This is a complete *non sequitur*. He should point out the effect produced in the particular instances, and call for a remedy. Let us on the present occasion endeavour to do this.

Sir William Thomson told us the other day at Edinburgh that the most brilliant achievements of science have, after all, been but the sober rewards of careful measurements and long continued labour. Let us, then, proceed on the only true scientific method, and measure everything with which we propose to deal—land, water, manure, and crops. The moment we do this, the unscientific ignorance which applies the sewage of 100 or 150 persons to every acre of a farm, over an indefinite term of years, stands out in its native monstrosity.

You are all familiar with the determinations and estimations of the ammonia voided in every twenty-four hours by mixed populations, made by Lawes and Gilbert, Hoffman and Witt, Thudichum, Way, and many others. The average of these calculations works out at over 12 lbs. per head annually; but, if we make the allowance for waste made by Lawes and Gilbert—which, however, I do not believe to be necessary—we still have the large quantity of 10 lbs. a head, or 1,000 lbs. for 100 persons, to be applied to one acre of land year after year. To get an easy comparison, let us take the nitrogen-equivalent of this quantity of sewage estimated in guano. The best Peruvian guano only contains 16 per cent. of ammonia; therefore the sewage of 100 persons is equal in ammonia to 6,250 lbs., or 2 tons 15 cwt. 90 lbs., of guano. It is quite true that guano is much richer in phosphoric acid than sewage; but still the ammonia is the standard by which it is sold; and, when I say that 2 to 3 cwt. per acre is an ordinary dressing of guano, and 4 to 5 a large one, you will see how monstrous are the doses administered by some engineers.

It must be borne in mind, however, that from the fact of the ammonia being supplied by the sewage in a state of solution—ready cooked, as it were—very much larger crops can be grown, and there-

fore larger quantities of manure consumed, than by ordinary cultivation. Still it appears exceedingly doubtful whether—having regard also to the commercial side of the question—it will ever be practicable to utilise the sewage of more than twenty to thirty persons per acre over a term of years.

It is evident that the reduction from 100 or 150 to 20 or 30 persons per acre, by increasing the total area to which the sewage is applied, would at once relieve Dr. Letheby's "pestilential swamp" of much of its bad character; and if the land, when so relieved, be treated according to the teachings of science, and also, I may add, of practical agriculture, I confidently maintain that the swampy and objectionable character vanishes at once.

Again, nothing could be more completely unscientific than what is known as the "catchwater" system of irrigation. Not to weary you with engineering details, I may briefly describe it as a system which necessitates a saturated condition of both soil and subsoil to admit of the sewage being passed over the surface of successive areas of land, overflowing at the lower edge of each into a "catchwater" ditch which conveys it to the next area, the effluent water eventually overflowing, in its turn, the edge of the last area, and running off the surface into the ditch which conveys it to the river, the first area receiving too much sewage, and the last too little. On this system there is simply no guarantee at all that the effluent water has been exposed to any purifying process. It is generally clarified and sometimes purified, but the whole thing is a happy-go-lucky affair from first to last. Accordingly we have found, in the case of four distinct farms laid out on this principle, that what had been predicted on theoretical grounds, was actually taking place in practice, and that something like a third of the organic matter in solution was escaping in an unoxidised form; and, what was even more satisfactory to me, we found barely a trace of organic matter in an oxidised form.

This danger, however, at once disappears on a farm laid out as is my Romford farm, where the sewage cannot escape without passing through five or six feet of constantly re-aërated soil, in its intermittent passage through which the organic matter is minutely, almost infinitely, subdivided by the grains of earth, and washed in the air contained in the interstices, which it displaces and forces to bubble up to the surface. Moreover, when a farm is properly laid out and properly managed, instead of the sewage being allowed to flow for many hours consecutively over the same individual square yards of land, in quantities far in excess of the wants of the plants, a few square yards only are treated at one time; and when these are moistened the sewage is passed on to a fresh area. Thus the sewage is economised, and the land begins to be re-aërated as soon as the sewage begins to move downwards to the under drains.

Frankland's "intermittent downward filtration" is, therefore, the same as scientific irrigation, *minus* the assistance of vegetation.

Two dangers will, however, occur to the medical mind as attendant on all sewage irrigation, namely, malaria and well-pollution. Malaria is supposed indeed to be an almost necessary attendant upon all irrigation, and so I believe it is in most cases, simply because irrigation coupled with artificial drainage has been hitherto unknown. Low lands have generally been chosen for irrigation from motives of economy; they are not drained; in most cases their subsoils are naturally saturated, and vast quantities of water are superadded. The soil is generally rich and built up of the decomposing vegetation of centuries, while the grass growing on it (not to take the case of rice-fields, which are artificial swamps) is rank. The long roots of this rank herbage push down into the unoxidised organic matter, and make little capillary tubes in the soil through which a saturated solution of organic matter is evaporated into the atmosphere. But this dangerous condition of things at once ceases, the moment under-drainage of the subsoil is made to supplement irrigation of the surface, whether the liquid employed be plain water or sewage. The danger of well-pollution also disappears when under-drainage is introduced coupled with intermittent irrigation, aëration, and moderate doses.

The sewage question is therefore solved, and the dangers arising from sewage removed by its direct application to land.

But the benefit derived from this system is not merely negative—it is also positive. Sewage-irrigation enormously increases the productive power of the land—provides, in fact, a new source of food for the people, and by making bread, meat, vegetables, milk, butter, and cheese probably cheaper, but at all events more plentiful, will feed the masses better, and enable them better to resist disease. The sewage of the urban population of Great Britain alone, expressed in wheat, represents a minimum of 675 millions of quartern loaves of bread, but it is specially adapted for the production of milk. Now it is notorious that the milk-supply of our large towns, even when "stretched" to the utmost by the aid of the water-companies, is ludicrously small, and I believe that the

stunted and weak frames of our town populations are due to the absence of milk from their diet as children, even more than to bad air. Milk is the great source of soluble phosphate, out of which children manufacture the bones of strong men. To tell the children of England to make these bones without milk, is like the order given to the children of Israel to make bricks without straw. Let medical men insist on sewage being applied to land, and they will remove one principal source of disease, while by the same stroke strengthening their patients to resist diseases arising from other sources. They will, in short, substitute Food for Fever.

THE ANATOMICAL RELATIONS OF HYPERTROPHY OF THE CERVIX UTERI.*

By ROBERT BARNES, M.D.,

Obstetric Physician to St. Thomas's Hospital; Examiner in Midwifery to the University of London and the Royal College of Surgeons.

A RARE opportunity presented by the care of Mr. Stewart, Curator of St. Thomas's Museum, enables me to offer an accurate description of the anatomical conditions connected with hypertrophic elongation of the cervix uteri. Nothing is known of the history of the woman who furnished the specimen, except that she was advanced in years. The whole pelvis and its contents were removed without disturbing their relations. A careful vertical section was made in the median line, thus giving two preparations, and exhibiting a typical illustration of this affection, the accuracy of which cannot be impeached. The specimens are so bulky that they could not travel without risk. I have, however, got our Librarian, Mr. Denison, to make an enlarged drawing of the one which shows the parts best. The drawing is very exact. [It was exhibited.]

The entire length of the uterus is about seven inches. The fundus and body are somewhat lower in the pelvis than natural; the body has undergone apparently very little elongation, the chief excess of longitudinal growth being spent upon the cervix. The two lips of the os uteri are much hypertrophied and somewhat everted. They form a mass covered by the everted vagina outside the vulva. That this is the result of downward growth, not of simple prolapsus or stretching, is seen in the condition of the bladder and of the ante-uterine and retro-uterine peritoneal pouches. The base of the bladder is carried down along with the down-growing interior wall of the cervix uteri, forming a sacculated pouch below the level of the urethra, and therefore below the symphysis pubis. The urethra is also distorted into a curve, of which the convexity looks upwards, the bladder-end of it being carried downwards along with the base, so that a catheter to pass would have to be directed first, a little upwards, then backwards and downwards. The body of the bladder is enormously enlarged; that is, its capacity is greatly increased, but its walls are not materially thickened. The change seems to be simply distension, probably the consequence, not of actual obstruction to the passage of urine, but to a habit of long voluntary retention acquired through the desire to avoid the irritation caused by the dribbling of urine over the protruded mucous membrane of the everted vagina. The fundus rose as high as the umbilicus, and considerably higher than the fundus of the uterus. The peritoneum, descending behind the abdominal wall, is reflected upwards over the bladder at a point about two inches above the symphysis pubis. It descends behind the bladder quite down to a point on a level with the sacculated pouch of the bladder; that is, below the level of the lower margin of the symphysis pubis. Rising over the fundus uteri, the membrane descends behind, forming a Douglas's pouch quite below the vulva. The only part not much disturbed is the rectum. Of course there is no apparent vagina, since the down-growing os and cervix uteri have carried the vagina before them, completely everting it and turning it into an investment of the protruded parts.

The specimens and the drawing exhibit very clearly the danger of amputating the hypertrophied cervix. It would not be possible to remove more than a portion of the os without opening the retro-uterine peritoneal pouch. It also explains the difficulty commonly encountered in keeping the protruded parts inside the pelvis by pessaries. The drawing exhibits the relations of the bladder, uterus, and rectum, exactly as they were found; that is, in apposition with each other. There were no folds of intestine descending between them in the anterior or posterior peritoneal pouches.

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

ON THE UNITY OF THE SYPHILITIC POISON.*

By S. MESSENGER BRADLEY, F.R.C.S.,

Lecturer on Comparative Anatomy, etc., in the Royal School of Medicine
Manchester.

No fact in surgery is better established than the auto-inoculability of soft chancre. Experiments have also long since proved that the soft sore may be conveyed by means of inoculation from one individual to another. For a time, the inoculability of the hard sore was denied; but, more recently, experiments have demonstrated the fact that the hard or infecting chancre is in like manner capable of inoculation upon a virgin subject, there giving rise to a sore similar in nature to the original lesion, and in course of time, like it, followed by a train of constitutional symptoms. Furthermore, it is admitted by the so-called dualists, that a sore is occasionally grafted upon a subject already syphilitised by matter taken from a true infecting chancre. In this case, they affirm that the sore so produced is invariably soft. This circumstance has not led them to infer the common origin of the two lesions, but that the soil (*i.e.*, the system of the syphilitised subject) is so changed as altogether to modify the character of the inoculated virus without converting it into the "materies" of true soft chancres. It is manifest that, in order to prove the common origin of the syphilitic poison—in other words, to prove the unity of syphilis—it is necessary to produce a soft sore upon a virgin subject by direct inoculation from a hard sore, *i.e.*, to produce a sore indefinitely, capable of auto-inoculation and never followed by constitutional symptoms. I have made numerous experiments to ascertain whether this was or was not possible, and here give the results of these experiments.

My subjects were monkeys, kittens, and guinea-pigs; the virus which I employed was obtained from cases of syphilis met with in private practice, in the Lock Hospital, and in the venereal wards of the Manchester and Chorlton Workhouses. I obtained the matter for inoculation by scraping the surface of the sore, prior to cicatrization, with either a piece of glass or an ivory vaccination-point.

The great majority of my experiments gave negative results; these I do not record, as they prove nothing. In two instances (one in a guinea-pig, and one in a kitten), the inoculation was followed, after the interval of two or three weeks, by local thickening at the site of puncture, and, later, by the outbreak of constitutional symptoms. The guinea-pig died within a month from the commencement of the basal thickening of the chancre, with disorganisation of one eye and extensive ulceration about the mouth and soft palate; the kitten I killed at the end of the eighth week, and found syphilitic gummata in the kidneys and liver.

Omitting failures and the two cases of syphilis mentioned above, I obtained the three following successful results.

EXPERIMENT I.—On March 28th, 1871, I took some virus from a syphilitic sore upon a female, aged 19. The sore, which was situated upon the left labium, was first noticed three weeks before. It presented a well-defined base, and very scanty secretion. There were mucous patches about the anus, and a papular syphilitic eruption upon the arms and legs. A kitten was inoculated with this matter the same day, upon the inner side of the shaved haunch. On the second day, there was evident irritation at the site of inoculation, which, on the sixth, had developed into a typical soft chancre. Matter taken from this sore was inoculated upon the opposite thigh, where it produced a precisely similar result. On July 27th, the chancres were both healed; there was no adenopathy, nor constitutional symptoms.

EXPERIMENT II.—On April 3rd, I took virus from a syphilitic female, aged 22. The sore, situated upon the labium, had a hard base. There were multiple inguinal adenopathy, and syphilitic sore-throat. I inoculated a guinea-pig with this virus the same day, upon the ear and haunch. The ear gave a negative result. On the eighth day, the haunch presented a characteristic soft sore, which freely suppurred. I successfully inoculated the same guinea-pig in two places, with matter taken from this sore.

July 27th.—The chancres were all healed. There was no hardness at the bases of cicatrices, and no constitutional symptoms.

EXPERIMENT III.—Virus was taken from a male, aged 26, on May 17th, 1871. The chancre was situated behind the corona glandis, and had a well-marked cartilaginous base. There was multiple inguinal adenopathy. The sore had appeared fifteen days before, and three weeks after an impure connection. At the present date (July 28th), the patient is covered with a papular syphilitic exanthem. I inoculated a guinea-pig the same day with this virus in three places; only one puncture, however, was successful. The resulting chancre was not

mature until the fourteenth day, when it suppurred freely. With matter taken from this sore, I succeeded in inoculating this same guinea-pig and a companion rodent, which chancres in their turn gave rise to inoculable matter. On July 27th, the chancres had healed. There were no constitutional symptoms.

It is necessary for me to state that, in these experiments, the initial lesion was never irritated by any application; I merely used the secretion obtainable from the surface of the untreated sore. When the sore was irritated by savine, it was much easier to procure abundant, and, as a rule, readily inoculable pus.

I never succeeded in obtaining positive results with matter taken from a phagedænic sore, or by scraping the surface of one which was entirely void of all secretion.

Such are the results which I have obtained; and, supposing my experiments to be verified by future observers, I do not see how we can refuse to admit the correlation, the common origin, and the convertibility of the two sores. Undoubtedly this convertibility is very seldom witnessed, the tendency being, here as elsewhere, to "breed true." Noting the fact that grave constitutional symptoms were nearly always preceded by a serious and obstinate character of initial lesion, and that a mild and benignant attack of secondaries was nearly always preceded by a slight and readily healed sore, Carmichael, Bassereau, and others, described no less than four perfectly well-defined classes of syphilitic sore, each followed by its own peculiar train of constitutional symptoms. The rarity with which the convertibility of which I speak is witnessed, need not surprise us. It is, indeed, not without its parallel in medical literature; for we meet with a strictly analogous phenomenon in the clinical history of the vegetable parasites. It may, indeed, be held as settled, that the fungi infesting the human body are all interchangeable; thus it has been proved that the mycelium of *aspergillus* is produced by the germination of the achorion; that favus is caused by the implantation of the torula; that favus may assume the form of *tinea tonsurans*; that *tinea tonsurans* is produced from *tinea circinata*, and, *vice versa*, that *tinea versicolor* is produced by the implantation of the fungus of *tinea tonsurans*, or from the oidium; that the aerial spores of *penicillium* develop into torula; that *sarcina* may develop from the spores of *penicillium*; that *sarcina*, *aspergillus*, and *penicillium* are derivable from the same source; that torula may assume the form of *mucor*; and many more facts of the same kind, all tending to complete the chain which connects in one family group the highest with the lowest fungus. Yet it must not be supposed that because this power of convertibility exists, it often takes place in the human subject; on the contrary, it very rarely takes place; for, says Dr. Tilbury Fox, "the upshot of the matter is this: that the achorion, even if identical in nature with other epiphytes, cannot be expected to produce upon the human surface any variety of *tinea* other than favus, except as the rarest phenomenon; and inasmuch as it is the most developed condition of favus in which the spores become nucleated, budding is apparent and fructification attempted; the soil which suffices for other phases will not conduce to the retrograde growth of achorion, which has the tendency (alike common to fungi) to reproduce itself"; and, further, after demonstrating the common origin of *sycosis*, *tinea tonsurans*, and favus, he adds: "there is no ground for rejecting the identity of *tinea favosa* and *tinea tonsurans* in our inability to produce artificially the one from the other, except but very rarely." It seems probable that the same causes which thus operate in this low region of the vegetable kingdom (these causes being differences in the soil and in the age, etc., of the seed) are the active agents in determining the character of the syphilitic sore.

The precise force which each of these causes exercises, we are not yet in a position to decide. There is some reason for believing that the interchange of character between the two sores is more frequently witnessed than is commonly believed. I may quote in support of this statement, the impartial evidence given by "the Committee appointed by the Secretary of State for War and Board of Admiralty to Inquire into the Pathology and Treatment of the Venereal Diseases." At page 9 of their report, it is stated that "hard sores do not necessarily contaminate the constitution, while, on the other hand, constitutional symptoms occasionally follow the presence of a sore which might have been regarded as a simple local sore by a practised observer."

After all, I do not consider this question of unity or duality to be one of much practical value. Granted that these experiments, when verified by the experience of others, demonstrate the unity of the poison, none the less will it be true that the original virus has given rise to two diseases, which are for all practical purposes entirely dissimilar, differing in symptoms, in prognosis, and in treatment. At the same time, I cannot admit that this fact of unity is *entirely* a sterile and useless fact, for two reasons; in the first place, the essential oneness of the syphilitic poison being proved, it clearly follows that we should in all cases await the appearance of constitutional symptoms (the first of which may pro-

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Plymouth, August, 1871.

bably be regarded as the multiple inguinal adenopathy, always present when infection of the system is about to take place) before commencing a course of mercurial treatment; and, in the second place, it should make us more guarded in prognosticating constitutional infection in cases of hard chancre, and certain immunity from all secondary symptoms in undoubted cases of soft sore.

THE TRIALS AND DIFFICULTIES OF A HEALTH-OFFICER.*

By DAVID DAVIES, M.R.C.S.

Inspector of Health for Bristol.

THE appointment of health-officers being of recent date, and not yet of universal adoption by the great centres of population, a few words on the difficulties and trials peculiar to such officers seem to be desirable, especially at the present time, when we are promised better legislation on the subject, which, however, from session to session is deferred—our legislators having hitherto found other matters to be of more importance than the health of the people. Without further preamble, I will enumerate those difficulties as they have cropped up in my own experience.

1. *The want of Early Information of the Occurrence of Infectious Disease in a Family or Neighbourhood.*—At present this information is only at the command of a health-officer through the unpaid courtesy of his professional friends, or by keeping up a continual system of espionage over other people—a system which is never pleasant, and one that often proves unsuccessful until much mischief has been done by the spread of disease.

2. *The Confused State of our Sanitary Laws, many valuable Enactments being Permissive and not Compulsory.*—As an instance of the complete manner in which our laws have failed to point out the different authorities for doing certain imperative sanitary work, take the building of hospitals for the isolation of persons suffering from infectious diseases. Under the Sanitary Act of 1866, boards of health may build such hospitals. Are these for the admission of paupers or not? or must paupers be provided for by the respective unions? Hence arise letter-writing and disputes between nuisance-authorities and boards of guardians, whilst small-pox or other fatal diseases may be spreading far and wide; each party considering its chief duty to be that of keeping down the rates. These permissive clauses have produced such bad results that I know at the present time a large union containing a very large workhouse without a single ward for the isolation of a case of infectious disease either in the workhouse or out of it; and I knew until very lately a large and important city without any such ward.

3. *The Separation between the Registration of Deaths and the Sanitary Authorities.*—The latter cannot get early intimation of death from the local registrars without paying such sums as the latter may please to charge for the information. I find no fault with the registrars, as with them it is a mere matter of business; but it is evident that the system is wrong, and that the deaths registered should as soon as possible be submitted to the scrutiny of the health-officer.

4. *The Division of Nuisance-Authorities, and the want of a Central Power to make them act in unison.*—I will here narrate a remarkable instance of this. From the county of Somerset a brook, which was within the memory of man a clear trout-stream, runs through a part of Bristol. A nuisance has been created by a glue-factory in the county, so as to render this brook a veritable Styx. It contained black mud saturated with animal matter, which in many places was a yard deep, and which, seething under the summer sun, gave out thousands of cubic feet of poisonous gases. The nuisance was made by A in the county. It then ran into the brook which formed the boundary between the lands of B and C, who had no hand in creating the nuisance. It then ran through a populous district under the jurisdiction of the Bristol Board of Health. The Board of Health called upon the guardians of the poor for that part of the county to abate the nuisance. In compliance with this the guardians, after taking the best legal advice, required B and C to cleanse the brook in the county and remove the nuisance. B and C, who were certainly innocent parties, pleaded non-liability. The county magistrates, after hearing the case argued by eminent counsel for some hours, made an order on B and C, because the nuisance was found on their land. B and C complied. Within the district of the Board of Health, D was in the same position as B and C in the county. The Board of Health summoned D before the Bristol magistrates, who dismissed the case, stating that D, being an

innocent party, was not liable, but that the Board of Health must find out the originator of the nuisance, who lived out of the jurisdiction of the Bristol magistrates, and had certainly no right to enter the land of D to remove the nuisance. Thus we have one law in the county of Somerset and another in Bristol; and the brook is now becoming as great a nuisance as ever. Which legal authority is right, is not for me to determine: either side is made to appear plausible in the hands of counsel. I could adduce other instances of want of unison from divided authority and the consequent failure of health-authorities.

5. *The Non-Adoption by our Profession of an Uniform Nosology.*—Hence the returns of deaths (occasionally even when made by able men) would puzzle wiser heads than mine. Some of our confrères will insist on calling a bad case of enteric fever "typhus", and a mild case of typhus goes by the name of "typhoid", or either may be disguised under the milder name of "gastric fever". Others enter as fever on the death-returns every case which has terminated with febrile symptoms and coma, although the cause of all the symptoms may have been disease of the kidney or some other important organ. Others of our body have peculiar views of the identity of common sore-throat, scarlet fever, and diphtheria. During the year, a health-officer, if he adopt a modern and specific nosology, must be often hurt by the returns of the Registrar-General, by which he will be informed that typhus, or perhaps cholera, has visited his district, although he is morally certain that neither has done so. But enough of this; let us hope that when we have one portal for our profession these differences will disappear.

6. *The importance attributed by the Public to the mere Figures of the Registrar-General, without regard to Locality, Causes of Death, or the Ages of the Dead.*—One district may be celebrated as a residence for invalids on account of its bracing air. Lethal atmospheric influences, such as prevailed in the spring of 1870, may sweep over this locality, and, by capillary bronchitis, destroy the old and the feeble in large numbers. During the same year that pest of our race, which heeds no sanitary conditions at our command—scarlet fever—may, like a destroying angel, gather the finest of our blossoms. Or a locality may be so celebrated for its hospitals and the medical and surgical attendance procured there, as to attract to it such a large number of persons suffering from fatal diseases and injuries, as, in conjunction with the workhouses, to raise the deaths in public institutions to 14 or 15 per cent. of the total. The public look only at the totals of the Registrar-General, and shake them in one's face, like Shylock his bond. When an adverse combination, due only to atmospheric influences, or an uncontrollable epidemic happens, the public will have their say about it. Newspaper editors write learned articles on the subject, which, as a rule, are very wide of the mark. Every one that can wield a pen writes to the local papers pointing out the cause of it all. Even sometimes an old-fashioned member of the medical profession will join the hue and cry, and for ever condemn all that is local. The health-officer is everywhere greeted with anxious and dubious inquiries. The public evidently think somebody ought to be hanged; and he is the most likely victim. He walks about like a "thing of shame", supported only by his *mens conscia recti*. He knows the lives he has saved; the public know how many they have lost. No one appreciates more highly the intellect brought to bear by the Registrar-General on the figures in his possession than myself. Had that high authority been furnished with further information regarding distant localities, and if he could by any process of elimination distinguish the deaths which are truly local, I respectfully conclude that many of his valuable quarterly reports would differ widely from the past—that some localities reputed healthy would sink to the bottom of the list, and others now reputed as unhealthy would correspondingly rise; that many of our country districts which send their sick to die in the large towns would change places with the latter. But the management of figures where there are so many modifying factors is a herculean task.

7. *The Death of many Infants under One Year Old is one of the greatest troubles of a Health-Officer in Large Towns.*—The majority of these deaths arise from causes over which a health-officer has no control, which are moral rather than physical in their origin. In all large towns there is the production of offspring by individuals who have no moral right to the privilege. They have not the physical means to support them, nor have they the desire to perform the duties of parents to them after they are born. They are viewed by many as unwelcome interlopers on their sensual enjoyments; and, I am afraid, that occasionally grim and undeserved poverty destroys the paternal and maternal instinct. Many die from sheer neglect and want of breast-milk or other appropriate food; others die from exposure, without proper clothing, to our variable climate; but a vast number die from want of medical advice and good nursing when suffering from diseases incidental to childhood, such as measles and whooping-cough. When either of these diseases sweeps over a poor locality in the cold spring

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

months the number of these little victims is appalling. No means at the command of a health-authority can alter these figures. "More want they the divine than the physician." A more extensive acquaintance with the facts of political economy, a more acute appreciation of moral responsibilities, and a greater power of self-restraint, among the lower stratum of our population, can alone remove this opprobrium of our large towns. The figures tell against the locality in which the deaths occur, but they are no index of the general sanitary condition of the place.

Many other points I could mention which occasion grief and pain to health-officers, but over which they have not the slightest control, and for which they are not in the least degree responsible.

I hope these few remarks will induce others of greater experience than myself to describe their own difficulties, so that we may learn something from one another's trials, and possibly point out to the legislature how it may best help us.

SUGGESTIONS FOR THE EMPLOYMENT OF NITRITE OF AMYL IN THE COLLAPSE AND CRAMPS OF CHOLERA.

By TALFOURD JONES, M.B.Lond, University Medical Scholar,
Physician to the Brecknock County and Borough General Infirmary.

THE existence of cholera on the Continent, and the presence of sporadic cases in this country, induce me to offer some suggestions respecting the employment of a new remedy in this terrible disease. This new remedy is the nitrite of amyl; and my reasons for advocating its use in the collapse and cramps of cholera will perhaps best be set forth by the enunciation of the following propositions.

1. That the collapse of cholera is the result of an impediment to the circulation of blood through the lungs, and that this impediment is due to the contraction of the muscular fibres of the minute pulmonary arteries.

2. That the cramps of cholera are due to a like spasm or contraction of voluntary and involuntary muscular fibre in other parts of the body.

3. That nitrate of amyl possesses the property, when taken into the system, of causing relaxation of muscular spasm and arterial dilatation.

4. That in many features there is a considerable resemblance between cholera collapse and asthmatic collapse.

5. That nitrite of amyl is a remedy capable of giving instant relief in asthmatic collapse.

I will begin by offering some remarks as to the soundness of the first two propositions.

The exceedingly careful *post mortem* examinations of Dr. Parkes* show that in cholera collapse the lungs are found shrunken, light, dry, and pale; the left ventricle of the heart is contracted and nearly empty; its right cavities, the trunk of the pulmonary artery, and the systemic veins, are distended with blood, and the mucous membrane of the intestine pale. "That there is," he observes, "some impediment or arrest of the circulation in the capillary system generally, and in the pulmonary capillaries in particular, appears almost certain."

This impeded pulmonary circulation is indicated, during life, by the comparative emptiness of the systemic arteries—the pulse being small and feeble, or even entirely absent, at the wrist—and by the fulness of the systemic veins and the lividity of the surface.

What is the cause of this impediment to the pulmonary circulation? Dr. George Johnson, in his recent paper read before the British Medical Association in Plymouth, says it is due to contraction of the minute pulmonary arteries; that a similar arrest of the circulation occurs as a result of acute apnoea; and that embolism of the pulmonary artery has in several recorded instances given rise to the most characteristic symptoms of cholera collapse—such as blueness of the surface, shrinking of the features, pulselessness, coldness of the tongue and breath, urgent dyspnoea, with loud puerile respiration over the lungs, and a feeble whispering voice. The recently published lecture of Sir Thos. Watson will go far to strengthen Dr. Johnson's theory, which, he says, is founded on a true analogy, and is consistent with the symptoms noticed during life and with the conditions discovered after death. We may, therefore, legitimately regard it, until fairly refuted, as a sound as well as a most ingenious and important theory. In truth, it derives strong confirmation from the fact that it unlocks, like a right key, the whole of the pathological intricacies of the disease.

The very painful muscular cramps in cholera are ascribed by Dr. Johnson to the action of the choleraic poison on the muscles; and he supposes that the contraction of the minute pulmonary arteries is due to a like cramped state of the muscular fibres of these vessels, which also he refers to the specific poison of cholera.

The injection of hot fluids into the veins of patients in a state of collapse has been often followed by good effects. Dr. Johnson holds that they act chiefly by relaxing through their warmth the spasm of the smaller arteries. The blood then flows on again, and the symptoms of collapse are for a time removed. There are many other facts that might be advanced in support of this theory; but it is sufficient for my present purpose to point out, as I have in the preceding recapitulation, the more important ones bearing on the pathology of the collapse.

Assuming, now, that the pathological causes of collapse and cramps are such as I have enunciated (and I firmly believe them to be right), what, then, is the physiological antidote to the poison which gives rise to such muscular contractility?

In my third proposition I say that nitrite of amyl, when taken into the system, causes relaxation of muscular fibre, and induces dilatation of the smaller arteries. In support of this statement it will be necessary to say a few words about the action of this remedy; and this is all the more needed, since I find from inquiry that the nitrite of amyl is most inadequately known; that its employment in medicine has hitherto been most limited; and that very little has been written about its action in disease. As an instance of this it may be stated that, since the publication in the BRITISH MEDICAL JOURNAL of February 26th, 1870, of the two cases treated by amyl, and communicated to the Clinical Society on the 11th February, 1870, by Dr. Lauder Brunton and Dr. Anstie, nothing has appeared in the columns of the JOURNAL on the action of this remedy.

Nitrite of amyl, $C^{10}H^{11}O, NO_3$, is an amber-coloured fluid, smelling like the essence of ripe pears. The experiments of Dr. Richardson show that it causes paralysis of the chain of organic nerves which supplies the contractile power of the blood-vessels; and that, applied to the olfactory filaments by inhalation, the impression is conveyed along the ganglionic nervous tract, and causes more or less paralysis of the vaso-motor nerves, and induces muscular and arterial relaxation.

Though it produces its characteristic effects directly upon the walls of small arteries, yet it is highly probable that it also acts upon most, if not upon all, unstriated muscular fibre.

I have now employed it in many cases of disease, and have likewise given it experimentally to some fifty friends, and have found that its administration invariably causes increased frequency of cardiac pulsation, dilatation of the arterioles, flushing of the face, warmth of body, and perspiration. It may be administered by inhalation, by the mouth, or by subcutaneous injection. It is beyond the scope of this paper to dwell further on this interesting remedy, or give details about its varied uses, mode of administration, etc. Those of my readers who may wish to learn something more about it will find in the next number (the October number) of the *Practitioner* a paper by me on the subject.

I have stated that in many features there is a considerable resemblance between the collapse of cholera and that of asthma. Thus the dusky or leaden hue of the surface, the coldness, the clammy perspiration, the feeble pulse, and the general signs of an impeded pulmonary circulation, are in both much alike. Dr. Johnson has noted this similarity, and says that the main difference between choleraic and asthmatic collapse consists in this—that in asthma there are a primary apnoea the result of bronchial spasm, and a secondary asphyxia or pulselessness consequent on contraction of the minute pulmonary arteries. On the other hand, in cholera there are a primary asphyxia, and a secondary apnoea consequent on the arrest of circulation.

That nitrite of amyl is a remedy capable, as I have stated in my fifth and last proposition, of giving instant relief in asthmatic collapse, will be seen from the following case, in which its employment was followed by the most striking results.

At twelve o'clock on the night of October 23rd, 1870, a woman begged I would instantly go and see her daughter, who, she said, was in a dying state. On entering her bed-room, I saw the patient, a young married woman, half undressed, sitting on the corner of the bed, and holding on to the bed-post. There was a dusky, leaden hue about her face, neck, chest, and hands, and a cold, damp sweat clung to her. Her body generally was cold, but her feet and legs were of an icy coldness. Her pulse could scarcely be felt. She was making violent efforts to breathe, and each inspiration was accompanied with marked recession of the supraclavicular and the intercostal spaces. Loud sibilant *râles*, with sonorous rhonchus, could be heard over the greater part of the chest. She tried to speak, but could only make faint gasps. The thought instantly occurred to me, that the nitrite of amyl, which, it should be mentioned, I had procured only a short while before, might be of use. I

* *Researches into the Pathology and Treatment of Asiatic Cholera.* By E. A. Parkes, M.D.Lond. 1847.

† *Lecture on the Diffusion, Pathology, and Treatment of Asiatic Cholera.* By Sir Thomas Watson, Bart., M.D. (BRITISH MEDICAL JOURNAL, Aug. 5th, 1871.)

ran back to my house—close by—and returned with the bottle. Five drops of the nitrite were applied, on a piece of lint, to her nostrils. In half a minute her face began to redden, and in about a minute it was deeply flushed; her heart palpitated; her carotids throbbed; warmth of body quickly returned; and her breathing became easy. The effect was marvellous, and I felt nearly as much astonished as the patient and her mother. She now became able to converse, and told me that she had been subject to asthma for many years, that her father was asthmatic, and that she had never before had such a severe attack as this. She accounted for it thus. In the early part of the day she was as well as usual; but that evening she remained out for some time, and returned home feeling damp, cold, and chilly.

In about ten minutes after the inhalation, the breathing became a little asthmatical; so we reapplied the amyl, and again she became perfectly easy, and then went to bed. Next morning, she told me that she had had a most comfortable night; the asthma was quite gone; and she was able to attend to her household duties.

In this case, the nitrite of amyl undoubtedly caused relaxation of the muscular fibres of the bronchial tubes. By the expansion of these tubes, the impediment to the entrance of air was removed, and it consequently had free access to the lungs. In addition, however, to this, there was also an impediment to the passage of blood through the lungs—due, probably, to a similar spasm or contraction of the muscular coats of the pulmonary arterioles. This is, I think, shown, not only by the condition in which the woman was, but also by the rapidity with which signs of a free arterial circulation followed the use of the amyl—rapidity, indeed, preceding even that of the complete relaxation of the bronchial spasm.

The question now comes, Will this remedy prove equally useful in the collapse of cholera? Will it relieve the frightful cramps? Will it, in fact, prove the physiological antidote to that poison which, when present in sufficient quantity in cholera patients, seems always to induce spasm of muscular fibre?

When reading, last month, Sir Thomas Watson's interesting lecture on Cholera, all at once the thought flashed through me, "Why, nitrite of amyl is the very remedy!" My mind reverted to my case of asthmatic collapse; and I pictured to myself cases of cholera collapse that had come under my observation. The resemblance of some of these to my case of asthma was most striking, and I came to the instant conclusion that the remedy that acted so magically in the one might be expected to act with similar certainty in the other. The remedy needs but a single trial in a genuine case of cholera collapse to enable us to judge of its medicinal value. I am perhaps over-sanguine, and am perhaps at fault in my pathological and physiological reasoning; but I confess I do, from my knowledge of the extreme therapeutical value of this insufficiently known medicine, anticipate important results from its employment in cholera.

In concluding, I will quote the last paragraph from Dr. Parkes's treatise on Cholera.

"Although the treatment of the severest forms of cholera has not hitherto been successful, yet, considering the virulent nature of the active cause, I think there is reason for congratulation that the medical art can do so much. It can arrest the disease in its premonitory stage; it can with tolerable certainty carry the patient through the consecutive febrile affection. It can successfully treat the milder cases seen towards the end of an epidemic. If at present the deep algide stage is beyond its control, there is no reason to dread that such will be always the case. I firmly believe that some great discovery will speedily reward the efforts of the pathologist, and that a more certain knowledge of the morbid changes in the blood will indicate to us the antidote to this poison, at present so terrible and resistless."

The pathological discovery is, thanks to Dr. George Johnson, now patent to everybody; and I venture to suggest the hope that the physiological antidote will be found in nitrite of amyl.

DYSTOCIA: SUCCESSFUL REMOVAL OF A FIBROID TUMOUR OBSTRUCTING LABOUR.*

By J. WALLACE, M.D. Edin.,

Assistant-Physician Liverpool Lying-in Hospital and Ladies' Charity.

THE following case is the first of a series which I hope to be able to lay before the Society, from time to time, as illustrative of dystocia or difficult or obstructed labour. It comes under the class of obstacle at the neck of the uterus, and is, perhaps, the most difficult to deal with, so far as the accoucheur is concerned, while at the same time it is one of the most dangerous to both mother and child. In looking over the records

of obstetric literature, I know of no instance which did not cause great anxiety to the accoucheur and all concerned; the rarity of the lesion giving rise to lack of experience, and, consequently, to doubtful diagnosis and want of decision in treatment.

Fibrous tumours are frequently met with in the unimpregnated uterus, and are occasionally discovered on the surface of the puerperal uterus in the form of nodules or small irregular bodies; but these give rise to little or no difficulty compared with what is experienced when the growth has so largely developed itself, either in the anterior or posterior lip and in the lower segment of the uterus, as to fill up the pelvic cavity to such an extent as to necessitate its removal, the use of the forceps, turning, embryulcio, or even Cæsarean section.

Mrs. H., aged 44, primipara, requested my attendance June 10th, 1870. She had had occasional uterine pains during the morning. On examination, first of the abdomen, the hand at once detected an abnormal contour; and, secondly, *per vaginam*, the finger impinged upon a hard round mass, very like the foetal head (and mistaken for it by one gentleman), occupying the centre and left of the pelvic brim and cavity; and it was only after very careful examination that I discovered the os uteri high in the brim, and pointing to the right ilium, and not at all dilated. I desired them to send for me when the pains became stronger and more regular. At 12 P.M., Dr. Johnstone, of Russell Street, kindly accompanied me to give chloroform should we deem it necessary. It was thought advisable to administer it, after which I made another examination, and found the os uteri as large as a florin, quite dilated, and the head in the first position of Naegele. The irregularity in the shape of the abdomen was caused by the high position of the child, and a rounded mass which gave obscure fluctuation, lying in front of, and to the right of, the uterus, and occupying part of the umbilical and right iliac regions. A catheter passed into the bladder, showed that that viscus was lying to the right of the mesial line, above the brim and below the superior tumour already alluded to. The catheter passed in front of the inferior tumour, occupying the upper pelvic outlet. Passing the finger *per rectum*, I found it to lie behind and to the right of the inferior tumour, pushed deeply into the furthest parts of the sacral curve. By grasping the tumour between the fingers of the left hand in the rectum, and the fingers of the right hand in the vagina, I found that it was slightly movable, but not sufficiently so to enable me to push it upwards above the brim, or to lead me to anticipate the possibility of being able to do so subsequently; neither fluctuation nor cartilaginous crepitation could be detected. Still pursuing my method of diagnosis, I next punctured the tumour with a trocar passed *per vaginam*, but no fluid whatever escaped. The child was living; the mother's pulse was normal, and she showed no signs of exhaustion or febrile excitement. Indeed, such could not well have set in, as pains only came every twenty minutes. We therefore determined to wait and see what effect the pressure of the foetal head would have upon the growth, which I now concluded was fibrous in its nature, and occupied the left lower segment and the cervix of the uterus, protruding downwards into the pelvic cavity, and so tilting the os uteri to the right.

On the following day, June 11th, the os was found expanded to the size of a crown piece, and dilatable. The diagnosis of the case having been concurred in by Drs. Johnstone and Davidson, the latter gentleman then administered chloroform, while I began to explore the nature of the abnormalities at the pelvic brim. Its shape was that of the segment of a circle, similar to a quarter moon, one horn pointing to the pubis, and the other to the right sacro-iliac synchondrosis, the transverse diameter being less than two inches, and that corresponding to the conjugate and right oblique about four inches. Having resolved to attempt delivery, as the patient was getting anxious and somewhat exhausted, I first applied the long forceps over the forehead and occiput of the foetus, with difficulty, but found it was impossible to move the head or the tumour. I therefore withdrew them; and, having passed a flexible bougie into the rectum, and a catheter into the bladder, I made an incision into the tumour from the vagina and below the cervix, and found that the tumour could be enucleated without much difficulty, as the attachments to its capsule at the lower part were so slender that the finger easily broke them down. Having passed the fingers well round it, I grasped it with polypus uterine forceps, and dragged it down; but, finding that the instrument was too slender, I fixed the crotchet into it, and by this means was able to bring it down nearly to the outlet of the vagina, applying all the time considerable extractive force. Finding at this stage of the operation that it was attached by what may be termed a so-called pedicle, of about the thickness of two fingers, to the uterus, I combined torsion with extraction, and in this manner soon brought the tumour away entirely. It was, as I had concluded, a fibroid of a dense, solid structure, presenting a glistening, shining appearance, almost like a serous membrane, with the exception of one extremity where it had been attached to the uterus. It weighed fourteen ounces,

* Read before the Liverpool Medical Society.

and measured six inches in length, three inches in thickness, and four inches in width. I presented it to the Museum of the School of Medicine, where it now is.

Delivery was completed by the re-application of the long forceps, with the assistance of Drs. Johnstone and Davidson, but unfortunately the left parietal bone was so much indented by the forceps that the child was still-born. This may be accounted for by the narrowing of the pelvic brim, in consequence of the descent of the superior tumour, which I discovered to be also a fibroid. I examined it thoroughly by placing one hand *in utero*, and the other on the abdominal wall, and found that the internal uterine surface opposite the fibroid left *in situ* was hard and cartilaginous, and combined manipulation gave a very deceptive feeling of fluctuation. There would not have been any difficulty in enucleating it had circumstances demanded it; but the absence of *post partum* hæmorrhage, and the exhausted condition of the patient, did not warrant further interference. Had hæmorrhage threatened or declared itself, I was prepared to carry out enucleation.

I need not trouble you with the details of after-treatment, further than to tell you that the administration of opium in large doses formed a leading feature in it, with soothing and stimulating applications externally, and antiseptic vaginal injections. At the end of a week she was out of all danger, and made an excellent recovery. Two months afterwards I examined the condition of the uterus. There was no vaginal cicatrix; and the fibroid which was allowed to remain had become so absorbed that no trace of its presence could be discovered; and up to the present date (May 10th, 1871) she menstruates regularly and normally, and is otherwise in excellent health.

I shall not detain you further than to state that other obstetricians have met with similar cases. Burns in his work on *Midwifery* relates a similar one, where the choice lay between removal of the fibroid and Cæsareotomy. He removed it, and the woman made an excellent recovery. Cazeaux dilates at great length on a case which was seen by M. Dubois and others, as grave doubts were entertained whether the diagnosis was correct. He says: "After proving our incapacity of making an exact diagnosis of the nature of the tumour, it was divided into two, with the view of enabling them to extract the dead foetus. The patient was delivered, but died half-an-hour afterwards." M. Danyau, who assisted Cazeaux in his case, reported a successful one of his own to the French Academy in 1851, where enucleation was performed. Mr. James Bell, surgeon, of Forres, in 1819, removed a fibroid obstructing labour, and his patient recovered. Mr. Rankin of Carlisle reported a case in 1850, where a fibroid had obstructed in several successive pregnancies, ultimately necessitating craniotomy; but after the last confinement, which was accomplished by turning, on the thirty-eighth day the mass came away; and Professor Goodsir, who examined it, pronounced it to be a common uterine fibroid. Simpson gives several cases where labour was terminated without enucleation. Dr. Montgomery and Dr. Shekleton performed Cæsareotomy under similar circumstances. Dr. Beatty of Dublin met with a case where the fibroid was of such magnitude that he thought Cæsarean section would be required; yet when labour came on he was able, by adopting Merriman's plan of pushing it up and fixing it above the brim, to allow the birth to be completed naturally. The practical indications to be followed out in such cases are (Burns)—

1. If the tumour be moveable, push it above the brim.
2. If immovable, interfere early and determine its nature by means of a trocar. When soft and not large, the forceps are to be applied; and when these fail, turning may be adopted.
3. Extirpate or enucleate in preference to the crotchet; but if the tumour be of large size, if there be extensive connections or danger from hæmorrhage, then do not attempt extirpation. If tapping had proved ineffectual in an early stage, then perforate and extract the child by means of the cephalotribe or crotchet as soon as circumstances will permit.
4. In extreme cases, where removal of the tumour is impossible, the Cæsarean section must be resorted to.

CLINICAL MEMORANDA.

ANEURISM OF THE ABDOMINAL AORTA, PRESENTING UNUSUAL FEATURES.*

THE patient, an old soldier, aged 52, suffered much from abdominal and gastric pains and asthma. On September 18th, 1868, gangrene of the right leg suddenly came on, and no pulsation could be felt in the external iliac artery, nor in any of the arteries of the limb. A line of demarcation speedily formed about three or four inches below the knee-

* Read before the East Kent District Meeting of the South Eastern Branch.

joint; and, although the impediment to the circulation was evidently high up, no further gangrene took place. The patient's health suffered less than was expected; and on December 19th (portions of the muscle, etc., having been previously removed from time to time) the bone was sawn through, and the leg removed as near the sound part as possible; but dead structures only were divided. The stump healed well, the projecting portion of dead bone coming away on April 6th, 1869; and the patient was able to move about tolerably freely with a wooden leg. During this time, the aneurism not only ceased to enlarge, but became smaller, more dense, and with lessened pulsation; the improvement being due probably to the diminished amount of blood circulating in the aorta, as well as to the rest and regimen. The secondary symptoms were also relieved. After a time, however, the aneurism again enlarged, and the patient died from exhaustion on November 5th, 1870, more than two years having elapsed since the gangrene came on; and during that time he suffered but little, the severe pains not returning when the tumour again enlarged. A *post mortem* examination showed that the aneurism had burst into the peritoneum by a valvular opening; a large quantity of clotted blood being found arranged in layers, and evidently deposited at different times.

Ramsgate, September 1871.

S. WOODMAN.

EFFECTS OF BROMIDE OF POTASSIUM.

I HAVE seen bromide of potassium, in half-drachm doses twice daily, produce aphasia. The patient was a lad twenty years of age. After taking the drug for a fortnight, he said his memory was bad; and, on inquiry, I found that he called things by their wrong names, and very often forgot the name which he wanted to pronounce. His father thought it very stupid of him, and scolded him for it.

J. HADDON, M.D., M.A.

Eccles, Manchester, September 1871.

WASP-STINGS.

I HAVE tried tincture of arnica this season in several cases which have come under my notice; and in each one the relief has been immediate, if had recourse to immediately after the reception of the poison. It is to be applied undiluted to the part affected by a large camel-hair brush; or, if its general application be necessary, from any additional inflammation from delay, I then recommend its dilution of one part to two or three of water.

JOHN FOSSE HARDING, F.R.C.S.

Tunbridge Wells, September 23rd, 1871.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

THE NOSOLOGY AND TREATMENT OF DIARRHŒA, CHOLERINE, AND ASIATIC CHOLERA.

GENERAL HOSPITAL, BIRMINGHAM.

DR. WADE thinks that, although diarrhœa is often directly traceable to the ingestion of some particular food, yet, as cases frequently happen without any apparent cause of this kind, and as we may often notice that medicines (*e.g.*, tincture of rhubarb) will act on the bowels in doses which do not in ordinary times produce that effect, we must admit that summer diarrhœa is partly referable to what Sydenham, with judicious vagueness, termed an "epidemic constitution". An attempt to define the nature of this leads us into the realms of speculation. It is reasonable to suppose that elevation of temperature is an important, perhaps essential, element of it. It is possible that the effect of heat may be to intensify what Burdon Sanderson calls the zymotic power of water; and this may be the link which joins the external temperature to the autumnal disorder of the human system. Such a bare possibility justifies the practice of depriving water of its zymotic powers by such a simple method as the addition to it of Condry's fluid, when it is to be used for drinking purposes. Again, it is not improbable that heat may primarily affect the nervous system. Even this is not proven: still less certainly can we say what section (if any) of this system is the first to suffer. Assuming an ultimate (if not primary) disorder of the ganglionic system, we should be prepared to find differences in different cases or seasons in the amount or kind of derangement of various abdominal organs. Thus the action of the liver is by no means uniform; its secretion is sometimes at first diminished and afterwards increased, and *vice versa*. To these variations is perhaps due what we think we

have observed; namely, that in some years nothing acts more speedily and satisfactorily than dilute sulphuric acid (R. Acid. sulph. dil. ℥iij; aquæ fontis ℥viij; M.), whilst in other years chalk and vegetable astringents seem more uniformly efficacious. Again, in some years there are many, in other years scarce any, cases of a dysenteric type. In some years cramps are a prominent symptom in most cases; in other years much less frequent and urgent. In some years cases are attended with much greater nervous depression and exhaustion (without actual collapse) than in others.

When a case is apparently to be traced to ingesta, there can be no doubt of the propriety of a dose of rhubarb or castor-oil: the addition to either of a few drops of laudanum often gives great comfort to the patient. Afterwards such astringents as a study of the epidemic of the year has shown to be most suitable are to be given.

In cases allied to dysentery, in place of ordinary astringents, a combination of turpentine, ipecacuanha, opium, and demulcents, will be found most efficacious. When there is much vomiting as well as purging, effervescing mixture with hydrocyanic acid, given every other hour, and a pill of acetate of lead and opium intermediately, will prove satisfactory. In such a case, as indeed in all of any severity, a warm bed is a great adjuvant to any treatment.

In the treatment of the diarrhoea of infancy, whey and barley-water should be at once substituted for milk or other food, and beef-tea should be avoided. Minute doses of stimulant are often needed. It seems a great pity that the term "lientery" should have been allowed to drop. It is a great fact that much of the diarrhoea of children is, in fact, an indigestion, more especially of caseine. This fact is, in practice, much overlooked, whereas the use of the term lientery would have kept it in mind (see a paper on Infantile Lientery, BRITISH MEDICAL JOURNAL, 1858). Such cases should be treated as dyspepsia; and chiefly by diet and alkalies, least of all by opium and astringents. There is probably no hard and fast line anywhere in the gradations between the mildest case of diarrhoea and the severest one of English cholera. If there be, we are not in a position to draw it.

Birmingham has never afforded an opportunity for studying an epidemic of Asiatic cholera. From observation of a few imported cases, it would appear that cases may occur in which there is a retention in the intestines of their secretions to an extent that embarrasses the patient. When this does occur, it is sound treatment to empty the bowels. This may be done, whatever notions we hold as to the propriety of an eliminant plan of treatment, under all circumstances. It would also appear that in collapse opium is useless at the time, and may be injurious subsequently; that brandy is useless, and indeed may be immediately injurious. The best treatment is external warmth, if agreeable to the patient, and as much simple diluent as he can take, at a temperature the most agreeable to himself.

MANCHESTER ROYAL INFIRMARY.

DR. HENRY BROWNE says that autumnal diarrhoea and English cholera are simply the consequences of different degrees of hepatic venous congestion. Asiatic cholera is a form of morbid poisoning.

Autumnal diarrhoea and English cholera may be very distinctively named from their symptoms, as bilious purging, and bilious vomiting and purging. The more severe form may be followed by collapse, cramps, and colourless motions, and it may even prove fatal, but never all at once. Asiatic cholera, omitting the premonitory loose painless motions, begins, and may end at once, in collapse; and the rice-water vomiting and purging are characteristically bilious.

As to treatment, a good warm bed best restores the circulation to the surface in excessive secretion of bile; and, the cause being thus removed, the effects soon pass away. Besides, the horizontal position soothes. Whatever share food may have had in the disturbance of function has been remedied by the beneficent symptoms; abstinence for a time is enforced, and only drinks are tolerated. Subsequently, to allow fats, but no sugars, is strictly scientific. Ten grains of the bicarbonate of soda, with five minims of tincture of capsicum, or thirty minims of tincture of ginger, and two drachms of tincture of rhubarb, in mint-water, are all the medicines that ordinary cases require. In the severest cases, ten minims of opium may be added, and the whole be repeated every two hours. Frictions and stimulants, as burnt brandy, may be used for cramps, and collapse.

When called to contend with Asiatic cholera, we know, too well, that we have to deal with a poison which we cannot neutralise. Yet we know that the evacuations contain the poison, and, therefore, we must consider the vomiting and purging to be beneficial actions, which we should aid rather than restrain. Dr. Browne is, therefore, an eliminationalist, although, in the last epidemic in Manchester, everything seemed to confirm the wisdom of treating the premonitory diarrhoea with opiates and astringents (because that was the only plan adopted).

Should the present, or any future, choleraic wave overtake him, he has determined to give elimination a fair trial, in all the stages of the disease. Still, he would prefer tincture of rhubarb and soda to castor-oil. Theoretically, cholagogues are indicated, or rather oxygen. And the saline treatment is certainly scientific, and according to common sense. The patient is very thirsty, from losses of the liquor sanguinis; therefore he should be allowed to drink freely of an artificial serum, only it should be more dilute than the true serum, that it may enter the vessels by physical laws, seeing the physiological are nearly in abeyance. This plan was adopted, at Dr. Browne's suggestion, in several of the cholera sheds in the last epidemic in Manchester. The formula was taken from Dr. G. O. Rees' analysis of the serum, only doubling the water. It was: Chloride of sodium, gr. xliij; bicarbonate of soda, gr. xxx; phosphate of soda, gr. xij; sulphate of soda, gr. vj; water, Oij. Mix for a drink, to be used *ad libitum*.

Lienteric diarrhoea, for which sulphuric acid is a specific; or mucous diarrhoea and dysentery, in which Heberden's sulphate of magnesia and ipecacuanha, with a laudanum and sheep's-broth enema, are indicated—cannot, of course, be confounded with bilious diarrhoea and cholera.

NEWCASTLE-UPON-TYNE INFIRMARY.

DR. PHILIPSON remarks that diarrhoea, severe and intractable, has been very common during the past few weeks; it being noticeable that many of the cases were of the bilious form, from acrid or an increased secretion of bile, others being distinctly inflammatory in character. In the bilious variety, the evacuations were at first feculent, and commonly green or greenish-yellow, subsequently becoming more fluid and watery. If the diarrhoea continued, a greenish-yellow mucus was mixed with the feculent matter. In the inflammatory condition, the evacuations were watery and serous, and exhibited every shade from a dark-brownish or greenish-brown, to a pale greyish or whitish colour. Sometimes the discharges contained pieces of thick gelatinous mucus. In both, the whole system was relaxed and debilitated. A sudden chill, drinking cold beverages when the body was over-heated or perspiring, and exposure to the ardent solar heat, appeared to be the exciting causes. The bilious condition was best remedied by mercury with chalk, and the compound powder of ipecacuanha; while, in the inflammatory form, warmth to the surface, fomentations, demulcents in combination with small and frequently repeated doses of opium, proved of marked service.

BRISTOL GENERAL HOSPITAL.

DR. MARTYN individually inclines to the following conjectures.

Autumnal diarrhoea is a local irritation of some portion of the intestine, resulting in pain and purging, when undigested (chiefly non-nitrogenous) matters reach the point in question. The cause is not unlikely to be low forms of life developed in food at the autumnal season. The treatment, when the bowels are empty, should be to soothe. Chalk is the antacid which acts most directly in neutralising the irritating secretions and food-decompositions. He also gives catechu, opium, and logwood. Equally necessary, he thinks, is the abstinence from any food at all difficult of digestion.

English cholera and *Asiatic cholera* do not differ generically, but in degree of intensity. They depend on the presence of an unknown poison in the blood. Autumnal diarrhoea may, Dr. Martyn thinks, be related to cholera, as local tubercle is to acute tuberculosis, in which the poisonous matter, having overflowed the barriers of the lymphatic system, reaches the blood. The intestinal drain is an eliminating process, for the poison is found in the evacuations; but should not be encouraged, because, by the diminution and deterioration of the circulating fluid, death is necessarily approached. In the treatment of cholera, he relies at present on the free drinking of diluents, water chiefly; and the persistent effort to give artificial warmth to the surface of the body (except the spine). For the sake of the community at large, the disinfection of all emanations from the sick is imperative.

BRISTOL ROYAL INFIRMARY.

DR. E. LONG FOX says that autumnal diarrhoea can often only be distinguished from English cholera by its less intensity. There are no very distinctive symptoms. Both diseases seem to depend generally on atmospheric causes, by which the liver is over-stimulated; and food, which at other times is easily assimilated, becomes difficult of digestion. This hepatic disturbance is especially noticeable in autumnal diarrhoea. In this disease there is often a profuse discharge of bile, accompanied by vomiting, flatulent distension, and some griping pain in the bowels. In children, particularly if the evacuations are stained with blood, he gives minute doses of castor-oil, with powdered acacia and dill-water, for twenty-four or forty-eight hours, or the formula that was in use sixteen years ago at the Great Ormond Street Hospital for Sick

Children, under the name of *mistura olei ricini*. The abdomen should be poulticed and the child kept in bed. If after two days the discharge persist, a little bismuth and chalk will often act well, without having recourse to the stronger astringents. In an adult, it is well to begin with one dose of castor-oil; and after the full action produced by the oil, he uses catechu and logwood, with opium if the pain be severe.

In English cholera the discharges are generally more mucous than in autumnal diarrhoea, the cramps more intense, attacking the limbs—the lower especially—as well as the bowels. The voice may be affected. (Dr. Fox has lately had a case in which it was almost lost.) There are much coldness of the surface, very violent vomiting, and great prostration. After a time, tenesmus may ensue. He gives one dose of castor-oil, if it can be kept down, and then trusts very much to lukewarm demulcent drinks. He does not think iced drinks good in cases of great prostration. When the vomiting is at all lessened, he gives Liebig's beef-tea as a stimulant rather than a nutriment, and strong black tea. External warmth is applied, all through the attack, to the abdomen; and sinapisms at first, also friction to limbs. After a certain point, a warm aromatic astringent is useful; and if tenesmus be present, a suppository of opium, or of opium with belladonna. In both diseases, rest in bed is most necessary.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

DR. LATHAM considers that autumnal diarrhoea may be caused either (1) by simple errors of diet, (2) by the effect of heat lessening the digestive powers, (3) by a larger amount of fruit or vegetables being taken with the food, or (4) by derangement of the biliary system induced by sudden changes of temperature, etc., and resulting in either a too abundant secretion or a lessened absorption of bile. As regards treatment, if the evacuations have been abundant and feculent, and there be no reason to suppose that the intestines contain undigested food, then the recumbent posture, bland food—such as boiled milk, arrowroot, etc.—must be prescribed; and, according to the circumstances of each case, either lime-water and milk, or some such draught as the following may be given every four or six hours: *Pulv. cretæ aromat. gr. xx—xxx; spiritus chloroformi mxv—xx; tincturæ opii m—x; aquæ menth. piper. ʒiiss*, with or without *mxxx—lx* of tincture of catechu. If, though the motions are loose and frequent, there be reason to suppose that the intestines still retain hardened feces or undigested food, then it is better to commence the treatment by giving five grains of compound ipecacuanha powder, with an equal quantity of hydrargyrum cum cretâ or a grain of calomel, and an hour afterwards a drachm of compound rhubarb powder. If after this has effected its purpose the diarrhoea and pain continue, the irritation may be soothed merely by the administration of fifteen or twenty drops of laudanum, or the mixture above prescribed may be given. In cholera—where in addition to diarrhoea we have severe cramps and violent vomitings—after the alimentary canal has been freely evacuated, and if remedies be not tolerated by the stomach, the hypodermic injection of morphia is speedy and reliable; but it must be borne in mind that, when it is administered in this way, narcotism is sometimes induced by an amount much smaller than may be given by the mouth without risk. A quarter of a grain may be injected, and repeated in an hour if necessary; its effects must be carefully watched; and if other doses be required, the intervals between must be sufficiently long to avoid the risk of inducing narcotism. The patient's intense thirst may be best relieved by giving small quantities of iced water, or small pieces of ice to swallow, at short intervals.

With regard to cholera, Dr. Latham maintains that in whatever way the poison may be introduced into the system, the disease is primarily and essentially a local affection of the mucous membrane of the intestines; and he considers that all the phenomena of the disease, including the condition of the blood, the failure of the heart's action, the cramps, the prostration, and collapse, may without difficulty be explained by the extent and severity of this primary local affection. The condition of the blood is simply a physical result of the copious serous evacuations: the thickened condition of the blood causes stagnation in the capillaries, and impeded flow of blood through the capillaries of the heart causes paralysis of that organ. This paralysis is produced also, and perhaps chiefly, by the depressing effect of the acute intestinal mischief on the sympathetic nerves, just as in poisoning by arsenic, or after perforation of the stomach or intestines, failure of the heart's action takes place, with loss of pulse and coldness of the extremities. The cramps are not peculiar to cholera, but occur equally in cholera, and are the result of reflex action, induced by the irritation in the intestines. Holding these views, Dr. Latham would treat the painless diarrhoea, which almost invariably precedes the fully developed attack of cholera, as characterised by rice-water evacuations, on the same principles as cholera. If, however, the diarrhoea increase, or the rice-

water evacuations show themselves, then the administration of morphia or opium must be discontinued; and no better treatment can be now recommended than that which Niemeyer found so useful in Magdeburg in 1848, and which Pfeuffer in 1854 recommended as being, in his opinion, the most successful. Niemeyer says: "In this stage, before the heart's action begins to fail, and the blood to be inspissated, I order for adults one grain of calomel every hour or every two hours, and envelope the abdomen in cloths well wrung out of ice-cold water. Let the cloth be renewed as soon as it gets warm—about every quarter of an hour or every half hour. If with this treatment the symptoms abate, especially the anxiety and oppression at the præcordia, the rolling about of the bowels, or the frequency of the evacuations, the interval between the renewal of the cold application may be gradually extended, so as to be repeated only every hour or every two hours." These ice-cold applications afford great relief; and "so soon as the damp cloth becomes even slightly warm, the patient will earnestly beg for a speedy change. If the calomel do not decidedly relieve the vomiting—as in many cases it will not—at once discontinue its use. I was often obliged to abstain from the administration of any medicines on account of the violent vomiting. In all cases, I allowed the patient to keep a piece of ice in the mouth; and besides, let him have small quantities of ice-cold water, containing a little white of egg, to drink. Tea, coffee, and all gelatinous or warm drinks, at this stage of the disease increase the anxiety, and the vomiting, etc., do not relieve the burning thirst." (*Die Symptomatische Behandlung der Cholera*. Magdeburg: 1849, p. 25.)

Dr. BRADBURY is of opinion that cholera is only an aggravated form of autumnal diarrhoea, and that Asiatic cholera is a totally different disease, produced by the introduction into the system of a specific virus. He thinks that when an attack of diarrhoea is accompanied by constant vomiting, cramps, coldness of the surface of the body, great prostration of strength, and an extremely feeble pulse, such an attack should be called English cholera or cholera. When there are rice-water stools, rapid collapse, lividity of the face, feebleness of voice and a history of an epidemic, the case is one of Asiatic cholera.

In the treatment of simple diarrhoea, rest in bed and the withdrawal of all solid food for a day or two, restricting the patient to mutton broth and arrowroot and milk, generally suffice for a cure. When there is reason to believe that the diarrhoea depends upon some irritant in the bowels, a dose of castor-oil or tincture of rhubarb is the most efficacious treatment.

In the diarrhoea of children, not dependent upon teething or improper food, Dr. Bradbury finds the following mixture most useful.

R Tincturæ opii $\text{m} \frac{1}{2}$ —j; acidi sulph. diluti $\text{m} \text{ij}$ —iij; syrupi aurantii $\text{m} \text{v}$; aquæ ad $\text{ʒ} \text{ss}$. *M.* Sumatur ter quotidie.

This mixture has checked an attack of diarrhoea which had resisted the action of chalk, lime-water, etc., remedies which Dr. Bradbury prescribes when he believes the purging to depend on a too acid state of the intestinal secretions. A teaspoonful of sherry, given three or four times daily, is very beneficial in some cases of obstinate diarrhoea occurring in young children.

In cholera, the sickness is best relieved by iced soda water, and the cramps by hot bottles to the feet, and hot flannels to the legs and abdomen. The treatment in other respects should be the same as in autumnal diarrhoea, the rest in bed being especially insisted upon.

In Asiatic cholera the bowels should not, at any stage of the disease, be locked up by opium or astringents of any kind, and all alcoholic stimulants should be withheld. Judging from the efficacy of sulphurous acid in typhoid-fever (*vide* BRITISH MEDICAL JOURNAL, Dec. 3rd, 1870, p. 599), and from the similar mode of propagation, etc. (*vide* Parkes' *Practical Hygiene*, second edition, p. 449), of that disease and Asiatic cholera, Dr. Bradbury thinks the sulphites or hyposulphites of soda or magnesia, or a solution of sulphurous acid, are deserving of a fair trial in the latter disease.

EAST SUFFOLK AND IPSWICH HOSPITAL.

DR. C. M. DURRANT says that the usual autumnal diarrhoea has been both prevalent and severe, and it is still very much so in the neighbourhood of Ipswich. The symptoms are general *malaise*, with flatulent distension of the abdomen prior to the setting in of diarrhoea, which has been accompanied by an unusual amount of abdominal pain. If seen early, a rhubarb and magnesia draught has been useful, and he has found no medicine for adults so serviceable as carbonate of ammonia, soda, chloric ether, in small doses (five minims), and tincture of opium. In the diarrhoea of children, the sulphuric acid has given most satisfaction, with or without laudanum. In one very severe case of English cholera, with rice-water evacuations, and great prostration and coldness, Dr. Durrant gave castor-oil, and also the ammonia mixture. The case ultimately did well.

In reference to the distinctiveness of the three varieties, he believes that the strictly premonitory symptoms of each are almost identical.

ST. THOMAS'S HOSPITAL.

IN the opinion of Dr. CLAPTON, Asiatic cholera and autumnal diarrhoea are distinct and specific diseases, but not so choleraic diarrhoea or English cholera. This term appears to have been given indiscriminately to severe forms of diarrhoea and to mild forms of cholera. Such cases are very numerous during cholera epidemics. Ordinary diarrhoea is at such times apt to take on a choleraic type; just as, when typhus is rife, all febrile affections are apt to assume a typhic type; and, when influenza is epidemic, catarrhal affections generally acquire its particular characters.

Simple diarrhoea never drifts on to Asiatic cholera (which is a specific disease, produced by a specific cause), but strongly predisposes the patient to its attack, especially if it have continued unchecked for some time.

The most reliable distinctive marks between autumnal diarrhoea, English cholera, and Asiatic cholera, are the following. In diarrhoea, the face is pallid, but there is nothing characteristic about the features; there is not much constitutional disturbance, except in the severer forms; nausea and occasional griping pain are complained of; the stools are chiefly bilious. In English cholera, the face is indicative of much distress. At the onset, there is considerable griping and uneasiness about the abdomen; but the subsequent stages are generally attended with little or no abdominal pain. The other symptoms are, vomiting; thirst; tongue furred and flabby, but not cold; pulse rapid and feeble; stools chiefly mucous: in the severer cases, serous stools, cramps, hiccup, and intense prostration. In Asiatic cholera, we find sharp features, sunken eyes, and a general leaden hue of the skin; vox choleraica; cold tongue; thready pulse; vomiting; stools serous (rice-water); no griping pain, but severe cramps, affecting chiefly the abdominal muscles and the calves of the legs; suppression of urine; and a strong tendency to collapse and death.

With regard to treatment, simple diarrhoea, unless of a severe character, scarcely requires any medicinal interference. Rest, and plain, nutritious, unstimulating food, are generally all that is necessary; but, during cholera outbreaks, every case, however mild, should be carefully attended to. As it mostly arises from some error in diet, and is attended with very acrid secretions and an excess of bile, an aperient is obviously indicated at the onset, such as a dose of castor-oil or rhubarb. If the griping pain be very great, a few drops of laudanum may be added. Saline aperients are to be particularly avoided. Should the diarrhoea continue, it will be necessary to prescribe astringents, as catechu or rhatany; absorbents, as chalk or bismuth; and perhaps also an opiate, to soothe the morbid irritation of the nerves.

Dr. Clapton's experience of the treatment of Asiatic cholera is chiefly derived from the epidemic of 1854, at which time 208 patients were admitted into the cholera wards of St. Thomas's Hospital. They were all watched day and night by Mr. Whitfield and himself, and full notes were taken of each case. There were 67 deaths and 141 recoveries. On referring to these records, he finds that the general and most successful plan of treatment was the hot-air bath at 130 deg.; large mustard poultices to the abdomen and calves of the legs; an ipecacuanha emetic; ice *ad libitum*; iced soda water. As soon as the patient could take food, a little milk, arrowroot, or weak beef-tea, was given. In very few cases were stimulants or opiates prescribed. The ipecacuanha emetic in many instances quickly brought about reaction from the state of collapse, and gave an impulse to the heart's action. Castor-oil, in frequent half-ounce doses, was given in ten consecutive cases; but six died, and the plan was at once abandoned. Those treated by calomel in frequent doses also presented a large mortality—fifteen deaths out of twenty cases so treated. Creasote, in half-hour doses of one drop, was given to six patients, who were also treated by hot-air bath, emetic, ice, and mustard poultices: five recovered. Quinine, in large and frequent doses, was given in two cases: one recovered. In nearly all the less severe cases of cholera, diluted sulphuric acid in half-drachm doses every two hours was prescribed, in addition to the other means explained. In these cases, the mortality was only one-sixth; but that might have been from the comparative mildness of the attacks.

Choleraic diarrhoea or cholerine was found to be most successfully treated by commencing with the following draught: R Tincturæ rhei ʒss; tincturæ opii mx; spiritus ammoniæ aromatici ʒj; tincturæ zingiberis ʒss; aquæ menthæ piperitæ ʒij. Afterwards the following was given every two hours: R Acidi sulphurici diluti ʒss; tincturæ cardamomi compositæ ʒj; aquæ menthæ piperitæ ʒiss. Simple farinaceous food was allowed, with weak tea or broth, and in some cases a little brandy. Absolute repose in bed should be enjoined in every case.

SEAMAN'S INFIRMARY, RAMSGATE.

SURGICAL CASES.*

(Under the care of Mr. R. HICKS.)

Popliteal Aneurism cured by Flexion aided by Intermittent Compression.—John Foad, aged 35, a miller, was admitted into the Infirmary on April 3rd, with a large pulsating tumour in the left popliteal space. He had been complaining, for about five weeks, of what he supposed to be rheumatism; and both legs were much swollen and inflamed. There was no disease of the artery in the right leg. He had discontinued work (lifting heavy sacks of flour) a fortnight. On admission, he was found to have in the left popliteal space a large pulsating tumour, measuring nineteen inches in circumference. The walls on the inner side were so thin, that fears were entertained that the aneurism would burst. He was placed in bed with the leg firmly flexed on the thigh, and Signoroni's tourniquet was placed on the femoral artery in Scarpa's triangle. As there were no relays of dressers to superintend, an ink mark was made where the tourniquet was to be applied, and the patient was instructed how to do it. He bore the first application for more than an hour, and after a short rest applied it again. On the 10th the measurement was eighteen inches and a half, and the instrument was borne longer and applied more frequently. During the night it was not applied throughout. On the 16th the circumference was eighteen inches; and on this day the pulsation, which had gradually been becoming fainter, ceased. The size of the tumour gradually decreased, and the swelling rapidly went down as the leg became more fit for use, and the compensatory circulation established. He can now walk with the aid of a stick, but is not able to completely straighten the leg. In consequence of the constrained position of the leg, both knee and ankle-joints are stiff; there is also contraction in the old aneurismal sac; but these conditions are improving day by day, and, in a short time, there is little doubt that perfect use of the leg will be regained. [The patient was exhibited.]

Fractures of the Skull.—William Gibbens, aged 31, was admitted on January 7th, 1871. Whilst he was heaving the trawl, the handle of the capstan flew back and struck him on the top of the head. He was found to have sustained a comminuted fracture of the skull, with depression and severe scalp-wound. A large lock of hair was firmly wedged in the fracture, and required considerable force to extricate it. He was perfectly conscious and had no general symptoms, beyond a slight loss of power of the right upper extremity. I therefore decided to leave the wound open and wait for symptoms of compression; none, however, occurred, but the whole of the bone involved was gradually thrown off and removed piecemeal by the dressing forceps. Five portions were so taken out, measuring two and a half inches by three-fourths of an inch when placed together. Only a very small portion of the inner table came away. In April the patient was quite well, and able to resume his occupation. The fracture was slightly to the left of the median line on the frontal bone.

Emma Palmër, aged 36, in a fit of jealousy, threw herself over the cliff (a height of sixty feet) and fell on the chalk beneath, which was covered with about a foot of water. She was unconscious for about two hours. She bled from the nose and ears, but no cerebro-spinal fluid was seen. She had sustained a fracture of the right parietal bone, which could be traced the whole length of the scalp-wound, which was three inches long. It probably extended much further; the left radius was fractured close to the wrist-joint, and she was literally a mass of bruises. The arm was placed in a pistol-splint, and ice applied to the head. She progressed favourably until the seventh day, when the right eyeball began to be pushed out, and was eventually completely protruded and destroyed. The introduction of a very small trocar and cannula showed that bleeding into the orbit had been the cause. She is now making a rapid recovery, with the loss of the right eye. The case is interesting, in consequence of the protrusion and rapid destruction of the right eyeball coming on at the seventh day; the right eye, on admission, being quite healthy, the pupil acting, and no symptom of any kind indicating anything wrong.

Successful Skin-Transplanting on an Ulcer of Five Years' Standing.—John P. contracted syphilis six years ago; five years ago an ulcer formed over the right external malleolus. He went into one or two hospitals, and sometimes the ulcer nearly healed and then became as bad as ever. He came under my care in the latter end of last year. No disease of the bone could be detected; and after trying rest and stimulating lotions with constitutional treatment, without any improvement, I scraped some epithelial scales and placed them on the ulcer, covering the part from the air. This had no good effect. I then took a small

* Read before the East Kent Meeting of the South Eastern Branch.

piece of skin from the arm, and placed that on some scratches made on the raw surface. The wound soon took healthy action and healed to half its size; but beyond that it would not go. Finding the tissues very tense all round, I made four free incisions around the circumference; thereon the ulcer rapidly healed, and has remained quite sound until now, nearly six months.

Hernia Operations in Aged Persons.—Mary Goldsmith, aged 75, was admitted on July 4th, 1870, with strangulated inguinal hernia of two days' standing. The taxis under chloroform being unsuccessful, the ordinary operation was performed; the sac being opened, and she was discharged cured on July 18th, fourteen days after the operation.—Mary Rolfe, aged 76, had had strangulated inguinal hernia two days. The sac was opened in operating. She was admitted December 15th, 1870, and discharged cured January 12th, 1871.

LIVERPOOL ROYAL INFIRMARY.

EXCISION OF THE TONGUE.

By REGINALD HARRISON, F.R.C.S., Assistant-Surgeon to the Infirmary.

J. T., an engineer, was admitted into the Liverpool Royal Infirmary, under my care, in August last, for epithelioma of the tongue of some duration. The case was deemed favourable for operation, the disease being limited to the anterior lateral portion of the organ, the adjacent glands being free, and the general health of the patient good. A small portion of the tongue had been excised before the patient came to Liverpool, by the surgeon under whose care he had previously been; but the disease had returned. The posterior half of the tongue was soft and apparently free from disease; and it was, therefore, determined to extirpate the whole of the organ, after the manner which has been successfully practised by Mr. Bickersteth.

On August 22nd, the patient being seated in a dentist's chair, and chloroform having been fully administered, I seized the tongue with a vulsellum, and divided the frænum and adjoining mucous membrane, so as to permit the organ to be more thoroughly drawn forward. I then passed a narrow knife from about an inch below the symphysis of the jaw through the floor of the mouth. Through this opening, by means of an eye-probe with a piece of thin tape attached, I drew the wire of the *écraseur*. The tongue being well drawn forward, I passed the loop of the *écraseur* back with the fingers of the left hand, so as to include the whole of the organ. While the wire was being tightened, I prevented it from slipping forward by my left fingers until a groove had been formed. The screw of the *écraseur* was very gradually turned, exactly thirty minutes elapsing before amputation was completed.

The patient was kept under the influence of chloroform during the whole time, and he afterwards told me that he had experienced no pain whatever. There was no blood lost either during the operation or afterwards, a little frothy mucus tinged with blood only requiring removal. I examined the stump, to see if I could find any vessel requiring a ligature; but the *écraseur* had done its work so well, that nothing like an artery could be discerned.

The patient made an excellent recovery, and left the Infirmary on September 1st, 1871. Nutrient enemata were regularly and frequently administered, until he was able to take a sufficiency of nourishment by the mouth.

I believe that the plan here described will be found the best for removing the whole of the tongue. As far as I have seen, the removal is quite as complete as where division of the symphysis is resorted to.

I am indebted to Mr. Stubbs and Mr. Hakes for their assistance at the operation.

THERAPEUTIC RECORD.

TREATMENT OF CHLOROSIS. M. Delieux de Savignac proposes, in the *Bulletin de Thérapeutique*, the following formula as being likely to fulfil most completely the ordinary indications of treatment in chlorosis: tartrate of iron and potass, ten grammes; powdered aloes, two grammes; powdered castor, two grammes; powdered saffron, one gramme; to be made into a mass with Venice turpentine and divided into a hundred pills. At first, three pills are to be given daily, and the number is to be gradually increased to six or nine; care being taken to maintain a free action of the bowels without producing diarrhoea. The pills are to be taken three times daily; early in the morning, and at luncheon and dinner. M. Delieux de Savignac explains that the aloes is intended to obviate the constipation frequently met with in chlorotic patients: the castor-oil and saffron to relieve flatulent distension of the abdomen; while

the turpentine exercises a beneficial influence on the leucorrhœa. If the aloes act too energetically, it may be replaced by rhubarb; or, if the constipation remain obstinate, a little jalap, scammony, or gamboge may be added. If the bowels be already free, M. Delieux omits the purgative altogether. When the turpentine produces gastric disorder, or colic with or without diarrhoea, balsam of Peru may be substituted for it. The use of the pills is contraindicated in chlorosis attended with menorrhagia.

MERCURIAL INUNCTION IN SYPHILIS.—Professor Sigmund of Vienna, the leading authority in his country, has published a series of lectures in the *Wien. Medizinische Presse*. He discredits "latent syphilis". It shows always cutaneous or mucous signs when present. Abortive or prophylactic treatment he considers useless; but when the skin, mucous membrane, or glands, are involved, he has recourse to frictions with Neapolitan ointment. He recommends, to soften the skin, baths, and even vapour baths; careful attention to the cleanliness of the buccal and nasal cavities. The patient should then, if possible, apply the frictions himself: a drachm of the ointment is to be rubbed for a quarter to half an hour in the morning on the legs, thighs, arms, belly or chest; avoiding parts covered with hair. When another person makes the frictions, he should wear an oiled or India-rubber glove. The parts rubbed are not to be washed, but the personal and bed-linen must be frequently changed. On an average from twenty to thirty frictions are required. The treatment may, if desirable, be alternated or combined with alkaline or sulphurous baths. He generally continues it to the date of cure, and for one-third of its then duration after the cure.

TREATMENT OF SCABIES.—Monti (*Jahrbuch der Kinderheilk.*, iv, 2) has tried the effects of copaiba and of carbolic acid in cases of scabies in children. Copaiba produces on the tender skin violent burning and redness; these symptoms, however, disappear in half an hour. The itching usually disappears after the first inunction; and the effervescence ceases after three or four applications. The remedy has no further influence on the eczema. Better results have followed the application of carbolic acid (one drachm to a pint of water or to four ounces of lard). By the diligent rubbing of the affected part with this three times a day, the itch is usually cured in three or four days.

AMPUTATION OF THE PENIS BY THE GALVANIC CAUTERY.—Dr. J. Zielewicz writes on this subject in the twelfth volume of Langenbeck's *Archiv für Klin. Chirurg.* To thirty-three cases described by previous authors, he adds ten operations performed in the hospital at Breslau, and seven in his private practice; and arrives at the following conclusions. 1. Amputation of the penis was in almost all the fifty cases required on account of cancer; once for gangrene, and once for enormous vegetations. 2. Eight of the patients died—four at Breslau, from pyæmia. The danger of pyæmic infection does not lie only in the laxity of the areolar tissue of the penis, or in the veins of the bladder and prostate, but depends also, and perhaps especially, on the hospital atmosphere. In fact, in cases treated in private dwellings, there have been no deaths. The galvano-caustic method does not absolutely prevent the occurrence of pyæmia in any case, especially when the disease has once appeared in the hospital; but the operation diminishes the danger by not being attended with the hæmorrhage which follows the use of the knife. 3. Secondary hæmorrhage was not met with in any of the cases, in spite of frequent manipulation in the course of passing the catheter, etc. 4. The operation is not followed by traumatic fever. 5. Of forty-five cases where the ages were known, the ages in thirty varied from 40 to 60; the youngest patient was 26 years old, and the oldest 78. 6. The contraction of the urethral orifice seems to follow alike all operations for the removal of the penis.—Dr. Fischer, in a postscript to the paper, says that he has amputated by the galvanic cautery for carcinoma in three patients aged 52, 81, and 45 years. The first two patients recovered; the third, who was in very impaired health, died of pyæmia.

TREATMENT OF NÆVUS BY THE GALVANIC CAUTERY.—Dr. Maas of Breslau has collected in the *Archiv für Klinische Chirurgie* (vol. xii) the histories of 112 cases of nævus treated by the galvanic cautery. The results were as follow: *Capillary nævus*—cured, 32; improved, 1; result unknown, 1. *Cavernous or venous nævus*—cured, 72; improved, 8; result unknown, 1; died, 3. *Arterial or racemose nævus*—cured, 2; improved, 1. *Nævus combined with other tumours*—cured, 6; improved, 1; result unknown, 2. He derives from the examination of the cases the conclusion that the galvanic cautery is followed by the best results in nævus, and is much safer than the injection of perchloride of iron or any other coagulating fluid. It would, however, be wrong to say positively that the remedy is indicated in all cases of

nævus. As Virchow has well remarked, the surgeon must take the circumstances of each case into consideration. The battery used in the cases referred to was that of Middeldorpf.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, SEPTEMBER 30TH, 1871.

DYNAMICS OF NERVE AND MUSCLE.

II.

IN a previous article (July 22nd, 1871) we noticed some very interesting and instructive views regarding the electrical properties of nerve and muscle, which have been advanced by Dr. Radcliffe in his able work on the *Dynamics of Nerve and Muscle* (Macmillan and Co., 1871). We inquired into the facts upon which Dr. Radcliffe has based his Leyden jar hypothesis regarding the electricity of muscle and nerve. We explained that for the maintenance of this hypothesis it is essential that the sarcous and nervous elements be surrounded by a non-conductor, which shall correspond to the glass of the Leyden jar. This non-conductor or dielectric Dr. Radcliffe finds in the nerve-sheath and sarcolemma. He has no direct proof that these are such bad conductors that they may act as dielectrics; but he tells us that he has investigated the conducting power of the fresh ligamentum nuchæ, and, finding this to be a very bad conductor, he has no doubt that the sarcolemma and nerve-sheath—seeing that they are chemically like the tissue of the ligamentum nuchæ—must be bad conductors too; sufficiently bad to play the part of the glass of a Leyden jar.

We are perfectly willing to admit that Dr. Radcliffe has been most ingenious in showing that if he take a "wooden cylinder, covered at its sides with a coating made of two layers of tinfoil, with an intermediate layer of gutta-percha sheeting" (p. 22), and charge the outer layer of tinfoil with electricity, he can obtain many of the electrical phenomena presented by muscle and nerve; but we wish we had better evidence to the effect that a nerve-sheath or sarcolemma saturated with the saline juices that penetrate these, in order to nourish the contained tissue, is a sufficiently bad conductor to play the part of the glass of the Leyden jar, or the gutta-percha of the tinfoil model. Nay, more, we should indeed desire better proof of the existence of something like a dielectric membrane around non-striped muscular fibres and the striated fibres of the heart. If Dr. Radcliffe fail to show that such a membrane is found around these, we are at a loss to see how his hypothesis can be maintained. Dr. Radcliffe doubtless feels this himself; and we are glad to see that in his reply (BRIT. MED. JOURNAL, August 5th, 1871) to our first article, he endeavours to dispose of our objection. He says that the fibres of involuntary muscle "consist of a number of contractile cells imbedded in an amorphous transparent substance. They have no proper sheath or sarcolemma like the fibres of voluntary muscle. But what of this? The cell, there is every reason to believe, is the contractile part of the fibre. Its wall, in the opinion of many, takes the place of the sarcolemma—being, in fact, analogous to the sarcolemma; and certainly there is no reason why the contents should not be regarded as analogous to the contents of the sarcolemma. In point of fact, there is no good reason why these walls—if there be any walls—together with the amorphous transparent substance of the fibre outside them, should not be a crude, thick, less elaborated, sarcolemma". We confess ourselves unable to follow Dr. Radcliffe through all this. We are at a loss to know what he means by the cells of which he speaks in

connection with the non-striped muscular fibre; and we should be glad to know who are the "many" who hold that the "walls" of the non-striped muscle-cells are "analogous to the sarcolemma". We are not aware that any histologist has demonstrated anything at all corresponding to a sarcolemma around the sarcous substance of the non-striped muscular fibre, or around the sarcous substance of the striped muscle of the heart. We still think, therefore, that our objection has not been surmounted. After pointing out this unfortunate hiatus in the conditions necessary for Radcliffe's hypothesis, we commented on Du Bois-Reymond's views on the matter, and stated our conviction that his hypothesis is in harmony with the known facts of the case. As was pointed out by Du Bois-Reymond, the action of a muscle or a nerve is accompanied by a diminution of the currents which may be obtained from these tissues. Radcliffe and Matteucci maintain that this diminution of electricity is due to the escape or discharge of electricity from the tissue. Du Bois-Reymond, on the other hand, maintained that it is not due to discharge, but merely to a partial rotation of the intimate particles of the muscle and nerve, whereby the positive poles comes into contact with the negative poles of neighbouring particles, and their currents are in this way short-circuited. In our former article we pointed out what appears to us to be a failure in the evidence, that there is a discharge in the case referred to. Dr. Radcliffe replies that his observations, with the aid of Sir William Thomson's new quadrant electrometer, have furnished "the very *experimentum crucis* of discharge, because this instrument takes cognisance not of changes of current, but of the simple fact of charge and discharge".

Dr. Radcliffe deserves credit for having been the first to use this valuable instrument in researches on animal electricity. It does not appear to us, however, that it has enabled him to settle in his favour the question at issue. He finds by means of this instrument that the electrical tension of (e.g.) the longitudinal surface of a muscular fibre is less during action of the fibre than it is during the state of rest; and, seeing that he had previously pinned his faith to the notion that the fibre resembles a Leyden jar, he concludes that this diminished tension must be evidence of the discharge of electricity. But, supposing that we do not adopt the Leyden jar hypothesis at all, we then find little difficulty in accounting for the fact shown by the electrometer. The fact may be explained on Du Bois-Reymond's as well as Dr. Radcliffe's hypothesis. The short circuiting of currents inside the muscular fibre during the muscular contraction seems to us to account for the phenomenon shown by the electrometer, just as well as the "torpedo-like discharge" of the electricity. We conclude, therefore, that this "*experimentum crucis*" with the electrometer entirely fails to prove the occurrence of discharge of electricity when a muscular fibre is thrown into contraction.

Why does a muscle contract? is a question for which physiologists have been driven to their wits' end to find an answer. Gladly indeed would they hail a satisfactory solution of the difficult problem. Dr. Radcliffe offers a solution which demands attention. He says (*lib. cit.*, p. 98): "1. That the state of relaxation is brought about by the charges of electricity present in the muscle during the state of rest, the mutual attraction of the opposite electricities disposed on the two surfaces of the sheaths of the fibres elongating the fibres by compressing the sheaths at right angles to their surface; 2. That the state of contraction is caused by the discharge of the electricity present during the state of rest, the discharge leaving the fibres free, to return by virtue of their elasticity from the state of elongation into which they had been forced by the charge." Here is a view which is simple, and one which in its less perfect shape, as advanced by Dr. Radcliffe some years ago, has appeared so satisfactory to some physiologists, that they have adopted it as the explanation of muscular action. Dr. Radcliffe supports his theory by arguments based not only upon his views regarding the static nature of the electricity in muscle and its torpedo-like discharge when the muscle contracts, but also upon an ingenious experiment devised by him. He takes a flattened band of India-rubber to represent the elastic muscle. He partially covers both its surfaces with gold-leaf, and then charges one of the metallic surfaces with static elec-

tricity. The India-rubber fibre elongates because, as he says, the communicated charge induces an opposite charge in the other metallic surface of the band. The opposite electricities attract each other; and in consequence of this the intervening India-rubber is compressed, and so elongated. On discharging the electricity, the band returns to its original dimensions. Dr. Radcliffe says (p. 102) that "it is scarcely too much to take this experiment as in itself a sufficient reason for removing the view of muscular action which is here adopted provisionally (the electrical view) from the region of pure speculation into that of actual demonstration." We wish that we could see the matter in this satisfactory light. We have failed to find all the conditions necessary for the Leyden-jar hypothesis. We have failed to find evidence that there is a discharge of electricity when a muscle contracts. Failing to find the proof of these being real events, we cannot, of course, adopt the theory of muscular action in which it is essential that they figure. But we go further; for we feel obliged to say that, even had the *charge* and *discharge* been proven, difficulties which seem to us insurmountable bar the way to our accepting this theory regarding muscle-action. 1. In this experiment, a piece of India-rubber is compressed by the attraction between two kinds of electricity upon its opposite surfaces. To us it appears that the sarcolemma, and not the sarcous substance of the muscular fibre, corresponds to the piece of India-rubber; for it is the sarcolemma which, according to Radcliffe, separates the two kinds of electricity in the muscular fibres. It would seem, therefore, that the elongation and contraction of the sarcolemma must be regarded as the mainspring of muscle-action; and that the sarcous substance has little to do but generate electricity when it is wanted, in order to compress the sarcolemma! Pity the contractile protoplasm which has not a sarcolemma or some such membrane around it! 2. If a discharge of electricity from a muscular fibre be essential for its contraction, it follows that a state of charge must not obtain to its full extent, at any rate, during the contraction of the fibre. But it has been shown by Helmholtz and Bernstein that the negative variation of the muscle-current (Radcliffe's discharge), which takes place when a muscle is stimulated, *does not occur during the contraction of the muscle*, but during the short interval intervening between the stimulation of muscle and the muscular movement. This is a point which has been overlooked by Dr. Radcliffe. We see no reason for doubting the accuracy of observers so thoroughly competent as those we have mentioned; and therefore, were the "torpedo-like discharge" true, we should have to say something like this. An almost momentary discharge of electricity takes place from a living muscle immediately after its stimulation; but, before the muscular contraction sets in, the muscle has again become charged with electricity, and remains so charged during its period of contraction. Here are difficulties indeed. It seems to us that we have adduced enough to show that Dr. Radcliffe's theory of contraction is untenable. It is true, as Dr. Radcliffe says (BRITISH MEDICAL JOURNAL, *loc. cit.*) that, while Du Bois-Reymond's hypothesis finds nothing for the electricity in muscle to do, his view assigns to it some useful work—to wit, the elongation of the muscular fibres; but we fear that even yet we must confess our inability to find anything for the electricity to perform.

Lack of space prevents our pursuing this subject further. We have not by any means alluded to all the topics treated of by Dr. Radcliffe in his interesting work. We advise all who are interested in questions relating to muscle and nerve to procure and peruse his ingenious work. Though we have been obliged to oppose some of the physiological doctrines which it contains, we nevertheless entertain for the author the highest respect. We heartily wish that we saw a greater number of accomplished physicians like Dr. Radcliffe striving to advance physiological science. The worrying work of an extensive practice, indeed, renders it difficult for any one to find time for such labour; and it is to be counted to the honour of Dr. Radcliffe, that he should have found leisure to labour at so recondite a subject. Where there's a will there's a way.

THE *Court Journal* describes her Majesty as still suffering from slight rheumatism of the foot. She did not leave her apartments for several days this week.

THE Introductory Address at the Liverpool Royal Infirmary School of Medicine will be delivered on Tuesday, October 3rd, at 3 P.M., instead of Monday, the 2nd, as previously announced.

MR. J. A. DOON, of Balkail House, Glenluce, Wigtonshire, has kindly forwarded fifty brace of birds for the use of the patients at Guy's Hospital.

A PHLEBITE is by no means so trifling a complaint as the sound of the word suggests; and if M. Gambetta is really suffering from inflammation of the veins of the leg (phlebitis) which rumour inflicts upon him, he is the prey to a very painful disease.

DURING the recent epidemic of typhus in Vienna, 1766 patients were treated for the disease in the hospitals of the city during the twenty-one weeks from March 22nd to August 15th. Of these 366 died, giving a mortality of 22.12 per cent.

THE Government of India have resolved to organise a statistical department for the purpose of ascertaining and conserving the internal resources of India. Dr. Hunter will be the first Director-General of this new department.

THE mortality in Paris last week amounted to 832 deaths, of which 55 were from diarrhoea, 45 from bronchitis, 35 from dysentery, 17 from infantile cholera, and 2 from cholera. The general condition of the health of the city was good.

THE fatal cases of small-pox in London, which in the two previous weeks had been 81 and 57, rose again last week to 89, which were 73 above the corrected average number in the corresponding week of the ten years 1861-70.

HER Majesty the Queen has again shown her especial patronage of the Earlswood Asylum for Idiots, by presenting the sum of five hundred guineas, to entitle her Majesty to the presentation of a second child to the Asylum during her Majesty's life.

WE are requested by the Dean of St. Mary's Hospital to supply a previous omission by stating that a *conversazione* will be held in the Board Room of the hospital at the conclusion of the opening address, which will be delivered by Dr. Alfred Meadows in the Anatomical Theatre of the School at 8 P.M. on Monday next, October 2nd.

A TELEGRAM from Alexandria states that the Board of Health has ordered ten days' quarantine for steamers arriving from Constantinople, in consequence of the outbreak of cholera in that city. The days occupied in the passage will be reckoned in the case of steamers carrying a doctor.

Cholera is raging along the whole Arab coast, brought down, it is said, by the Turkish troops. The crews of our gun-boats have suffered from the scourge, as well as from the heat—to face which, indeed, according to all accounts, the vessels placed by the Admiralty at the disposal of the Indian authorities seem quite unfitted.

THE deaths from diarrhoea in London, which in the four previous weeks had been 487, 353, 293, and 268, further declined last week to 205, of which 186 were of infants under two years of age. Only two deaths were referred to cholera and choleraic diarrhoea last week, while in the eight previous weeks they had averaged 22. Both those last week were certified as choleraic diarrhoea, one of a child aged 2 years, and the other of a female aged 48 years.

ACCORDING to official returns, there are in Austria 4664 physicians, 3376 surgeons, 11759 midwives, 2248 apothecaries, and 6093 other persons in the sanitary service.

NEW INFIRMARY AT LAUNCESTON.

THE Rowe Dispensary at Launceston is about to be developed into a small Infirmary, containing six beds and an accident-ward. The new building is being erected at the expense of Lady Rowe, widow of Sir W. Rowe, late Chief Justice of Ceylon, to whose liberality the institution of the Dispensary is due.

A CASE OF ANEURISM OF THE INNOMINATE ARTERY.

A CASE of aneurism at the root of the neck—supposed to be of the innominate artery—in a female aged 45, has recently been treated at this Hospital by simultaneous ligature of the common carotid and subclavian arteries. The operation was performed on September 20th by Mr. James Lane, who tied the carotid artery above the omo-hyoid muscle and the subclavian beyond the scalenus. No unfavourable symptoms of any kind have resulted from the operation. The tumour appears to have diminished slightly both in size and in the strength of its pulsations.

MEDICAL OFFICER OF HEALTH FOR ISLINGTON.

AT a special meeting of the Sanitary Committee of the Vestry of Islington, held at the Vestry Hall on Monday evening, the 25th instant—Dr. Harvey in the Chair—the eleven candidates selected out of the twenty-six for this office at the previous meeting on the 18th instant attended, according to request, and were personally examined before the Committee as to their fitness for the office. The result was that Mr. Haviland, Dr. Corfield, and Dr. Tidy, were the three recommended to the Vestry at large as the most eligible. The election is fixed for Friday, October 6th, at 8 P.M., and the electors have an *embarras de richesses*.

AN UNFORTUNATE ERRATUM.

IN the BRITISH MEDICAL JOURNAL of last week the printers erroneously transformed Dr. Mac Donald, F.R.S., the gentleman whom we mentioned as the probable professor of naval medicine at Netley, into Dr. Mac Donald Fox. To this erratum we call the attention of the editor of one of our weekly medical contemporaries, who, to the favour of continuous criticism of our doings and sayings, adds the compliment of the general appropriation of what pleases him of the contents of our pages in a very unceremonious fashion. We regret that this particular paragraph was ear-marked, and protest that the erratum was unintentional.

THE EFFICACY OF VACCINATION.

As it is not practicable to obtain direct experimental proof in England of the protective power of vaccination against small-pox, Dr. De Renzy quotes the following interesting fact from his experience.

“The priest of the Mahomedan shrine of Bahawul Hug, at Mooltan, Mukdum Shah Mahomed, consented, at the request of the Deputy Commissioner General Van Cortlandt, C.B., to have his son vaccinated; and I performed the operation myself, hoping that the example set by this high religious authority would have a good effect in inducing other Mussulman parents to allow me to vaccinate their children. The priest, indeed, had little faith in my assertions of the efficacy of vaccination; but, as he thought it could do no harm, he yielded, from a feeling of courtesy to General Van Cortlandt, so far as to have the child operated on. In due course, and some time afterwards, the ceremony of inoculation, which had been practised for many ages in the Mukdum's family, came to be performed; and then, to his surprise, he discovered that the boy would not take small-pox. The most skilful inoculators tried and failed to produce the disease. The experiment satisfied the Mukdum of the truth of what I had told him—that vaccination, properly performed, is an almost sure preventive of small-pox. The boy is now himself the priest of the shrine of Bahawul Hug, his father having died two years ago. Unlike his father, who was deeply pitted with small-pox, he does not bear the smallest trace of that terrible disease.”

THE HAMPSTEAD SMALL-POX HOSPITAL.

THE Hampstead Small-pox Hospital inquiry threatens to assume proportions not much inferior to those of the Tichborne case. It is understood that the case for the complainants cannot be ended this week; and, when it is concluded, the Managers will perforce have to adduce a still greater mass of rebutting evidence, including, first, the evidence of the Managers themselves, who are among the most highly respected names in London, and include gentlemen holding the highest positions in connection with the great voluntary metropolitan hospitals, and some distinguished medical men; then that of the sisters and nurses; the medical Inspector of the Poor-law Board; some well known hospital physicians and surgeons who have at different times inspected the wards; and a selection from a host of patients contemporaneous with those who have testified, and who offer denials of the alleged abuses. The charges made are of a very shocking character; they have, however, by no means well stood the test of cross-examination; and we believe that the general impression in medical circles is, that the case is tinctured with palpable exaggerations, and that the more serious charges are clearly breaking down. Had the pledge given by Mr. Hardy in the House of Commons, that visiting physicians should be appointed to these asylums, been carried, it seems probable that circumstances could never have occurred which have given a colour to this scandal.

TERCENTENARY OF HARVEY.

PRELIMINARY steps have been taken at Folkestone—the birthplace of the illustrious author of the circulation of the blood—to mark the tercentenary of Harvey's birth by the erection of a suitable public monument to one of the greatest of Englishmen and most illustrious of the world's true heroes. It is not to the credit of our country that no such public monument exists. At a meeting convened by influential requisition, the Mayor of Folkestone in the chair, letters were read from Earl Granville, Baron Rothschild, M.P. for the borough, Lord Robert Montagu, M.P., Dr. Bence Jones, F.R.S., and other influential persons, and the Presidents of the Royal Colleges of Physicians and Surgeons, warmly approving, and proffering support. Mr. George Eastes, M.B., with whom the movement originates, read an interesting sketch of the life, labours, person, and character of Harvey. Mr. John Simon, F.R.S., the Medical Officer of the Privy Council, supported the project in an eloquent speech. Dr. Bateman, Dr. Bowles, and other local gentlemen, moved resolutions appointing a numerous committee, nominating Dr. Bence Jones, F.R.S., Treasurer, the Town Clerk of Folkestone and Mr. George Eastes, M.B. London, as Honorary Secretaries; subscriptions to be received at the Branch Bank of England to the credit of the Fund. When we wish to think well of ourselves, and to establish a claim on the gratitude of mankind, we call ourselves the countrymen of Harvey and of Jenner, whose discoveries have done more for the relief of mankind and the saving of life, the glory of science and the progress of biology, than those of any other two men, past or present. Let us show that we know how to honour their memory.

A FRENCH MEDICAL WAR MEDAL.

THE French Minister of War lately laid before the National Assembly a *projet de loi* authorising the government to strike a medal to be awarded to those who gave their disinterested services to the ambulances during the late war. The honour is to be conferred not only on males, but on females, who, says the minister, “took so large a share in the acts of benevolence and humanity performed during the painful crisis through which we have just passed.”

LUNATIC ASYLUMS.

FROM a return moved for in the House of Commons by Lord Robert Montagu, and lately issued, we learn that in the various borough and county lunatic asylums in England and Wales on the 1st day of July last there were 31,474 inmates, of whom 19,905 were members of the Church of England, 2,835 Roman Catholics, 7,099 belonging to other denominations, and 1,635 whose denomination was unknown.

DR. BLACKMAN OF OHIO.

THE late Professor G. C. Blackman of Ohio, whose death, at the age of 52, is announced, was well known in this country as a bold and accomplished surgeon, enthusiastic in his profession, and accomplished in its highest branches as a science and an art. He was personally known to more than one of us in this metropolis. In 1855 he became an occasional student at the London hospitals, subsisting in London, by a system of the most rigid self-denial, for some months on about fifteen pounds—"studying covered with bed-clothes to avoid the expense of a fire, and subsisting on two penny rolls a day." He was treated with characteristic kindness, which he never forgot, by a surgeon whose kindness and nobility of character have endeared to him many hundreds of pupils and friends. Mr. George Pollock of St. George's Hospital and Sir William Fergusson also received him kindly and hospitably. At a later date he was one of the very few foreign surgeons elected member of the Royal Medical and Chirurgical Society. Although he attained to great eminence and wide repute, he seems from various circumstances to have failed to realise a fortune.

DEATH AT THE LONDON HOSPITAL FROM CHLOROFORM.

ON Saturday, Mr. Richards, the deputy coroner for East Middlesex, held an inquiry at the London Hospital into the circumstances connected with the death of a lad named Edmond Kitching, aged 15 years. It appeared, from the testimony of the relations of the deceased, that about a month ago he was taken before the bench at the Guildhall, to be dealt with on a charge of having no visible means of sustenance, in consequence of being found by an officer sleeping, at five o'clock in the morning, in the open air. He was sent to the boys' home in Regent's Park Road; but on the 4th instant was removed to the hospital for treatment for an internal disease. While there, he requested that an operation might be performed on one of his eyes, in order that a squinting under which he laboured might be removed. The necessary preparations were made for the performance of the operation; and on the 24th instant he was placed under the influence of chloroform, which was administered by Mr. Tay. After the completion of the operation, the deceased, upon recovering from the effects of the drug, made efforts to vomit. While doing so, he gave a deep inspiration, which had the effect of forcing back the rising matter, and causing his death by suffocation. The jury returned a verdict of "Accidental Death."

THE NEW HOG-PARASITE.

It will be seen from a communication in another column from Dr. T. Spencer Cobbold, F.R.S., that the new hog-parasite which he described and identified in our columns in January last as the *Stephanurus Dentatus*, from specimens sent from Indianapolis, appears again amongst some slides of entozoa forwarded from New South Wales. This affords an interesting confirmation of the anticipations then expressed, and adds an item of value to the progress of helminthological science in its agricultural relations.

SMALL-POX AT BRIDGWATER.

AN inquiry has been ordered to be made by the Local Government Board, relative to the small-pox epidemic in this town. Until within a few days, the *Bridgwater Mercury* says, when cold weather began to set in, the disease continued to spread, not only in Bridgwater, but in several of the neighbouring parishes; and during the past fortnight several cases have terminated fatally. This is exactly what we anticipated. But the fatal result might have been obviated, had the advice given in these columns to the Bridgwater guardians, at the commencement of the outbreak, been promptly taken. Had a temporary hospital been erected, or even an encampment pitched on the immense artificial mound by the canal basin, readily and generously placed at the disposal of the town by the Bristol and Exeter Railway Company, the progress of the disease might have been checked at once. To save money, the guardians huddled the small-pox cases

under the same hospital-roof with the general patients, who were constantly shifting either homeward or houseward. *Hinc illa lachrymæ.* Other tears, however, are to be shed. The guardians have decided upon attending to the request of the Local Government Board, and on furnishing a report, through the district medical officer, on the origin and prevalence of the disease, and on the steps which have been taken in reference to it under the fourteenth section of the Nuisance Removal Act, 1870. One of the guardians, whose ill advice has done much to promote the spread of the disease from the first, of course thought that the guardians were entitled to ask their medical officers to furnish such reports *gratuitously*. This preposterous idea was not, however, shared by the majority; and the result is, that each district medical officer is ordered to furnish the Board with a report for his district, in consideration of which the guardians will reward his labours with a guinea! Surely the small-pox is making some remarkable revelations illustrative of the penny-wise and pound-foolish policy. Would it were only £ s. d. that have been sacrificed.

THE NOMENCLATURE OF THE PHARMACOPŒIA.

MR. C. R. C. TICHBORNE, a very competent pharmaceutical and chemical authority, discusses with approval the changes in nomenclature and notation of the *Pharmacopœia* proposed by Mr. Attfield, to which we lately referred. He is convinced that, when a new edition of the *Pharmacopœia* shall be issued, which will not be just yet, we shall have the new atomic weights and a binary notation and nomenclature in conformity with the new system alone. He thinks that the great difficulty in the perfect acceptance of the new nomenclature and notation in pharmacy is, that most of the medical licensing bodies do not make it compulsory that the candidates should answer in the new notation. As long as it is optional with the medical student, it will never be perfectly adopted, for pharmacy must sail in company with the practice of medicine. Now we find that in the year 1870 there were in this kingdom 1160 medical students registered, being much in excess of the pharmacists. With the pharmaceutical student the acceptance of the new system is easy; chemistry is his principal and most difficult study. With botany, it constitutes all his science; he must have both a theoretical and practical knowledge of it, or he is no pharmacist. He therefore will not mind a little more trouble, for the new system is a degree and only a degree more difficult. But chemistry hitherto has formed but a small part of the medical student's education, and the little he has learned he has looked upon as a matter of secondary importance. In such a case, if the student be presented with two roads, he will very naturally take the short one. We commend the papers of Messrs. Attfield and Tichborne to the notice of the *Pharmacopœia* Committee of the General Medical Council, on the part of which we shall not be sorry to see a little more obvious activity.

DEATH-CERTIFICATES.

WE have received a copy of a Manchester paper containing a report of an inquest at Eccles on the body of a man who died suddenly. Dr. Haddon had been attending him, and was summoned at the moment of his death. Dr. Haddon, we believe, was of opinion that the case was one of pyo-nephrosis. An inquest was held, at which it transpired that Mr. Roe, who had not seen him for six months, had given a certificate that death had occurred from heart-disease. We must remark that the responsibility of giving death-certificates without accurate knowledge of the immediately preceding conditions, and absolute conviction arising from that knowledge and from inspection of the body, is a dangerous and improper proceeding. The practice of giving death-certificates, under any circumstances, without seeing the body, is open to abuse. Dr. Burke, Deputy-Registrar of Ireland, related to the Sanitary Commission, in his evidence on this subject, a case in which a well known physician, who had accepted the statements of relatives as to the decease of a patient whom he had been quite recently attending, found that patient next day sitting up in his drawing-room. Sir Dominic Corrigan

has also related instances *ad rem*, in his able paper on the subject of Registration. In the present case there seems to have been a really deplorable and extreme laxity of practice on the part of the giver of the certificate. Dr. Haddon was obviously best able to form an opinion as to the cause of death. To grant a certificate alleging the cause of death for a patient who died suddenly, and who had not been attended for six months by the author of the certificate, is a proceeding so unquestionably wrong, that it is difficult to find an excuse for it. The adverse observations of the coroner were fully justified. It is not necessary to warn medical practitioners against such a course; but it may be well to remind them that their certificates may easily be made the means of dangerous abuses and frauds by designing persons, and to repeat the counsel of extreme caution in granting them.

THE MEDICAL TEMPERANCE QUESTION.

A PICTORIAL Drink-Bill of the British Nation, prepared by the Rev. Dawson Burns, recalls, by means of a strikingly clear and effective pictorial chart, the distressing fact that the annual expenditure on alcoholic drinks of the nation amounts directly to the enormous sum of £108,000,000, half as much again as the whole annual government expenditure, more than twice as much as the annual produce of British mines or the annual railway receipts, and £20,000,000 more than the annual exports of British textile manufactures. The total annual loss of the British nation from the expenditure on intoxicating liquors is set down at £216,000,000. These are very startling and distressing figures, and we see no reason to challenge their correctness. The *Medical Temperance Journal*, in its October quarterly number (Tweedie, 337, Strand), contains a very interesting article by Dr. A. H. H. McMurtry of Belfast, on the Duty of Medical Men in Relation to the Temperance Movement. Dr. McMurtry writes very earnestly, very strongly, and with all the fervour of overwhelming conviction of the importance of his subject. And, indeed, looking to the ineffable misery and disaster, the waste, degradation, suffering, and crime, which are constantly wrought in this and most other civilised nations by drink, we are far from thinking that the importance of the subject can be exaggerated. The influence of medical men, if they were united and agreed, might be all powerful on this subject; and we should be glad to see a conference of medical men, including those of the highest class, originated in some really influential quarters, with a view to giving this subject a more thorough discussion than it has yet had. We should like to hear a discussion in which Parkes, Edward Smith, Hughes Bennett, A. P. Stewart, Paget, Jenner, and some of our leading provincial practitioners, would take part, in which the whole subject should be probed. To what extent, if it all, are physicians justified in recognising alcohol as an article of daily food in health? Does the habit of prescribing alcoholic drinks act injuriously upon the morals and welfare of the people? Is it possible or desirable to substitute the more enticing forms of alcohol by medicinal and less alluring forms? We all of us sympathise with the ends which the National Temperance League has in view. A small minority only practically participate in their means of action. Can we in any way, and in what way, help to rescue this nation from the curses which drink brings upon its population?

THE RED CROSS IN ENGLAND.

THE *Worcestershire Chronicle* calls attention very truthfully to the leading part taken by Captain Burgess and Captain Furley, as founders of the movement which led to the formation of the English order of St. John (rather a silly device), and the vigorous Aid Society, its offspring, which has superseded the parent. The exertions of Captain Burgess have hardly been sufficiently known to the public, but they are none the less appreciated by the wide order of actual workers in the cause. Burgess and Furley were unquestionably the primary founders, and worked incessantly as soldiers in the army which they originated. Without Colonel Loyd Lindsay, however, it is probable that they would have had but little success in their first operations.

IMPROVEMENT OF THE CAM.

THE Cambridge Board of Town and University Improvement Commissioners are on the eve of a discussion materially affecting alike the interest of the ratepayers and the health and comfort of the inhabitants of the borough and the members of the University. It is sought to amend the sanitary condition of the town by diverting its sewage from the River Cam.

RE-VACCINATION AT OXFORD.

SMALL-POX is still epidemic, though in a condition of subsidence, at Oxford. There were thirty deaths from it in the past four months. The Vice-Chancellor has very wisely recommended to undergraduates who will come up next term, that every young man who has not been properly revaccinated within the past seven years, or since he attained the age of 17, should submit to the operation before his return on Oct. 13. We heartily hope that the revaccination will be performed *very carefully*, and that proper certificates of the same will be required.

HOMŒOPATHIC CONGRESS.

THE following report is published in the daily papers.

"Yesterday about fifty homœopathic medical practitioners assembled at the Randolph Hotel, Oxford, for the purpose of hearing papers read and discussed, etc. Dr. Hughes (Brighton) read a paper on 'Therapeutics in its relation to Modern Physiology', prepared by the President for the year, Dr. Madden (London), who himself was unable to be present, having, unfortunately, recently sustained an attack of apoplexy. Dr. Black (Clifton) read a paper on 'Posology', which led to an animated discussion as to the efficacy of high and low doses—the result of the testimony borne by different practitioners being somewhat indefinite, varying with varying circumstances. Homœopaths would seem to be inclining to meet allopathists half way, the latter on their part having of late years considerably modified the wholesale dosing which was in vogue in bygone days. Other papers were read and discussed. The proceedings concluded with a dinner. The Congress decided that the next meeting should be held at York the first Wednesday in September, 1872. Dr. Black (Clifton) was elected President for the year ensuing; Dr. Dunn (Doncaster), Vice-President; Dr. Pope (London), General Secretary; and Mr. Nankwill, Local Secretary."

This is a method of rattling which is by far more ingenious than ingenuous. If the gentlemen who called themselves homœopathic have become convinced of the fallacy of their "infinitesimal" dilutions and dynamised powers, it would be but honest to say so. They only make the sham, which they dignify by a Greek title, more dishonest when they pretend that they are on the way to "a compromise", and that practitioners of rational medicine have on their side modified their doses to meet them. Of course the progress of diagnosis and of science, and variations of type of disease, have changed some of our modes of practice. But a comparison of pharmacopœias of this date and fifty years back will particularly show no change in doses. They have remained more stable than anything else in our progressive art; and our doctrines and practice are, if anything, more directly opposed to the follies of the homœopathic principle now than at any time. The fallacious semblances on which they relied have been nearly all shattered, and the doctrine of elimination was the tombstone of homœopathy. Over the places where they wrote "Similia similibus", it writes everywhere "Tolle causam."

SCOTLAND.

UNIVERSITY OF EDINBURGH: ETTLES SCHOLARSHIP.

AT the recent graduation, the Ettles Scholarship, which is annually awarded to the most distinguished graduate, was given to Dr. Urban Pritchard, a student of King's College, London. Dr. Pritchard also gained a gold medal for original researches on the structure of the organ of Corti, conducted by him in the physiological laboratory of King's College.

RELAPSING FEVER IN GLASGOW.

WE observe that while, during the last fortnight, the health of the city has been quite exceptionally good (the death-rate not quite reaching 25), there is a prospect of an increase in relapsing fever during the winter. Dr. Gairdner, in a report to the Police Board, says: "Looking to the type of disease reported in detail, and to the records of the last three or four months, there seems no reason to doubt that relapsing fever, partially subdued during the heat of summer and in consequence of the open-air life adopted in June, July, and August, by many of the dwellers in our low tenement houses, is again tending to develop itself, in proportion as the nights become colder and overcrowding becomes more favourable to the spread of infection."

GLASGOW MEDICAL SCHOOLS: THE WINTER SESSION.

THE classes in the Glasgow medical schools will be resumed on October 31st. The students of the University will still be subject to the same inconvenience as last session, of having the University and the Infirmary separated by a distance of over two miles. We believe that last winter this inconvenience was submitted to with perfect good nature on all hands, and we feel sure that the same will be the case this winter. The University authorities are pushing forward the new hospital as quickly as possible; and we understand that an effort will be made to open an out-door dispensary there at the beginning of the coming session.

THE CITY IMPROVEMENT SCHEME IN GLASGOW.

GLASGOW possesses the unenviable distinction of being the most closely built and densely peopled city in the kingdom; and, we do not doubt in connexion with this, it is one of the most unhealthy. Any one who has ever traversed the central parts of the city must have been appalled at the closeness with which lofty and densely populated blocks of houses were set down, leaving merely narrow lanes, much resembling ditches, between the high walls of the opposite tenements. It was in view of this striking state of matters, and of the high death-rate, which it was impossible not in some degree to associate with it, that, six years ago, the City Improvement Scheme was set going. Compulsory powers of purchase were obtained from Parliament; and the process of buying up properties, the demolition of them, and the opening up of new streets, was at once set about. At first, there seemed to be very little done. At each annual meeting for a number of years, there was the report of large sums of money being expended, and yet no apparent difference was made in the face of the city; and the death-rate kept as high, and even mounted higher than formerly. There was then, of course, the usual outcry against the useless expenditure, and the scheme ran some risk of coming to a premature end. The good sense of the citizens, however, prevailed, and the scheme was proceeded with; and it is with eminent satisfaction, as we think, that the fifth annual report must be viewed by all interested in the sanitary condition of large cities. One who has not visited the parts of Glasgow concerned for a number of years would find it difficult to realise the amount of change which has now been effected in the denser parts of the city. New streets have been formed; densely populated lanes have been converted into wide thoroughfares; and altogether the place has much less of the appearance of squalor than it formerly possessed. During these five years, 1,180 dwelling-houses have been demolished, and a population of about six thousand displaced from the densest part of the city; and the consequence has not, as might have been expected, been an increase in the overcrowding in the central districts, but the people displaced seem really to have taken the hint and moved their camp towards the suburbs; this being evidenced by the fact that the prosecutions for overcrowding have even diminished in the midst of all this demolition. The efforts of the City Improvement Scheme have been in some degree seconded by the formation of the Union Railway, which was simultaneously buying up and demolishing property in the densest parts of the city. On the whole, there has been a most mani-

fest improvement in the appearance of these parts of the city; and we do not doubt that the praiseworthy efforts of the citizens will be ultimately rewarded by a reduction in the death-rate.

IRELAND.

SANITARY AFFAIRS IN DUBLIN.

DR. GRIMSHAW, Physician to the Cork Street Fever Hospital and Steevens' Hospital, writes to us:

"As Dr. Mapother has undertaken the defence of the Dublin sanitary authorities against the charges brought by Mr. Baker and myself, perhaps you will be good enough to allow me to point out what charges have been made, and how far they have been answered. Dr. Mapother has made so many countercharges, and thus so far complicated what was at first a simple enough question, that your readers who do not see the Dublin daily journals may have some difficulty in understanding how the matter stands at present; I therefore offer a few explanations.

"The charges against the sanitary authorities may be thus summarised. 1. The scavengering of the city is so bad that it is (especially in the poorer streets) dangerous to the health of the public. 2. The disinfecting chamber is out of order, and unfit for use; and, if in order, no means have been taken to bring articles thither for disinfection. 3. Houses reported as fever-nests have not been attended to by the authorities; and complaints sent to the City Hall concerning nuisances, etc., are usually not attended to. 4. The authorities have not provided proper privy and ash-pit accommodation for the poor, nor taken measures for the cleaning of such wretched accommodation of this sort as at present exists.

"On the defence side we have: 1. No defence of the scavengering neglect, but a statement that this does not concern the Health Committee, but Committee No. 1 of the Corporation. 2. A denial that the disinfecting chamber is out of order, although proved to be unfit for use by Mr. Baker before, and by the reporter of *Saunders' News-Letter* and me after this denial had been made. 3. No defence has, up to the present, been attempted against the charge of neglecting the reports of fever-nests and other nuisances. 4. No defence has been made of the state of the privies and ash-pits; but this charge has been admitted by the Health Committee, by its issuing (for the first time) a notice 'to all whom it may concern' to cleanse the same at particular times, thus casting the duties of the sanitary authorities on *any one* whom it may concern.

"The rest of Dr. Mapother's defence of his masters consists in bringing charges against other people, bodies or places, as follows: Against Mr. Baker's dispensary district, for being in a worse sanitary condition than Dublin; against other towns generally for being worse than Dublin; against the authorities of Cork Street Hospital, for not providing sufficiently detailed returns to the City Hall, although returns containing all available information are sent to the City Hall twice a week, and are habitually neglected by the Sanitary Committee, as is shown in a letter appearing in the Dublin papers this morning; against the fever-hospitals for not using their cabs as foul clothes-carts for the Corporation disinfecting chamber, although one of these hospitals has no cab, and the other has a disinfecting chamber of its own, built within the hospital in the year 1803; against the commissioner of the *Freeman's Journal*, for making a mistake about the Coombe Hospital, in a very graphic report upon 'The Four Kings' Prisons', although he did not charge any of the defects (if there be any) of the Coombe Hospital to the sanitary authorities; and, lastly, against some one for making a mistake about a cholera ship in the river.

"The most amusing episode of the whole discussion is the threat of the Health Committee to put the law in force against the Scavengering Committee, to remove a nuisance created by the latter committee on the banks of the Royal Canal, and complained of by the Rev. Mr. Doran, P.P., in a letter to the *Freeman's Journal*, as dangerous to the health and lives of the inmates of a large orphan asylum in the immediate vicinity."

NOTES ON THE ANNUAL MUSEUM.

THE following are a few notes on some of the leading contributions to the Annual Museum at the Plymouth meeting.

CLASS I. *Medical and Surgical Instruments and Appliances.*—Dr. Woodward's obstetric support (No. 7 in the catalogue), exhibited by Mr. Plum of Worcester, is designed for expediting labour and preventing *post partum* hæmorrhage.—Messrs. Arnold and Sons of London, were large exhibitors of some of the latest inventions. Amongst them was Dr. Angove's accident case (17), which would be improved by placing cork partitions between the instruments, or by embedding the instruments in a block of cork. This would add very little to the weight of the case, whilst it would prevent the edges of the knives from being injured.—Mr. W. Miller's instrument, for the cure of bunion (36), attracted attention.—Mr. Jessop of Leeds exhibited an instrument (39) for facilitating the *post mortem* examination of the head, and a somewhat similar contrivance for keeping a patient's head steady during operations on the eye, etc. These useful inventions are described and figured in the JOURNAL of September 2nd.—Messrs. Mayer and Meltzer of London exhibited a very choice selection of instruments. For high-class workmanship they could not be surpassed.—Mr. C. Steele of Clifton exhibited his flexible probes (61), which he has lately compared with Sayre's probes, showing a similarity of design.—Mr. Greenway exhibited several of his inventions. His grasping-splint (62), for severe fractures of the leg, keeps the fragments in position without interfering with the circulation. Fomentations and dressings can be applied to the naked limb without causing any disturbance at the seat of injury. His unilateral limb-suspender (63), described by Mr. Haynes Walton, at a meeting of the Medical Society of London, as "one of the best appliances of modern surgery", attracted the notice of the visitors. This apparatus can be used for the upper or lower extremity, not only in the treatment of fracture, but of inflamed joints or any ailment requiring absolute rest in the limb during the various movements of the patient. Mr. Greenway's unilateral bed-guard (64), although a simple contrivance, has proved of the utmost service in the removal of the weight of bed-clothes from various parts of the body. This, as well as the suspender, being one-sided, the patient is scarcely aware of their presence in the bed. His irrigating apparatus (66), first employed at St. Mary's Hospital, and described in the JOURNAL of September 24th, 1870, was exhibited and placed in position on a bed. Its employment has been attended with the best results.—The ophthalmic suction instruments (67, 68), by the same inventor, were also exhibited. To Mr. Greenway belongs the credit of having made the application of suction, to parts within the eyeball, safe and practicable.—Mr. Ernst of London sent a very valuable collection of orthopædic apparatus (82-98). They were exquisitely finished, and nothing better of the kind could be desired or even obtained.—Messrs. Krohne and Sesemann, of London, also sent a good assortment of instruments (99-120). Some of them were plated with pure nickel, thereby preventing rust, and affording other advantages.—Mr. W. Heath, a Plymouth optician, exhibited a choice collection of microscopes, etc. (121-130). Two were of full size (one of them binocular), with completely revolving glass stages, affording the utmost facility for manipulation and perfect cleanliness in use. These, as well as his student's microscope, were well put out of hand and moderate in price.—Messrs. Maw, Son, and Thompson, sent a contribution (131-139). Their urinary test-stand was very complete and well furnished. Dr. Barnes's excellent apparatus for dilating the os uteri and for injecting perchloride of iron solution is too well known to require comment. Dr. Potter's speculum must be intended for a very capacious vagina. We presume that smaller sizes are made. The latest form of dilating reflectors bids fair to take the place of all glass specula. Mr. Greenway's improved ophthalmoscope is a boon to the student, enabling him to view the fundus of the eye without any difficulty, the position of the mirror and lens being arranged before the observer commences the examination. Dr. Mackenzie's inhaler is an admirable contrivance for administering medicated vapours. Being made of glazed earthenware, it is not liable to become foul or to corrode. Mr. Blackbee's pessary and speculum were also exhibited by this firm. The speculum is more of a dilator than an illuminator, being composed of plated wire so bent on itself as to form a kind of skeleton tube, capable of being compressed or expanded by means of a traversing ring. The Messrs. Maw's sample of spongetents was very good.—Messrs. Wood, manufacturers, of Manchester, exhibited among other instruments Bradley's insufflator (a puff-ball and tube) for dusting the fauces and air-passages with nitrate of silver, alum, etc.; also their vaccination-guards to protect the vesicle. These

inventions only require to be seen to be appreciated.—Dr. Hearder (D. Sc., etc.), a medical and general electrician, of Plymouth, exhibited a few of his medical electro-magnetic coil machines (155). They are very compact, have great extent of power and facility of manipulation, and are graduated accurately and uniformly. The unit of force forming the basis of these graduations being the same in all these instruments, electricians are not only furnished with a common standard for the comparison of the results of their experiments, but with a ready means of electrical diagnosis. Another point in their favour is the moderate price at which they are sold by the inventor.

The special exhibition of fracture-apparatus, suggested and carried out for the first time this year by Mr. Greenway, was interesting, and served to draw forth various comments as to the best mode of treating fractures. The inventions shown in this branch were: Appliances for the upper extremity (40), by Mr. McVail of Alnwick Infirmary; Surgeon-Major Wyatt's battle-field splint (54), by Mayer and Meltzer, an admirable contrivance, not only in cases of emergency, but in routine practice; Mr. Greenway's appliances (62, 63), already alluded to, and his suspender for two broken legs (65). The following (70-81) were shewn by Messrs. Weiss: Lonsdale's splint for fractured patella; Weiss's arm and humerus-splint; a set of six-jointed elbow-splints; Weiss's jointed radius-splints; Liston's leg-splint; Fergusson's excision-splint; Busk's thigh-splint; Fergusson's leg-splint; Salter's sling; Weiss's fracture-cradle, with side-splints; and Lawrence's back-splint.—By Mr. Ernst: Wire-splints (98) for fluid dressings—most useful appliances, enabling the surgeon, if necessary, to apply irrigation during the treatment of fracture.—By Mr. G. Cordwent of Taunton, his ingenious apparatus (142) for compound fracture of the lower extremity, allowing dressings to be applied with ease.—By Mr. Jonathan Hutchinson, a side-leg splint with back-piece (145), for the treatment of fractures above the ankle, with displacement of the foot backwards; a splint for the treatment of fractures of the humerus (146); and numerous illustrations of the application of hatter's felt to the construction of splints (147).—By Messrs. Cow, Hill, and Co., of Cheapside, air-splints (153), or inflated India-rubber junks, which serve the purposes of splint, pad, and bandage. These almost unknown appliances, which were invented nearly thirty years ago by the late Mr. Cow of Devonport, deserve the attention of surgeons.—Mr. Greenway was the only exhibitor of drawings of ancient fracture apparatus, he having employed artists specially for the occasion.—Mr. Christopher Heath exhibited two illustrated works on fractures—Hamilton's and Malgaigne's. We hope that Mr. Greenway's idea of a special display in connection with the museum will prove fruitful, and that each year will have its special features.

CLASS II. *New Drugs and Preparations.*—Messrs. Southall, Son, and Dymond, the well-known manufacturing chemists of Birmingham, exhibited a case of specimens of opium and cinchona barks, and the analysis of each. This was very instructive, showing the great inequality in the medicinal value of different specimens of the same drugs, and therefore to what an extent the prescriber is in the hands of the druggist. The difference in the percentage of morphia in the various specimens of crude opium was very great. They also exhibited preparations of opium and of cinchona barks made with drugs of uniform value, and various specimens of, and preparations made from, "quinovia" or cinchona bark without the woody fibre. Their surgical dressing "tenax," a superior kind of oakum, was displayed in bulk. It is being extensively adopted, and in a coarser form has long been held in repute among sailors as a covering for wounds, the tar which it contains forming an important element in its usefulness. We shall have a further word or two to say about these preparations another time.—Messrs. Howards and Sons, the celebrated alkaloid manufacturers, exhibited samples of sulphates of quinine, quinidine, cinchonine, and cinchonidine. The name of this firm is a sufficient guarantee for the quality of these productions.—Amongst the drugs exhibited by Balkwill and Son, of Plymouth, was a liquid extract of poppy, proposed to replace the syrup of poppy. As the latter often undergoes fermentation, we consider the proposal a right one.—Mr. S. B. Turney, a Plymouth chemist, exhibited a choice selection of drugs.—Messrs. Calvert and Co., of Manchester, exhibited samples and preparations of carbolic acid. Their soaps are of great value, not only in the treatment of skin-affections, but for ordinary use, especially by members of the medical profession who are frequently exposed to contagion. Their carbolised tow for dressing wounds deserves the attention of surgeons.—Mr. Agnew, of Liverpool, exhibited samples of his "cod-liver oil jelly," with and without pepsine and pancreatine. These preparations will be very acceptable to a large class of patients, but we think they would be improved by simply using lemon as the flavouring ingredient.—The preparations of "koumiss" exhibited by the manufacturer, Mr. E. Chapman, attracted much notice. The virtues claimed for this drink in other countries necessitate its trial by the profession in this country.

CLASS III. *Articles of Diet*.—Messrs. Peak, Frean, and Co., biscuit manufacturers, of London, exhibited samples of various kinds of biscuits suitable for invalids. The purity, composition, and appearance of these articles of diet cannot fail to ensure a large consumption.—Messrs. Dunn, Hewett, and Co., cocoa manufacturers, of London, exhibited various samples of their manufacture. They all possessed good flavour, and were perfectly free from adulteration.—Messrs. Fry and Sons, of London and Bristol, also exhibited various preparations of cocoa. They were pronounced full-flavoured, especially the Caraccas variety, and of great purity. Their quinine chocolate-drop, each containing one-third of a grain of Southall's quinine, is an admirable method of administering cinchona to children. This preparation deserves to rank with the lozenges of the *Pharmacopœia*.—Van Houten's "pure soluble cocoa," exhibited by Mr. H. Eschwege, of London, is true to its maker's description. This was the only specimen exhibited by this manufacturer, and a purer or more delicately flavoured article of its kind it would be impossible to procure. For patients suffering from indigestion cocoa is far preferable to tea or coffee, which frequently aggravate the malady.—Messrs. Orlando Jones and Co., of London, exhibited samples of their "entire wheat-flour." As an article of diet, it ought to be universally adopted, not only by invalids, but by the public generally.—Messrs. Summers and Co., of Bristol, exhibited samples of their aerated waters. They were all high-class productions, and remarkable for purity.—Mr. Max Greger, of London, exhibited some of his Hungarian wines. They were all highly approved of, and the "Ruster" was generally considered well-suited for cases of nervous exhaustion arising from fatigue or other cause.—Mr. Verkrüzen, of London, placed before the Association samples of German, French, and other wines. It has seldom fallen to our lot to taste such high-class productions, several of them at a price suitable for hospital consumption. Mr. Cory, the agent in attendance, deserves great praise for the manner in which he introduced the wines to the notice of the members.—The "Essa Brewery Company," Saltash, Cornwall, submitted their pale ale and nourishing stout to the notice of the meeting. Both these articles were very grateful to the palate, and, as specimens of pure malt liquor, reflected great credit on the brewers.

CLASS IV. *Pathological Specimens, Casts, etc.*—This class contained a number of interesting specimens and drawings. Mr. Jonathan Hutchinson, who was the principal contributor, sent a large collection of photographs, coloured sketches, portraits illustrating the occurrence of syphilis and other diseases after vaccination, and pathological specimens. Specimens were also exhibited by Mr. Christopher Heath, Mr. Jessop, Dr. G. Johnson, Mr. J. H. Fuge, Mr. P. W. Swain, Mr. Charles Steele, etc. We shall probably return to this interesting department of the museum on another occasion.

CLASS V. *Medical Literature*.—Numerous works on medicine and the allied sciences were exhibited by Messrs. J. and A. Churchill, Mr. H. K. Lewis, Messrs. Baillière, Tindal, and Cox, the New Sydenham Society, etc.

CLASS VI. *Miscellaneous*.—There were very few objects exhibited under this head. The most prominent were the drawings of Mr. Greenway's proposed plan of hospital construction, by Mr. James Hine, of Plymouth, an architect of good standing in the western counties. As Mr. Greenway read a paper on this subject, and it will shortly appear in the pages of the JOURNAL, we shall reserve our comments for another occasion.—Dr. A. Mackintosh, of Callington, sent his prize Herbarium. For want of space it could not be properly displayed.—A very interesting collection of crystals and fossils was exhibited by Mr. Robert Oxland, of Plymouth.

POISONING BY ARSENIC IN WALL-PAPERS OF ALL COLOURS.

II.

THE following is from the pen of the correspondent whom we have already introduced to our readers in connexion with this subject.

Having in a previous paper endeavoured to draw special attention to the very serious dangers resulting from the use of arsenic-green colouring in wall-papers, even where only a spot or line of green occurs in the patterns, it is of no less importance to make known the fact that arsenic is used not only in papers containing green, but frequently and even in large quantities in papers of all colours, even occasionally in some that are nearly white. I state this on the authority of an eminent analytical chemist, late lecturer on chemistry at St. Bartholomew's Hospital, to whom I sent some months since the papers of several rooms, which, although totally free from green-colouring, I suspected to contain arsenic,

because of various symptoms in the occupants of the rooms which appeared to me to indicate chronic poisoning by arsenic. The results of analysis proved that in every instance the persons alluded to (including two physicians) were occupying arsenic-papered rooms, not one of which contained even a speck of green. These papers were of many colours—dark-brown, buff, white, blue, and various delicate shades of grey, drab, and mauve. Two were chiefly white; and of these two, very similar in appearance, one contained a very little arsenic, and the other a large quantity, thus proving that it is quite impossible for any one, professional or otherwise, to judge by the eye whether a paper contains arsenic or not, or whether much or little. The indications of arsenical poisoning caused by the papers containing only a little arsenic were clear in each case.

In my former communication, I stated that in my own household great relief followed the removal of the papers containing green. Such was the case. The very dangerous symptoms ceased shortly afterwards, and we hoped recovery would follow, but there continued an under current of chronic irritation which could not be accounted for, and baffled medical skill. The situation of the house was remarkably healthy, the drainage good, and every room well ventilated. But the improvement we had experienced at first did not continue, and, about nine months after the removal of the green papers, the former alarming symptoms threatened to reappear in every case, and aroused my suspicions that we were again suffering from arsenic. I then had the papers analysed, and the result was that arsenic was found in the papers of every bedroom in the house and of one sitting-room. Thus we, who had previously suffered enough to have a wholesome dread of this terrible poison, found that we had unwittingly replaced the papers containing green with other arsenical papers; and, although these latter contained only small quantities of arsenic, the results became very serious after occupying the rooms for a few months. On removing these papers, and colouring the walls with a wash of whiting and size, tinted with safe colours (such as ochre and Indian red), immediate relief followed, and health has been steadily improving since; but spending an hour or two in an arsenic-papered room, or wearing articles of dress containing the slightest trace of arsenic, speedily brings back the former symptoms more or less severely. It is now six months since we removed these papers, and the improvement since then has been decidedly satisfactory; but after many years of severe poisoning, recovery can only be a gradual process, and it is to be feared that some ill effects must last for years, if not for life, especially in the case of those who no longer have youth on their side to assist the reparative process.

One point worth noticing is that, since we have had no papers on our walls, the atmosphere of the rooms has been far purer than before. It appears to be generally the case that where wall-papers contain any arsenic, the atmosphere is more or less close and heavy, and no amount of ventilation or cleansing will prevent this. Directly the windows are shut, the want of oxygen is perceptible, and some persons therefore find it necessary both to sit and sleep with either door or window open, feeling a want of pure air, while ignorant of the cause. But I have also known cases where arsenic-papers so injured the sense of smell, that this closeness was not perceived until the breathing became affected, and then the need of fresh air was seriously felt. It may be well to mention that, in substituting distemper or oil-paint for paper, it is necessary to be very careful as to the composition of the colours, as many of the pigments used both for oil-paints and for distemper appear to contain arsenic, and have proved injurious; in consequence of which the use of arsenic in oil-paint, as well as distemper, has been prohibited in Prussia for the interior decoration of houses. But that subject needs to be gone into by itself. I have lately had some papers analysed, containing chiefly blue-colouring, which proved to be arsenical; and it appears to be very generally the case that persons occupying rooms where there is blue in the paper, suffer from the same class of symptoms as are produced by papers containing green. It was, in fact, my own experience in blue-papered rooms, and observations made in other cases, combined with the fact that cobalt blue is derived from an arsenical ore, which first led me to suspect the presence of arsenic in other papers besides green. "Arsenical cobalt" is the name given to the ore from which both the cobalt and arsenic of commerce are obtained, and is so-called because cobalt is almost invariably found in combination with arsenic. The processes by which the arsenic is separated from the cobalt appear to purify the latter but imperfectly, for I am informed that the dealers in cobalt consider it pure when it retains ten per cent. of arsenic! Consequently the cobalt blue used in wall-papers, distemper-colouring, and oil-paint is probably never free from arsenic, and therefore papers having blue in the pattern should be avoided. Mauve papers likewise appear to be very frequently arsenical. I also know of cases where arsenic was found in red papers, and produced the usual ill effects, no remedies being of any permanent use until the papers were removed,

when the illness ceased. The circumstances were related to me by the physician who attended in one instance.

It is very generally believed that a small quantity of arsenic in a paper is not injurious. Even where there is a considerable quantity, medical men not unfrequently tell their patients that it does good, and say, by way of proof, "You know I have often given it to you as a medicine with great benefit." Granted, that it is a very valuable medicine; but it is quite possible to have too much of even a good thing, and when arsenic is inhaled for hours together, either all night or for some hours in the day, none can tell how much is inhaled, nor, if they did, would there be any power to regulate the dose, which varies according to the temperature of the room. Further, it is stated that "physiologists well know that arsenic is far more deleterious when breathed than when swallowed." The experience of years in this matter has taught me—and every day's experience confirms it more and more fully—that papers containing very small quantities of arsenic are liable to produce most injurious effects in the course of time, although their onset may be completely hidden from casual observers, and even from medical men who have not given special attention to the chronic effects of arsenic upon the healthy body in contradistinction to the disease.

Arsenic, being volatile, is continually giving off poisonous exhalations. In a heated room it is more rapidly volatilised, and its effects are then all the more seriously felt. Dr. Orton, of Stepney, who wrote on the subject some years ago in the *London Review*, and who is quoted in *The Green of the Period*, makes the following remarks, "deduced from a very close and watchful experience": "That the arsenical particles or dust are more to be apprehended in dry weather and in heated rooms, although during summer, from freer ventilation, doors and windows being open, the poison is then comparatively innocuous." Nevertheless, I could give cases of most serious results from arsenic-papers in summer, although doors and windows were open continually. Dr. Orton goes on to say: "That heavy damp weather is the season of most peril, and that then, by a decomposition set on foot, the poison is insidiously conveyed to the system in the form of arsenuretted hydrogen gas; that this poison affects persons of all ages, but that it is remarkably obnoxious to infantile life; that arsenic so absorbed is not uniform in its action, varying from slight, little noticeable, up to serious symptoms; but that the mucous membrane is peculiarly the seat of its attack, as manifested in its simulation of the various forms of diphtheria, in producing ophthalmia, defective vision, nasal irritation, great thirst, short dry cough, even asthma, low fever, great prostration, and faintings." This clear testimony from a physician ought to carry weight when generally known, but it does not appear to have done much towards arousing the attention of the profession, if we may judge by their indifference to the subject ever since it was first brought under their notice fourteen years ago.

It needs to be explained that arsenic possesses the extraordinary properties common to musk and strychnine, of never lessening appreciably in quantity during any number of years, though continually giving off poison into the atmosphere. Hence, a paper which has been up for many years is no less dangerous than a comparatively new paper; on the contrary, it becomes increasingly dangerous with age, because the older it grows the more does the surface pulverise. It is generally believed that no harm results unless the paper powders off perceptibly on friction; but that is an error, for the dust may be so fine as to defy detection, except with the aid of a microscope; and even if there were no dust whatever, evil effects would still result from the evolution of arsenuretted hydrogen, which is stated to be "gaseous at the usual temperature of the air."

The fact that arsenic is frequently to be found in papers of all colours, and in those termed "colourless," can hardly fail to throw light upon many cases where physicians have been baffled by symptoms resembling arsenical poisoning, and yet could detect no visible sign of arsenic in the paper—supposing that they looked for it, which, it would appear very few have done hitherto. The same will apply to cases where green papers have been condemned and removed, but where, as in the instances already given, through great relief followed, recovery has not been satisfactory, for the all-sufficient reason that those papers were replaced by others containing arsenic, though in very much smaller quantities.

It is also frequently the case, that where symptoms occur similar to those produced by arsenic, the paper visible on the walls may prove to be free from this poison, while underneath it are concealed one or more arsenical papers; and the peculiarly volatile nature of arsenic is such that wherever it exists, it escapes and poisons the atmosphere—even when used to preserve stuffed birds under a glass case—a fact stated by a well known physician. I have recently met with an instance of very severe poisoning from a vivid green paper concealed under another paper, which had been the cause of unaccountable illness for several

years. I also know an instance where as many as thirteen papers were thus found, one over the other, in a bedroom, the occupants of which were alarmingly ill. The outer paper being visibly arsenical, I advised its removal, and then was discovered this odious accumulation of papers underneath, several of which were also arsenical. Immediate relief followed their removal. This pernicious habit of putting up new papers over old ones appears to be a very general practice in lodging-houses, to save labour and expense, but also in private houses it is constantly done, from false notions of economy, or else to get a job quickly finished. Even if there were no arsenic-papers in existence, it is an unclean and therefore an unhealthy custom which cannot be too strongly reprobated.

It being, then, proved that arsenic is frequently used in papers of various colours besides green, the only alternative left to those who would keep health, or regain it, is, to have every paper in their houses analysed, and on no account to put up any wall-paper in sitting-rooms, bedrooms, halls, or passages, without obtaining a certificate from some reliable analytical chemist that it contains no arsenic. I would especially caution the public that it is most important to employ a professional analyst, instead of trusting, as too many have done, to an ordinary pharmaceutical chemist, who is not of necessity an analyst by profession. I mention this, because I know instances where pharmacists have failed to detect arsenic both in paper and in other fabrics, which were afterwards found to contain it in large quantities.

From the facts now given, it will be seen that the evil concerning which I write, is of still greater magnitude than if confined exclusively to papers containing green. In my former communication, I stated that, owing to the very general use of green-colouring, almost every house in the kingdom was probably more or less poisoned with arsenic; but with this additional evidence of the presence of arsenic in papers of all colours, it would appear that in some houses the atmosphere of many rooms (or even of all) may be poisonous. In such dwellings, what chance can the inmates have of health? A lowered condition of vitality and want of nerve-power is understood to be the predisposing cause of all disease, and it would perhaps be difficult to find any agent more capable of producing such results than arsenic. What, then, does this wide-spread system of poisoning tend to but gradual, sure decay and deterioration of the national health? and that by totally unnecessary and preventable means, which the Government of this country is bound on every public ground to deal with promptly and energetically. I have been carefully investigating this subject for nearly two years, having had fourteen years' personal experience in the matter, with special opportunities for close observation of the symptoms developed in the progressive stages of arsenical poisoning during the whole of that time; and I have no hesitation in saying that I believe every medical man in the kingdom is treating day after day numerous cases of disease, originating in irritation of the mucous membrane, which simulate almost every morbid condition under the sun (brain, heart, lungs, liver, kidneys and other organs being affected in turn), the true diagnosis of which would be "arsenical poisoning."

It must not be supposed that I would attribute all disease to one cause. There are, alas! only too many others at work besides; but it will at least be allowed that this constant inhalation of poisoned air, by lowering vital power, paves the way for the invasion of every conceivable ill to which flesh is heir, and may therefore be said to tend indirectly to produce illness of all kinds (as well as directly, by irritation of the mucous membrane), while it also aggravates very seriously diseases that have arisen from other causes. The facts I have given speak for themselves, and may serve to show how serious an amount of atmospheric poisoning and consequent injury to health, and even destruction of life, are going on in our midst, slowly but surely. It is to be hoped that public feeling may be speedily aroused, and universal indignation expressed that such wholesale murder, for it amounts to nothing less, should have gone on unnoticed and unchecked during the greater part of this century, in a country which considers herself foremost in the ranks of civilised nations. Its effects may justly be described, to use the words of a writer upon another subject connected with social science, as "the lowering of the physique of the nation, the deterioration of our constitution." According to the purity or impurity of the air we breathe, so are human beings influenced both physically and morally; crime itself lurks in poisoned dens; and if we surround man, woman, or child with a poisonous atmosphere, from whatever source, we hinder healthy development, lessen the capability as well as the desire for employment, and sow the seeds of physical and mental incapacity for every avocation of life.

DR. MICHAEL BEVERLEY has been presented with a handsome biscuit-caddy by the nurses of the Norfolk and Norwich Hospital on retiring from the office of House-Surgeon.

ROYAL COLLEGE OF SURGEONS.

FROM the annual report of the receipts and expenditure at this institution from Midsummer-day 1870 to Midsummer-day 1871, which has just been published, it appears that the former amounted to £11,752 : 2 : 3, and the latter to £11,759 : 14 : 1, being an excess of £7 : 11 : 10 over the receipts. In the account of receipts, the largest amount is derived from fees paid for the several diplomas, amounting to £9,279 : 11. The next largest amount, £1,907 : 1, is derived from rents (£845 : 1) and dividends on investments (£36,000) £1,062. Elections into the Council, Court of Examiners, and Fellowship, yielded £262 : 10. The Trust Funds produced £290 : 3 : 2, and are included under the following heads:—Hunterian, £49 : 13 : 8; Jacksonian, £10 : 2 : 10; Blicke's bequest to the Library, £8 : 17; Blane's Naval Medals, £8 : 17; Gale's Annuity, £20 : 7; Clift Fund, £44 : 15 : 8; Erasmus Wilson Fund, £147 : 10.—The disbursements, which amounted to £11,759 : 14 : 1, were principally on account of fees paid to members of the Council, Courts and Boards of Examiners, viz., £4,377 : 18 : 6, and salaries and wages £3,387 : 8 : 10. The sum of £974 : 17 : 7 was paid for taxes, rates, and stamps, exclusive of postage. Pensions are put down at £457 : 3. Subjects, patients, bandages, and refreshments, £158 : 3 : 11. Law expenses, £146 : 10 : 10.

In analysing the list of Fellows, Members, etc., we find that there are now 192 Honorary Fellows, 434 who have attained that distinction by examination, 706 by election, and 2 *ad eundem*, viz., Messrs. Kelburn King and Wm. Mac Cormac, making a total of 1,334, in whom the elections into the Council are vested. There are nearly 15,000 Members, 1,014 Licentiates in Midwifery, and 314 Licentiates in Dental Surgery.

To those about to undergo their examinations, the *Calendar* will be useful as giving all the questions submitted to the several candidates during the past year, whether for the Fellowship or Membership, together with much information.

ASSOCIATION INTELLIGENCE.

SHROPSHIRE ETHICAL BRANCH.

THE annual general meeting of the above Branch will be held at the Lion Hotel, Shrewsbury, on Friday, October 6th, at 1 P.M.; A. G. BROOKES, Esq., President, in the Chair.

Dinner will be served punctually at 3.30 P.M., for the convenience of the country members.

Gentlemen intending to read papers, or to be present at the dinner, are requested to notify their intention at their earliest convenience to

JUKES STYRAP, } *Hon. Secs.*
EDWYN ANDREW, }

Shrewsbury, September 25th, 1871.

SOUTH MIDLAND BRANCH.

THE next meeting of the above Branch will be held at the Town Hall, Wellingborough, on Tuesday, October 10th, at 2 P.M.

Gentlemen who intend to read papers or cases, are requested to forward the titles of the same forthwith.

J. M. BRYAN, M.D. } *Honorary Secretaries.*
WM. MOXON. }

Northampton, September 11th, 1871.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch will be held at the Railway Hotel, Taunton, on Tuesday, October 3rd, at 5 P.M. Dinner on the table at 5.15 punctually. Tickets 3s. 6d. each, exclusive of wine and waiters.

The following resolution was passed at the annual meeting:—"That with a view to obtaining from members of the Branch their opinion, and to this extent, authority on especial points of interest, a notice be sent to each member, at least one month before a general meeting of the Branch, of a question on a medical or allied subject to be proposed by the Council, on which at the said meeting each member will be expected to express his opinion; but having regard to the number of opinions it is sought to elicit, no argument in supporting an opinion shall exceed five minutes in delivery, whether read by the writer, or deputed, or spoken extemporaneously."

The following question has been settled by the Council as the one on which opinions should be now asked:—"Does the application of Carbolic Acid favour the healing of wounds?"

Gentlemen intending to be present at the dinner, or to read papers afterwards, are requested to give notice to the undersigned, so that he may make the necessary arrangements.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, September 11th, 1871.

SOUTH EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE forty-first meeting was held at the Church Institute, Ramsgate, on Thursday, September 14th, 1871.

The following papers were read.

1. Mr. R. Hicks: Selection of Surgical Cases, with Remarks. [See page 383.]

2. Mr. S. Woodman: Case of Abdominal Aneurism, with Gangrene of the Right Leg. [See page 380.]

3. Dr. Parsons related a Case of Laceration of the Vagina from Fracture of a Glass Injection-Syringe, in which he had removed numerous fragments at intervals during a period of twenty-two months. He also exhibited a Syringe by Maw and Son, with a collar of vegetable ivory, which effectually prevented the advance of the piston through the nozzle, which was the cause of the accident in this instance.

Dinner.—The members and visitors afterwards dined together at the Granville Hotel.

CORRESPONDENCE.

THE NEW HOG-PARASITE.

SIR,—As in January last you were good enough to insert a letter from me in reference to the occurrence of a rare and remarkable entozoon in the hog, I feel sure that the record of some additional facts in relation to this subject will not fail to be of interest.

At p. 50, No. 254, of the JOURNAL, I have stated that the parasites discovered by Professor Fletcher, of Indianapolis, were examples of *Stephanurus dentatus*; but it will not surprise you to learn that other persons who have seen the worm have supposed it to be a new species of helminth. Thus, Professor A. E. Verrill, the distinguished zoologist, of Yale College, New Haven, Connecticut, has described it under the name of *Sclerostoma pinguicola*. His communications will be found in the September number of the *American Journal of Sciences*, for 1870, and in the more recently published "Report of the Connecticut Board of Agriculture." This Report has also been issued as a separate brochure by the Smithsonian Society, and is entitled *The External and Internal Parasites of Man and the Domestic Animals*.

But the most interesting fact which remains to be told is, that the *Stephanurus* has just turned up in Australia, in confirmation, as it were, of the anticipations expressed in the editorial notice of the JOURNAL, recorded at p. 44.

Through the kindness of Mr. Slack, President of the Royal Microscopical Society, I have had an opportunity of examining nineteen slides of unnamed entozoa, recently received from Sydney. They have been transmitted by the Secretary of the Agricultural Society of New South Wales, requesting that the various forms might be identified. A valuable paper by Mr. William Morris is also sent with them, describing the worms. This paper will be read before the Royal Microscopical Society at their next meeting on October 4th.

Having identified and named all the specimens, I am in a position to say that the *Stephanurus dentatus* is amongst their number, and that the facts thus brought out, in relation to the structure, development, geographical distribution, and obscure form of disease produced by this singular parasite, are of the highest interest, not alone to helminthologists, but also to practical agriculturalists and veterinarians, as well as to the scientific body of the medical profession.

I am, etc., T. S. COBBOLD, M.D., F.R.S.

Wimpole Street, September 1871.

OBITUARY.

DUNCAN GREENHILL, L.F.P.S. GLASGOW, RUTHERGLEN.

ON August 20th, Mr. Duncan Greenhill, Surgeon, died at the age of 46 years. From the time when he received his licence, in 1855, he settled in the town of Rutherglen, and pursued his profession quietly and unobtrusively, securing for himself the esteem and confidence of those who sought his advice. In everything relating to the interests of the borough, and likely to benefit the people, he was ever forward in offering his aid.

SAMUEL SOLLY, F.R.S.

THE many old pupils of St. Thomas's Hospital will hear with regret that their old teacher and friend expired suddenly on Sunday last, the 24th instant, at the residence of his daughter, Mrs. Money Wigram, in the 66th year of his age. After receiving an excellent preliminary education, he commenced his professional studies under the immediate auspices of Mr. Benjamin Travers, surgeon to St. Thomas's Hospital, to whom he was articled at the Royal College of Surgeons on May 3rd, 1822, in those "good old times" when hospital surgeons could take as many apprentices as they liked, and nearly always on the same terms, viz., payment of a premium of one thousand guineas to reside in the house, or half that amount if living out. Mr. Solly's father preferred the latter, and accordingly paid £525. Besides other advantages, it was generally considered that the pupil might look forward to becoming attached to the staff, and ultimately succeeding, as in the present case, to the higher surgical offices by seniority. On the completion of his apprenticeship, Mr. Solly was admitted a member of the College of Surgeons on May 9th, 1828. When the new charter was granted to that institution, he was one of the first elected a Fellow (December 1843). In 1856, he was elected a member of the Council of the College. In 1862, Mr. Solly was chosen Professor of Human Anatomy and Surgery, but did not continue his course beyond one year.

On the resignation of Sir William Lawrence as a member of the Court of Examiners, the Council, on May 27th, 1867, elected Mr. Solly his successor. In time, he became junior, and then senior, Vice-president; but, at the election of President, he was passed over in favour of Sir William Fergusson. There is no doubt the Council felt that, in such excited times as they were then passing through, they required the more powerful assistance of Her Majesty's Sergeant-Surgeon. Soon after this, Mr. Solly's health broke down, rendering it necessary for him to resign his chair as an examiner, and, we believe, also some of those lucrative appointments which he held in the city where he had long practised his profession. In 1866 and 1867, he was President of the Royal Medical and Chirurgical Society.

Mr. Solly was deservedly well known and esteemed from his numerous and valuable contributions to the advancement of medical science, especially by his work on the *Human Brain*, his *Surgical Experiences*, an analysis of Müller on the *Glands*, and many papers and lectures on surgery, etc., in the journals. By his death, a vacancy is created in the Council of the Royal College of Surgeons, which will not, however, be filled up until the annual meeting in July next.

Mr. Solly leaves a widow and family of sons and daughters to deplore his loss.

ALEXANDER MACDOUGALL, M.B., C.M.

DR. MACDOUGALL died in the Edinburgh Royal Infirmary on September 5th, of diphtheria, after an illness of nine days. He was the son of the late John Macdougall, D.D., Minister of Lochgoilhead, and came to Edinburgh to study medicine, where, after a distinguished career as student, he graduated in August 1870. The following winter he obtained by competitive examination the post of resident-physician to the clinical wards of this Infirmary. Here, by his assiduity, kindness, and gentleness, he won the esteem and respect of all with whom he came into contact. In the same winter he was elected president of the Royal Medical Society, whose good he had ever at heart, and from which, he said, he had gained many advantages.

RICHARD FILKIN, M.D., RICHMOND, SURREY.

RICHARD FILKIN was born at Great Berkhamstead in November 1775. His father was Lieutenant Filkin, R.N. In July 1790 he commenced his medical education under Mr. Dundas (afterwards Sir David Dundas, Bart.), Sergeant-Surgeon to King George the Third. Seven years later, Richard Filkin entered on his medical and surgical studies at St. George's Hospital, and passed as Member of the Royal College of Surgeons in 1803. He then entered the army, and ultimately became Surgeon of the North Gloucester Militia; and in 1815, the regiment having been disembodied, he was placed on half-pay, which he retained to the time of his death.

Being relieved from military duty, he settled in private practice at Tetbury in Gloucestershire, where he resided about fourteen years. After he had left Tetbury he went to Glasgow, and took his degree of M.D. at the University. He never practised after this, but occupied his leisure in travelling on the continent of Europe. He eventually settled at Richmond, and where he died on the 15th inst., in the ninety-sixth year of his age.

Dr. Filkin was a man of considerable intelligence and of agreeable

conversation. As a medical officer of the army, his zeal and energy occasioned him to be well thought of at the Army Medical Board, especially for his *Code of Diet for the Army*.

WILLIAM HENRY WRIGHT, M.R.C.S.E.

MR. W. H. WRIGHT was born in Hackney in 1822. After studying at Guy's Hospital, he became a member of the Royal College of Surgeons and a licentiate of the Society of Apothecaries in 1845. He subsequently settled in practice in Clapton Square, and held the appointment of Divisional Surgeon to the Hackney Police, having also a very extensive private practice in the neighbourhood of Hackney. In private life he was much respected, being a most genial and kind-hearted man, and in his profession he enjoyed the confidence of all those whom he attended. Mr. Wright left his residence on September 19th for the purpose of taking a short tour through North Wales. On the 22nd, whilst in the neighbourhood of Festiniog Falls, he was walking upon the cliffs, and had descended a little below the summit of the precipice overhanging the Falls, when, the ground giving way, he was precipitated into the waters below, a depth of fifty feet. Seven wounds upon the head testified to his having struck against the rocks. An inquest was held on Monday the 25th, when the following verdict was returned. "Accidentally killed by a fall from a precipice at Cymfael Falls, Festiniog."

MEDICAL NEWS.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ATCHAM UNION, Salop—Medical Officer for the St. Mary's District.
BRISTOL, City of—Medical Officer for District No. 2.
CHARING CROSS HOSPITAL—Assistant Physician.
CORNWALL LUNATIC ASYLUM, Bodmin—Assistant Medical Officer.
COTON HILL INSTITUTION FOR THE INSANE, near Stafford—Assistant Resident Medical Officer.
GAINSBOROUGH DISPENSARY—House-Surgeon.
GREAT WESTERN RAILWAY—Surgeon for the Leamington District.
GUEST HOSPITAL, Dudley—Resident Medical Officer.
INSPECTOR OF ANATOMY for the Provinces.
LIVERPOOL INFIRMARY FOR CHILDREN—Honorary Assistant Medical Officer.
LIVERPOOL NORTHERN HOSPITAL—House-Surgeon.
MACCLESFIELD—Certifying Factory Surgeon for.
MACCLESFIELD DISPENSARY—Medical Officer.
MANCHESTER ROYAL INFIRMARY—Physician's Assistant.
MAYO INFIRMARY—Surgeon.
NEATH UNION, Glamorganshire—Medical Officer and Public Vaccinator for the Llangonoyd District.
NORTHERN HOSPITAL, Liverpool—Physician.
OMAGH UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Eastern Division of the Omagh Dispensary District.
PEMBROKE UNION—Medical Officer for District No. 5.
POCKLINGTON UNION, Yorkshire—Medical Officer and Public Vaccinator for the Pocklington No. 2 District.
QUEEN ADELAÏDE DISPENSARY, Bethnal Green—House-Surgeon.
RATHDOWN UNION, co. Dublin—Medical Officer for the Killiney Dispensary District.
ROYAL INFIRMARY, Edinburgh—Resident Physician, Clinical Wards.
ROYAL ORTHOPÆDIC HOSPITAL, Oxford Street—Resident House-Surgeon and Apothecary.
SHROPSHIRE EYE and EAR HOSPITAL, Shrewsbury—Physician.
UNST, Shetland, Parish of—Medical Officer.
WARMINSTER UNION, Wilts—Medical Officers and Public Vaccinators for the Corsley and Warminster Districts and the Workhouse.
WARNEFORD HOSPITAL, Leamington—Surgeon.
WARRINGTON DISPENSARY—Resident Surgeon; Apothecary.
WESTMINSTER HOSPITAL—House-Physician.
YORK COUNTY HOSPITAL—House-Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CORSCADDEN, Mr., appointed Apothecary to the City of Dublin Hospital.
HENRY, R., M.D., appointed Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Aghnacloy Dispensary District of the Clogher Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATH.

TOONE, Henry, Esq., Surgeon, at Whitwick, Leicestershire, aged 38, on Sept. 12th.

THE MARQUIS OF HERTFORD has been elected President of the General Hospital, Birmingham, for the ensuing year.

THE LORD BISHOP OF RIPON will preach the anniversary sermon on behalf of the Derbyshire General Infirmary.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London. 7.30 P.M.: Council Meeting. 8 P.M.: Dr. Copeman, "On Cases in Practice"; Dr. Braxton Hicks, "On the Contractions of the Uterus throughout Pregnancy: their Physiological Effects, and their value in the Diagnosis of Pregnancy."; and other papers.

EXPECTED OPERATIONS AT THE HOSPITALS.

LONDON HOSPITAL, Wednesday, October 4th, 2 P.M. Removal of Tumour occupying the Nostril, Orbit, Temporal and Zygomatic Regions of Left Side, by Mr. Maunder.—Removal of Naso-pharyngeal Polypus; Operation for Ununited Fracture of Femur, by Mr. Couper.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

J. X. (Bantry).—It would hardly be advisable to comply with our correspondent's request. The honour in question is reserved for men of the very highest eminence, and for them only.

MR. THOMAS MORGAN (Madeley).—Apply to Mr. Becke, Northampton; or Dr. Ford Anderson, 28, Buckland Crescent, Belsize Park, London, N.W. Mr. Fairlie Clarke's address is 1, Curzon Street, London, W.

GEOGRAPHY OF PHTHISIS: A DISCREPANCY.

SIR,—Your article on the Geography of Phthisis, and abstract of Dr. Charlton's interesting paper, in the JOURNAL, afford materials for much reflection. Although the causes which procure for certain localities a complete or partial immunity from phthisis remain as yet unknown, we may still hopefully avail ourselves of our limited knowledge in the hygienic treatment of those patients whose history leads us to fear the development of some constitutional taint. If it should prove that a residence in such a favoured locality tends to arrest this development, we shall have discovered a fact in preventative medicine of great value to the inhabitants of these islands. As, however, it would be impossible to send the mass of our consumptives to Iceland, the Andes, or the Kirghis steppes of Russia, it becomes expedient to inquire what places in our own isles hold out the greatest chance of escaping from this malady. The investigations of Dr. Edwards Crisp and Mr. Haviland promise to render us great assistance in this matter. Referring to an article on the Influence of a Moist Atmosphere in the Production of Pulmonary Consumption, published in the St. Andrew's Transactions for 1868, Dr. Crisp there states: "Great Ouseburn, in the county of York, is one of the places in England where phthisis is least prevalent." Turning to Mr. Haviland's coloured map, published in the JOURNAL at the beginning of this year, a considerable portion of that Union is found to be shaded *dark*, indicating a district where phthisis is not below the average in frequency. If investigations into the geography of disease are to be made available for its prevention or cure, it seems of the first importance that the facts elicited should be most carefully sifted and recorded. This discrepancy, meeting us on the very threshold of the inquiry, seems worthy of remark. Perhaps Mr. Haviland or Dr. Crisp, who have evidently bestowed much labour and study on this subject, can assist us to a satisfactory explanation.

I am, etc., LEONARD ARMSTRONG.

ARSENICAL PAPERS.—Lady Hattry will find another communication on this subject in this day's JOURNAL. The author of the paper is, as we have stated, not a professional man; but the authenticity of his statements is vouched for by an eminent physician. Our correspondent might apply to Dr. Apjohn or Dr. Cameron, Dublin.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MEDICAL WOMEN.

SIR,—Your article headed "Minerva Medica" is so fair in spirit and so wise in its counsels to lady aspirants for medical work, that I ask leave to add a few remarks; and having been for seven years Honorary Secretary to the Female Medical Society, I may be able to throw some light upon the question.

1. I would correct your writer in one point of fact, when he says that the seven ladies now studying medicine at Edinburgh have practically testified their opinion of the Obstetrical College of the Female Medical Society by keeping away from it. So far is this wrong, that two of those seven ladies are old students of our College, and took the highest honours of their years. One of them, Mrs. Thorne, subsequently practised as an *obstetrician* in Bedford Square; but, when the opening for further study occurred at Edinburgh, she became one of the *septem contra Edinam*. Mrs. Thorne has done much in publicly pointing out the value of midwifery as a specialty for educated women, and the usefulness of our College in enabling women to fit themselves for the work. The other lady is the sister of Mr. Holroyd Chaplin, a well-known London solicitor, who is now one of the most active and useful members of the Executive Committee of the Female Medical Society.

2. I enclose prospectus of the College courses for its eighth annual session, from which you will see that the scheme of study is, so far as it goes, a sound and adequate one for "midwifery and the accessory branches of medicine"; and that the various subjects are taught respectively by medical gentlemen of adequate standing and ability.

3. The Female Medical Society would have done anything further that seemed feasible. In 1866, I applied to the Apothecaries' Company, but could get no encouragement whatever, and practically little information. I persevered until I was privately told by a member of the Court of Examiners that they meant to make it as difficult for the women as possible, and that they had made a mistake in letting Miss Garrett up. We understood that a full school, if organised for women, would be refused recognition on any practicable basis—such, for instance, as that on which the "Grosvenor Place School" worked for many years. The following are extracts from official letters which I obtained after some importunity from the Secretary:—

"No lectures are acknowledged by the Court of Examiners which are not delivered at a recognised medical school and to which is attached an hospital of at least a hundred beds." ***

And in another letter:—

"No lecturer will be recognised who is not connected with a recognised medical school. A medical school is not recognisable without a complete staff of lecturers, nor is the course of lectures acknowledged if delivered in a private room." ***

Such a school would require large means for its establishment, and a large income for its support; and as, in my opinion, there were not lady-students enough in the country to support it if established, I made no effort in that direction. Nor do I think that a charitable school is more required for women-physicians than for men-physicians. Even now I am of opinion that a complete medical school for women, if established, would stop for want of students. Numbers of ladies come to me about "entering the profession"; and when I advise them to set to work to pass the Arts examination at the Hall, or the preliminary women's examination at the London University, they disappear, and I hear no more of them.

4. Our Committee have never been able to adopt the notion of mixed classes; and on that and some other grounds we have not met with the co-operation of those who hold what are called more advanced ideas upon the subject. If there were any reasons of another kind for this absence of co-operation, your columns would be a proper place for these reasons to be stated and discussed.

4, Fitzroy Square, W., September 26th, 1871. I am, etc., JAMES EDMUNDS.

* * We read this as a total surrender of every material point at issue. 1. The prospectus forwarded is, in our opinion, absolutely farcical in its meagreness. The number of lectures in each course is not stated; there does not appear to be an adequate museum or a hospital attached; and there is a fatal failure to fulfil all the principal points which we described as compulsory for all recognised medical schools. The necessary full facilities for illustrating the lectures would seem from the prospectus to be non-existent. The Colleges cannot recognise what does not exist. 11. Dr. Edmunds's opinion apparently concurs with our own, that there are not enough lady-students in the whole country to support one ordinary medical school, on however small a scale. *Cadit questio*. An average of twenty students a year will keep a medical school in working order, as the experience of Lane's school, the Westminster, and others, shows. If there be not so many to be got together in the three kingdoms, our conclusion that this is really a very small question, magnified by loud talking and the spouting of frugal sympathisers, seems to be fully justified. No advocate ever dealt a more fatal blow to his own cause than the writer of this letter.

MEDICAL RESPONSIBILITY.

M. G. H. R. puts the following curious case as a query.

There are three of us practising medicine in this village. A farmer's wife was taken in labour, and the husband came for No. 1, who declined attending, as he was engaged for a shooting party, and did not wish to be detained. He then went to No. 2, and took him out to his house, about a mile distant. After being about an hour away, the doctor came back, and went to bed, it being about half-past five in the morning, the farmer leaving him on a saddle-horse. As our houses are close adjoining, I heard the whole transaction. About half-past six, the same man came for me, and I declined going, and told him to get the man he already had out. He said he would rather have me, as the other occasionally drank too much. There is no doubt this is quite true and notorious; but he was quite sober when he was called from bed that morning, and able to ride out and in again to and from his patient's house. I most positively refused to interfere in the case; and the man was obliged to keep to the practitioner he wished to throw over. Everything went on satisfactorily, although it turned out a breech presentation.

My reason for troubling you with these details is, that I wish to know—Could I have been compelled to go to this case? or could I have been held responsible for anything untoward that might have occurred? I think not; but the farmer, in conversation some time afterward, was of the contradictory opinion. I would be glad to have your decision on the point in your answers to correspondents, at your convenience.

* * As there was a practitioner already in attendance, M. G. H. R. would clearly be absolved from occupying the delicate and unsatisfactory position which it was sought to impose on him.

INTRODUCTORY ADDRESS

DELIVERED AT

ST. THOMAS'S HOSPITAL, LONDON,

On October 2nd, 1871.

By F. LE GROS CLARK, F.R.C.S.,

Senior Surgeon to the Hospital; Member of Council and of the Court of Examiners in the Royal College of Surgeons of England; etc.

MR. TREASURER,—It is now many years—I do not care to say how many—since I exchanged my school-days for an articulated student's life within the walls of our venerable Hospital. I may, even then, have indulged in the fond anticipation that, at some long distant future, I might realise the promotion which every hospital-apprentice of my time hoped for, but few attained. Yet I knew that unremitting exertion was needed in this competitive race, and I sought with others the mental relaxation and physical bracing which exercise on our river afforded. We used to come to Stangate; and many a time have I tripped, in the lightness of heart which the young and unwarped spirit alone knows, over the long shelving shore at low water to launch my boat. Even the ready credulity of boyhood would have rejected, as absurdly improbable, the suggestion that each flood-tide was then flowing over the site of the Hospital of future ages. Yet so it is; and I stand, with mingled feelings of deep emotion, on this spot to inaugurate the first session of a new era in the history of our old and honoured school.

It would ill become me, on an occasion like the present, to yield to those reflections which naturally claim their influence over the mind of one who has passed the meridian of his days. It is the penalty of survivors to lament over the graves of those who are gone before; and how few of the number who began their career with me still remain, whilst all my honoured teachers have departed. How distant the prospect of the future was long years ago, yet how brief in retrospect. It scarcely needs an effort to carry me back to the time and scenes when, with buoyant hope and earnest purpose, I listened to the words which fell from the lips and watched the hand-skill of those I revered, ambitious to tread in their footsteps. Their place knows them no more; and in paying a passing tribute to their memory I am reminded that I am now the oldest teacher in this school, and the oldest officer or servant of the institution; and I am sensible how closely the next generation is pressing on—how soon I must give place to others, happy if, perchance, I linger still in the memory of some whose early promise I have hailed, and whose future career I shall continue to watch with abiding interest.

I have been led into this train of reflection by a consciousness that lapse of time has gained for me the privilege of addressing you on this interesting occasion. I shall not, however, indulge myself by giving further expression to meditations in which my younger hearers cannot be expected to sympathise. We are met together to celebrate a new birth, to inaugurate a new era, to renew our association with the familiar waters of our old river, from whose banks we have been divorced so long. He will not resent our presence, for, though we have encroached upon his bed, he flows by us with increased vigour, and in a purer and more wholesome current than of yore. All hail to our noble river, which secures to us immunity from encroachment, and an animated scene and health-giving breezes for our patients.

We have a noble Hospital, and the local habitation of its fitting accompaniment—a great Medical School. To you, Sir Francis, I offer, on behalf of my colleagues, our congratulations on the completion of this great work, which owes so much to your unflagging energy and devotion, and to express at the same time our appreciation of the enlightened spirit which has prompted the governors to make such admirable arrangements for the medical school. I believe, sir—nay, I have no misgiving—that our success will be commensurate with these preparatory advantages, and will leave no room for regret that this impulse has been acted on so liberally.

Although deputed to inaugurate a new era in the history of our Hospital School, I cannot be unmindful that there are many present on this occasion who sympathise with me in the memories of the past, and I may be excused if I devote a few moments to the retrospect; such indulgence—sentimental if you please so to call it—may not be without its apology, and even its useful application, in this utilitarian age.

The dawning history of St. Thomas's Hospital was not such as to promise the vigorous adolescence which it has since attained. It was

early in the thirteenth century—viz., in 1207—that an accidental circumstance gave birth to it. The canons of St. Mary Overbury were burnt out of house and home, and took refuge in a building which they erected near at hand till their monastery was rebuilt; and the subsequent appropriation of this building for charitable purposes is the origin of our Hospital. A few years later, when under the patronage of the Bishop of Winchester, the ruins of whose palace still survive by the river-side in Southwark, it was scantily endowed by him.

The derivation of our name is somewhat obscure. It would appear, however, from the careful researches of Dr. Stone, who has contributed a *Short History of Old St. Thomas's Hospital* to our Reports, that the spital was first dedicated to St. Thomas, the martyr of Canterbury; and afterwards, with more orthodoxy, to St. Thomas the Apostle. The annual income of the Hospital towards the close of the fifteenth century was £343; and this was dispensed by a president, master, and brethren, the foundation being limited in its usefulness, and employed as an almshouse for the needy and infirm to die in, rather than as a refuge wherein the sick and wounded could be made whole. Nurtured thus through a prolonged infancy of more than three centuries, the institution was at last claimed by our orthodox and excommunicated King Henry VIII as church property, and was subsequently adopted and endowed by his youthful son Edward, who, shortly prior to his death, appointed the Lord Mayor and commonalty of the city for the time being as governors in perpetuity of the four royal foundations of St. Thomas, St. Bartholomew, Bridewell, and the Blue-coat School. Under their sheltering wing our Hospital has flourished and been enriched during the succeeding reigns. The old structure survived the great fire of London in 1666, and likewise a succeeding conflagration ten years later in Southwark; but towards the close of that century it was replaced by a new building, nearly £40,000 being subscribed for that purpose; and the statue of Sir Robert Clayton, which still graces our grounds, was then erected in commemoration of his liberal benefactions.

My own early memory of our Hospital dates back to a period prior to the erection of the two noble piles of building which flanked the new front square, in the midst of which the beautiful statue of our sixth Edward stood; and I used to traverse the old London Bridge from my city home, and listen by night, on my way from lecture, to the mysterious music of the water-works as the tide rushed through them with deafening noise; and little, indeed, did we then ween of the possibility that any power could arise of such influence as to compel our removal to another site. The interval of our abode in our late temporary refuge has been one of partial suspension of animation, and will, doubtless, ere long, be regarded as a blank in our existence, when the life we now renew shall be fully established and developed.

In the chronicles of our Hospital there are recorded many curious and interesting facts and events, as well as the names of both physicians and surgeons who were not only famous in their own day, but whose reputation has survived to the present time. Amongst the records, for which I am much indebted to our Medical Secretary, Mr. Whitfield, I find references to some singular customs and circumstances, which mark the changes that time has wrought in us and in our establishments. Thus towards the close of the sixteenth century, inmates of the Hospital, of notoriously bad character, were ordered to be punished at the cross erected within its walls before they were discharged; and we have an actual recital of punishment by whipping at the said cross being inflicted for misdemeanour in 1567. We also find that, in 1573, the morals of the patients were further cared for by a hand-mill being provided for them wherein to grind corn, that they might thus “be kept from idleness.”

In 1698, Mr. Elton, one of the surgeons, was suspended from his office for assaulting and beating one of his colleagues; and in consequence thereof an order of the Court of Governors was passed—which I presume is still in force—that in future if any officer strike or beat another officer he shall be expelled. This was certainly a vulgar way of resenting an offence, and is suggestive of the hybrid character of the barber-chirurgeon of that epoch. But it is recorded traditionally that the more polished physician, whose status in society permitted him to carry a rapier by his side, was also guilty of professional squabbling, ending in deadly feud, for Mr. Whitfield has in his possession a gold-headed cane, which was presented by one of our medical staff to his grandfather, in recognition of his services in arresting a mortal combat across his table by two of the physicians of this establishment.

I find the practice of specialties is recognised in the register of events for 1638, when £20 a year was voted to a surgeon—I suppose the Wilson of his time—for the special care and cure of scald-head. But the governors of that period showed a wise discretion in another allied act. It is well known that, before the great Cheselden lived, and adorned alike the profession and our Hospital, one of the most terrible

diseases to which the human frame is subject was rarely cured; because of the ignorance and incapacity of those who undertook the only means of affording effectual relief by operation. Now it appears that in the year 1700 a certain Dr. Cypriano, a native of Amsterdam, and educated at Utrecht, had acquired a reputation for this operation; and the General Court of the Hospital, prompted by a humane feeling, and careful also of the honour of their officers, requested the President to treat with this gentleman, with a view to his instructing two of their surgeons in his special operation. It is recorded that on several occasions he performed the operation in question at our Hospital with great success, and without fee or reward; but we do not learn whether his instructions were serviceable to his two pupils. I should think it doubtful, for little is learned in a complex operation, almost every step of which is out of sight, and in which an appreciation of all the attendant difficulties can be acquired only from an accurate acquaintance with the anatomy of the parts concerned. But anatomy was not then studied as it now is; and the benevolent object of the governors would have been more effectually attained had they rescinded an order of the court, issued a short time previously, that "no dead corpse should be dismembered."

The first impulse in the right direction, in the performance of this operation, was given by a French priest, Frère Jacques, in 1697, who acquired an European fame, but it remained for Cheselden to place it on the sure foundation which I have indicated; and it is much to say of our great surgeon, that his work on the subject, published in 1723, deserves to be a text-book still, and that, in every essential particular, this operation remains what he left it a century and a-half ago. What worthier subject, then, could be found for the sculptor's chisel, or to be held in cherished remembrance by the old St. Thomas's students? And beautiful as a work of art is the marble effigy of this fine old English surgeon, which now graces our entrance hall, the gift of those who delight to honour the great and good associated with their hospital and school.

At this period of our history a regular registry of the surgical pupils was kept by the apothecary, and the useful order of dressers existed. It may not be uninteresting to the gentlemen now holding that responsible office, to learn that they were then called "cubbs" in our establishment.

I have said that we can boast of many names of celebrity in the annals of our hospital. Thus, one of our physicians, Dr. Prujean, received special marks of honour at the court of Charles II, whose Queen he attended in a severe attack of fever. Dr. Richard Mead, whose courtly bust (also the gift of our old students) presents an interesting contrast to the artless and almost rude attire of his great surgical colleague, was an accomplished physician and a man of letters; and whilst an officer of our hospital he condescended to read lectures on anatomy to the Company of Barber-Surgeons. Engaged in a large and lucrative practice, the medical attendant of Queen Anne in her last illness, and the court-physician of George II, we learn that he was "highly respected, and as the patron and friend of the learned, universally admired."

It is recorded that Cheselden gave lectures on anatomy and surgery at the Hospital, but it was not until later, viz., in 1768, that Joseph Else, one of the surgeons, was officially appointed to lecture; and it may be said of him, that he was the founder of the systematic teaching of anatomy in St. Thomas's Hospital.

Dr. Mark Akenside was likewise an accomplished physician, and, in addition to being one of the officers of our Hospital, held the highest court appointment at the commencement of the reign of George III. But his reputation as a poet has survived his professional fame, and there is much of elegance and rhythm in his verses, and his language is choice and classical. But few can read his *Pleasures of Imagination* without some sense of weariness at the pompous and somewhat pedantic diction in which his really beautiful imagery is clothed.

In 1770, Dr. Fordyce, whose portrait we possess, set us an example of diligence which I think few of my colleagues would be disposed to follow. He used to lecture daily on three subjects, viz., chemistry, materia medica, and the practice of physic; and these lectures, given at his own house, were delivered in three successive hours, commencing at seven o'clock in the morning.

Dr. Reynolds was a court physician of his time at the close of the last century; and Sir Gilbert Blane, another of our physicians, held a similar position in the next reign, and acquired much credit for his recommendation of a plentiful supply of lemon-juice to our troops engaged in the unfortunate Walcheren expedition.

The names of the first Lister (whose aged, benevolent face I can just recall), and of Wells, the author of the elegant and conclusive monograph on the "Formation of Dew"; of Currey, Chandler, and the Clines, bring me to the period of my own personal recollections, when

my honoured master, Mr. Travers, with Mr. Green and Mr. Tyrrell, were the surgeons, and Dr. Williams, Dr. Elliotson and Dr. Roots, were the physicians of our Hospital. They are all gone; and I can but record the great esteem in which they were held by all who knew them, as men of high scientific attainments, whose teaching and example have left their impress on the minds of many scattered throughout the length and breadth of this land. Of my own more immediate contemporaries, some are gone and some still survive, though they have withdrawn from amongst us. The grave has scarcely closed over one; and many will have learned, with grief but scarcely with surprise, of the death, one short week since, of Samuel Solly. I have known him since my boyhood, and we have been allies and colleagues throughout life; and I cannot recall a single hour during which the harmony of our intercourse has been interrupted. His compulsory retirement from professional duties, in consequence of ill health, occasioned our premature loss of his services here, and he carried with him the sympathy and kindly feeling of all his colleagues.

I may, perhaps, be permitted to express the excusable pride I feel in having now associated with me many of my former pupils, who have already made a name for themselves in the world of science; and even in the rising generation, St. Thomas's has no need to be ashamed of her children, and we both hope and expect she will rear many worthy successors of those I have named.

The last few words I have spoken remind me of the change which has come over the guiding principle of election to the offices of this Hospital since I was an artiled student. Then an apprenticeship to one of the surgeons was deemed a necessary first step towards obtaining the appointment of Surgeon to the Hospital; and I have, naturally, a vivid recollection of all my contemporaries, who were competitors at the early start. Just as on the racecourse, one by one fell away from various causes; and speculation as to the future was often falsified by unredeemed promise or inability to stay. He who had the good fortune, as it was mine, to get an early start, might hope to win; but the necessary exertion was arduous and unremitting; for, since the age of twenty, I have not ceased to take part in the teaching, though not the less a learner, in our hospital school. I mention this circumstance to exemplify the trying nature of the long probation and deferred promotion which attended this arrangement. The principle of free choice which now prevails—partly the cause, and in part the consequence, of the comparatively obsolete usage of apprenticeship—carries its own recommendation with it; yet, I am free to admit that my conservatism does not allow me to dismiss this custom of other days without a word of apology for it. If we may judge by results, certainly the names of my immediate predecessors and teachers, and of their contemporaries at the sister hospital where the same usage prevailed, are some justification of that system. The training of the young men, who claimed their privileges from an apprenticeship of six years at the hospital, was such as to constitute a special preparation for their future duties, if they were naturally qualified to avail themselves of their peculiar advantages. Living for a lengthened period in the dissecting-room and wards of the hospital, they could not fail to acquire that familiarity with their after engagements, which no other training could so well supply. Indeed, the change in the practical working of the old system of apprenticeship is not, to my mind, an unmixed advantage. When practitioners in the country conscientiously performed their duty towards their apprentices, during their more protracted sojourn with them, our students used to come to London already in possession of preliminary information, and what I may term conventional details, in their profession, which are not so well acquired in our schools.

But times are changed, and with them the rising generation; and I neither expect nor desire to see a recurrence to the bygone system to which I have referred. Yet, I would venture to plead on behalf of the students whom we educate at our school; other things being equal, their prior claim to preferment is just and natural, and should never be ignored. In reputation, a hospital and its school are essentially linked together; the indirect advantages to the public derived from the latter are scarcely subordinate to the benefits directly flowing from the former; and the fame of a hospital must ever be commensurate with the reputation of its officers, as trustworthy teachers of the scientific practice of their profession.

But both teachers and pupils have their special responsibilities; and by their reciprocal fulfilment only, can successful teaching be secured. I believe that the public generally have but a very imperfect appreciation of the complex and extended course of instruction which medical education now embraces; and it is this increasing complexity which continually enhances the difficulty of the problem that is presented by the necessity of having some definite limit to the acquirement which a qualification to practise demands. It is not given even to the most gifted to become proficient in all the required subjects within the limit

of time which is assigned to study; and therefore it is obvious that a standard must be adopted which shall supply a numerical sufficiency of qualified practitioners. Whilst it is my sincere conviction that the College of Surgeons has honestly and faithfully fulfilled its functions, I have hailed with satisfaction, as I have sought to forward by my feeble influence, that scheme of conjoint examination which offers to the candidate one common portal by which he may enter the profession with a qualification to practise; whilst it leaves to our English colleges and universities the special privilege of conferring honorary degrees, after exacting proof of more advanced attainments.

I said that teachers have their responsibilities; and without presuming to dogmatise on this subject, I will briefly indicate the method which my own experience has taught me to regard as the most profitable, if not the most acceptable, mode of imparting professional knowledge. Teaching may be either exhaustive or suggestive; the former method, even if well and fully accomplished, can but instruct the student in facts, and supply him with reasons—good or bad—for the conclusions drawn from those facts. But this is not education, which consists less in supplying the learner with thoughts, than in stimulating him to think for himself. For

“ Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.”

Bishop Butler has remarked that the best writer—and, *à fortiori*, I should say the best *viva voce* teacher—is he who simply states his premisses, and leaves his readers to work out the conclusions for themselves. It is true that much of our teaching relates to facts; but these facts are, or ought to be, associated with principles; and the business of the teacher should be, in my apprehension, to exercise the mind of his pupil to work out for himself the relation between a principle enunciated and the facts by which it is supported. Trituration and digestion are as essential to healthy assimilation by the brain as by the stomach; and I am disposed fully to concur with an apologist of Coleridge's disjointed style of writing, when he eulogises its highly suggestive character, as contrasted with such exhaustive teaching as alone will satisfy him “who thinks that the epithets *teres* *atque* *rotundus* are the highest that can be applied to a scientific work; or who expects an author to furnish him with a complete system which he can carry away in his memory; and after it has received a few improvements from himself, may be hawked about to the public or to a set of admiring disciples.”

I cannot help lamenting that there is much in the present method of teaching which is subversive of this suggestive principle for which I plead. Circumstances have, no doubt, conduced to this result; and chiefly the multitude of subjects crowding upon the attention of the student, which create a demand for the supply of information in such a form that it can be appropriated by an exercise of memory, without the invigorating effort which suggestive teaching stimulates. The results of such mechanical learning are not satisfactory; and the stereotyped acquirements of our students have induced the examining bodies wisely to modify their examinations, by rendering them as practical as possible; in order that the possession and exercise of a retentive memory may not be the chief qualification on which a student can rely for obtaining his diploma.

If, then, it be the duty of the teacher to stimulate the student to think for himself, it is no less incumbent on the latter to cultivate a spirit of self-reliance in learning his profession. He must, in short, educate himself, with the assistance and direction he will obtain from his teachers; and he will find that an infusion of enthusiasm into his work, will impart a pleasurable life and activity to the laborious details of his scientific pursuits, and render attractive that which would be otherwise irksome or repulsive in his studies.

I would now address a few words especially to those who are about to commence their hospital career. Your sojourn amongst us is fraught with momentous consequences to you, both moral and intellectual. The new life you enter upon and the new scenes you become conversant with, must leave their lasting impress on you for good or evil. Familiarity with suffering and death, in all their varieties and forms, constitutes a school of moral training which cannot fail to refine or to debase the moral sense—to strengthen or to enervate the character. Your future career will afford ample opportunity for applying the lessons of sympathy here inculcated; and of patient forbearance and gentleness in your relation with the sick and sorrowing, with whom so much of your life will necessarily be spent. These are grave responsibilities which will be yours, the importance of which you cannot too soon realise;—confidence of the most sacred character entrusted to your keeping; and opportunities for good beside and beyond your mere professional duties, from availing yourselves of which, no false humility, no mistaken apprehension should tempt you to shrink;—and which

you cannot evade without a compromise of truth, if you indulge the restless hope of restored health or of prolonged life, when you know that hope is vain. It is unnecessary I should pursue this subject further; if you obey the prompting of your better nature, and speak the truth with gentleness and candour, you will have your reward in peace of conscience; whilst it is beyond your ability to estimate the consequences to the dying sufferer who hangs upon your lips.

If I have paused to point out these as some of the moral lessons to be studied here, it is scarcely requisite that I should dwell on the necessity of improving every opportunity of mental culture now placed within your reach. The book of Nature is spread out before you in the dissecting-room, the laboratory, the wards, the museum; its pages are to be supplemented—not superseded—by the teaching and recorded opinions of other interpreters of the great Original. Drink deeply at the fountain-head; and gradually each new phenomenon or insulated fact will assume its true relation to others, as you view them blending harmoniously, and acting under laws, alike grand in their conception and simple and uniform in their operation, and thus bearing the impress of the infinite Intelligence and Goodness which planned them. It is thus, I venture to believe, that you will best cultivate the self-reliance and freedom from the slavery of authority, which are such essential qualifications for philosophical inquiry, and which are quite consistent with—indeed, ought to be the offspring of—true humility; for, that independence of character which has taught its possessor to scorn servile imitation, and to bow obsequiously to no man's dictum, should prompt him likewise to follow meekly the steady light of Truth, and to be the ever-ready servant and interpreter of Nature. I do not say your path is easy; but you may make it pleasant, by opening wide your heart in sympathy with your fellow men, and by cultivating your profession in an enlarged and philosophic spirit, instead of resting satisfied with the minimum of knowledge as your trading capital, acquired only for the pecuniary return it promises. You owe this to the noble calling you are about to follow; for, though I am aware that it has been said—and I fear with some truth in its application to the present time—that the “age of chivalry is gone, and that of sophisters, economists, and calculators has succeeded”, yet is my faith unshaken in the elevating tone and influence of scientific pursuits, and in the full though tardy recognition of their claims, at length forced on the promoters of public education; unshaken also in the manly sentiment and independent principle which pervade the mass of my profession.

A few words more of personal application I am constrained to speak to my younger hearers, who will bear with me if their triteness deprives them of their relish. Most of you must be aware that your sojourn amongst us entails sacrifices on those who have sent you here,—sacrifices in the anxiety consequent on your being thrown alone amid all the temptations, frivolities, and dissipation of this great city; and a pecuniary sacrifice for your best and permanent interest. Confidence is placed in your redeeming the tacit or spoken pledge of honest and upright conduct. Will you abuse and betray that trust? Yet, wasted time and misemployed talents, and the indulgence of low tastes and vicious habits will be such betrayal, and bring grief and disappointment in return for self-denying love.

In fulfilling your obligations, I would simply ask you to be manly; and I will tell you briefly my interpretation of that comprehensive word. I should be untrue to my own instincts, and to the position I occupy as President of the United Hospitals Athletic Club, if I did not bid you cultivate manly exercise and sport. I admire the strong arm, the swift foot, and the bold bearing of the athlete. Yet these pastimes must be your recreation, not your occupation. But there is a higher phase of manliness, to which I especially refer. It is manly to be severe with yourself, and to deal lightly with the failings of your fellow-men. It is manly to admit, rather than to justify, either ignorance or error. Self-sacrifice is manly; but there is no element of manliness in the untruthful, the selfish, and the impure mind. It is both gentle and manly to esteem others better than yourselves, and to claim the respect which is your due by that courteous consideration for all around you which never fails to characterise the true gentleman. Above and beyond all, if you value your Bible, it is manly to avow it, and, by patient endurance of contradiction, and consistency of conduct, to prove that your faith is a real and living principle, regulating primarily your own deportment, and thus influencing your relations to all around you.

“ To thine own self be true;
And it will follow, as the night the day,
Thou canst not then be false to any man.”

But it is time that I bring to a close my brief tribute to the memory of the past, and the vindication of my confident hope in the future, of our ancient and royal foundation. Once the refuge of a few obscure monks; now reopened amid the pomp and glittering pageantry of State

officials, and graced by the presence of the noble and gentle in the land, and of our beloved Queen, who sympathises in the early interest the good Prince Albert took in our future home: nurtured erst in poverty, and restricted in usefulness; now possessed of a princely income, and folding within her wide-spread arms the destitute sick and maimed, whose only passport is suffering and want: yielding formerly her pittance of empirical skill and nursing to the few who sought it; now rich in the memory of so many whose labours within her walls have indelibly allied their names with some of the most enduring achievements of medical science; and (shall I not add?) proud of association with the imperishable name and work of the self-denying and gentle Nightingale:—such, in brief, is the history of this noble institution; and such are the children she has nurtured, who have repaid her fostering care by shedding a lasting lustre on our profession.

And what is the moral to be laid to heart from this history and these names? Shall *we* shrink in timid indolence from sustaining the weight of reputation thus transmitted to us? Shall we plead, with deprecating humility, that “there were giants in those days”, and sit down in listless indifference beneath the laurels they planted? Nay, not so. Let each and every associate in the work, with unselfish and untiring energy, devote himself to his allotted task. Let the substantial token of our affection for our Alma Mater, placed within her chapel-walls, be the pledge and symbol of that harmony of action for the common weal which no jarring note of discord shall disturb. Let private advantage and individual preferment ever yield, as in truth and honesty they should, to the fulfilment of the sacred trust to which every officer of this establishment is pledged when he takes office here. Let this be done earnestly, heartily;—I speak, sir, as one who has journeyed through weary years of discouragement, and is permitted, by grace, and not by right, to tread a few steps within the boundary of the promised land; let this, I say, be done earnestly and heartily, and who shall gainsay the confident anticipation, which it may be, perchance, my happiness to witness, though not to share in, that our ancient foundation, both hospital and school, shall emerge from its temporary eclipse, to shine with more than pristine brightness.

And, standing thus on this border-land, once more beside the old familiar river, from whose slimy bed this stately edifice has arisen as if by magic; surrounded, too, by my trusted colleagues and many familiar faces which remind me of our earlier and happy association as pupil and teacher,—Imagination portrays for me, without an effort, the expanding vista of an illustrious future, worthy of such a history and such a habitation.

ST. GEORGE'S HOSPITAL.

DR. JOHN CLARKE, Lecturer on Midwifery, delivered the Inaugural Lecture. Having given a hearty welcome to the students, Dr. Clarke remarked that they were about to be introduced to a profession which had been truly called “Godlike” in its aim and tendency, unselfish and elevating in its practice, with duties great and laborious indeed, but allowing of pleasures which, if rightly esteemed and viewed, were equally elevating, grateful, and attractive—the grand aim and object of which was, or ought to be, the happiness and comfort of mankind. He was always proud to acknowledge the reciprocity of good feeling which had existed between the teachers and pupils of St. George's Hospital, and he trusted that in the future the dangers of lodging-house life might be avoided, giving comfort to the student without expense, freedom without licence, pleasurable enjoyment without dissipation. Great and well nigh insuperable difficulties, he well knew, lay in the way of compassing such an object, but he did not despair of one day seeing it fairly advanced towards accomplishment. The hospital now possessed three hundred and fifty beds, large enough for all practical and scientific educational purposes; not so large as to weary and confuse the student by its size and number of patients. There was a medical school, composed of buildings most admirably adapted to their purpose, and a museum almost equal in number and variety, and quite equal in the skilful arrangement of anatomical preparations, to any other in London. Having adverted to the multiplicity of the subjects with which the student would have to deal, their varied character, and the novelty of the language in which information was conveyed, the numerous examinations which the students would have to undergo, the lecturer said he could well understand all these perplexities, although in his time of studentship examinations were less numerous, and examiners less of a bore than they were at present. He insisted, though, strongly upon a knowledge of the classical languages, without which it was impossible to understand the nomenclature of disease, or the terms commonly used in medical books.

EPIDEMIC AND SPECIFIC CONTAGIOUS DISEASES:

CONSIDERATIONS AS TO THEIR NATURE AND MODE OF ORIGIN.

Being the Introductory Address delivered at University College, October 2nd.

By H. CHARLTON BASTIAN, M.A., M.D., F.R.S.,

Fellow of the Royal College of Physicians; Professor of Pathological Anatomy in University College, London; Physician to University College Hospital; etc.

WE assemble to-day to inaugurate the work of a new session. Some of you are entering upon a new career, though others will have only to find your way again into what is, I trust, an already established routine of work and duty. The occasion, however, on which we now meet differs little in all essential respects from many others which have passed. Words of advice and counsel have been so often uttered to the new-comers, that I feel it would be comparatively useless again to take up such a well-worn theme. This view is further strengthened by the consideration that the able and judicious exhortations of many who have preceded me on similar occasions are still accessible. Without further excuse, then, gentlemen, I shall pass on to topics of another kind.

In medicine, even more than in other less complex sciences, it is well that imperfectly established general doctrines should be, from time to time, tested by the light of more recently acquired facts. Practice necessarily follows along the paths indicated by theory, and therefore it is in many cases all-important, even from a practical point of view, that true theories should be arrived at. The wider the applications of the theory, the greater is the necessity that it should be sound and based upon the best knowledge of the time.

I have determined to lay before you some considerations touching the nature and origin of epidemic and so-called ‘specific’ infective diseases. You will be impressed with the vast importance of the subject when you learn that nearly one-fourth of the total number of deaths occurring in Great Britain are due to these affections. As the Registrar-General has aptly pointed out: “Diseases of this class distinguish one country from another—one year from another; they have formed epochs in chronology; and, as Niebuhr has shown, have influenced not only the fall of cities, such as Athens and Florence, but of empires; they decimate armies, disable fleets; they take the lives of criminals that justice has not condemned; they redouble the dangers of crowded hospitals; they infest the habitations of the poor, and strike the artisan in his strength down from comfort into helpless poverty: they carry away the infant from the mother's breast, and the old man at the end of life; but their direst eruptions are excessively fatal to men in their prime and vigour of age. They are emphatically the *morbi populares*.”

No labour is too great, then, no pains should be spared, in order to arrive at just conceptions concerning the origin, nature, and mode of distribution of these scourges of humanity. Deeply impressed with the difficulties surrounding these great problems, and with the enormous importance of strengthening the foundations of our knowledge in respect to them, I was induced rather more than two years ago to take up the investigation of some questions which lay at the root of the whole subject. It seemed to me that no real advance could take place in our power of controlling these diseases until certain other great problems had been settled. What is the real cause of fermentation and putrefaction? Can the organisms which are associated with many of these processes arise *de novo*? These were questions the solution of which seemed to be of the utmost importance to the science of medicine, as well as to the cause of science generally. Thus incited, I resolved to study such much-disputed subjects for myself, with the view of arriving at some independent opinion.

As the results of this work—which to many may have seemed almost wholly unprofessional—have tended to strengthen certain views concerning the epidemic and specific diseases, and to make plain some points which were previously involved in obscurity, I think I cannot do better than attempt a somewhat hasty review of facts, which seem to point conclusively to the necessity of entertaining opinions with respect to some of these diseases which have been hitherto almost wholly ignored.

In the consideration of the nature and causes of disease, we have always to keep in mind two principal sets of factors. Each person exists with structural characters and functional properties which, though

in the main similar to those of his fellow men, have nevertheless individual peculiarities more or less marked. These may be inherent or acquired, habitual or occasional. Amongst these individual peculiarities are ranged what time-honoured custom has called the 'predisposing causes' of disease. On the other hand, man, with his individual peculiarities, lives in a world of change, exposed to the incidence of constantly varying external conditions, which, acting upon individual peculiarities, or upon the average human nature, become, in proportion to their deviation from the usual condition of things, so many 'exciting causes' of disease.

These two sets of factors must never be lost sight of. In the majority of cases, both come into operation in the production of the resultant morbid condition, although in others one or other of them alone may seem to be so potent as of itself to determine the morbid manifestation. The person who inherits a tendency to destructive lung-disease may develop this morbid condition under the influence of exciting causes which would scarcely affect another who inherits no similar weakness (predisposing cause). On the other hand, just as contact with boiling water, owing to the exceeding potency of the 'exciting cause', may determine a lesion of the skin in any individual (quite independently of the existence of a 'predisposition'), so may a person who is born with a weak and unstable nervous system become insane or epileptic, independently of the influence of any obvious exciting causes.

All diseases are, in fact, due to altered structure or molecular composition, whether visible or invisible, ascertainable or non-ascertainable. They are no longer regarded as entities. They are due to changes of state in some portion of the body, whereby the vital movement in the part is diverted from a normal into an abnormal mode of activity.

The complicated structure of the human body, and the allocation of specific functions to specific parts, necessitates, and has occasioned, a functional correlation and interdependence. Any disturbance of this normal balance of functions of necessity entails a definite sequence of pathological states and actions. A morbid change in an important organ, if it interferes with the function of the part, rarely exists alone. It sets up other associated effects, whereby the disturbed equilibrium of functions is more or less replaced by a new adjustment.

The effects are often well marked, though very variable, when the disease is one in which any notable alteration in the composition of the blood occurs. Supplying the materials of growth for all parts of the body, any changes in the composition of the blood are found, now to affect one organ and now another most profoundly. Before entering, however, upon the consideration of those diseases in which changes in the nature and quality of the blood form the most important condition of the disease, it will be useful to dwell for a time upon some of the more local pathological changes that occur in the more solid tissues of the body. The two sets of phenomena are closely related to one another. Morbid states which are at first purely local may, after a time, produce general diseases; and a general or constitutional disease frequently entails limited lesions in special parts. A wound or a local inflammatory process may lead to thrombosis, gangrene, and blood-poisoning; just as, following a reverse order, various febrile conditions may cause local lesions—now in one organ and now in another.

There are so-called 'specific growths', just as there are 'specific diseases' of a more general or constitutional character. The life-history of such growths as cancer and tubercle is a subject of great intrinsic interest; though the importance of their study is much enhanced by the fact, which I shall strive to make plain, that their modes of origin and distribution within the body are capable of throwing much light upon the origin and distribution of epidemic and specific infectious diseases amongst the community.

The term 'specific,' as applied to diseases, is confusing, and apt to carry with it a crowd of erroneous notions. Doctrines of 'specificity' have, however, been fashionable in medicine, though they are now growing more and more into disrepute. Thirty or forty years ago, amidst all the jargon concerning homoplastic and heteroplastic, euplastic and cacoplastic growths, would it not have been deemed rank heresy to profess a disbelief in the prevalent notions concerning the unalterable and 'specific' nature of cancer and of tubercle? Here were products altogether peculiar, and not derivable, as it was thought, from the normal tissues of the body—having laws of growth and distribution peculiar to themselves, and an origin which was shrouded in the mystery of a remote past. In view of this doctrine as to the specific and alien nature of the products, how natural was it that an undue stress should have been laid upon the fact that a tendency to the occurrence of such modes of growth may be hereditarily transmitted; how easily explicable is the facile and popular resort to the notion that, where multiple cancerous growths exist, the primary new formation has given rise to a seedling progeny by means of actual cancer 'germs'. Slowly but steadily these views have been undergoing a progressive modifica-

tion. The anatomical elements of cancer and tubercle are now known to have no special and peculiar characteristics, and they are believed to be as easily derivable from pre-existing tissues as are other non-specific morbid growths. A mere local change in the mode and intensity of pre-existing tissue-changes suffices to engender them. In the case of tubercle, this has been conclusively proved by such experiments as those of Dr. Burdon Sanderson and Dr. Wilson Fox. The latter says: "M. Villemin's position, that tubercle is a specific disease, producible by tubercle alone, cannot, I think, be held to be true; nor can the method of inoculation be used as a test of the tubercular character of any pathological product; for the four guinea-pigs in whom the vaccine lymph was inoculated, and those inoculated with putrid muscle, and even one beneath whose skin I simply inserted a piece of cotton-thread, and also one of the four in which, following Dr. Sanderson's example, I inserted a seton, presented as intense and typical specimens of the disease as those on whom inoculation had been practised with the most typical grey granulations from the lungs or the meningeal vessels." What has now been (even experimentally) established with regard to tubercle seems also to hold good for such 'malignant' growths as recurrent fibroid, epithelial, and cancerous tumours or infiltrations. Statistics to which Virchow has drawn prominent attention seem to indicate most clearly the potency of 'exciting causes' in giving birth to these growths. Are they not found primarily, with by far the greatest frequency, in situations which are exposed to the action of irritative agencies, either external or internal, normal or abnormal? An amount of irritation which in some persons may lead to chronic inflammation or an hyperplastic overgrowth, will in others suffice to produce one of these so-called 'malignant' growths, even without the aid of any ascertained predisposition. The history of many cases of 'labial cancer', and of that to which chimney-sweeps are liable, speaks almost as plainly concerning the origin of cancer, as the results of experiments on the rodent animals do concerning one of the modes of origin of tubercle.

Is there anything specific in the mode of growth of these products, and in their subsequent distribution within the body of the affected person? Just as an erysipelatous inflammation spreads by gradually inducing a similar morbid action in adjacent parts, so does a cancer or a mass of tubercle grow by a slower extension of the morbid modes of growth. We have no more to do with a kind of implanted something increasing by a multiplicative reproduction in the one case than in the other. In both alike there are deviations from the ordinary modes of growth, which gradually extend to adjacent healthy parts. Neighbouring lymphatic glands become affected in the case of tubercle and cancer-growths, just as they do where simple inflammations exist; and just as the change in the gland in the case of inflammation must be regarded as the result of a mere induced morbid action, rather than as the product of the multiplicative reproduction of a transmitted germ, so is a similar explanation open in the case of cancer and tubercle. Modes of growth which have been primarily induced may be also secondarily induced. The kind of agency, which is at least probably potential where the lymphatic system is concerned, or where particles of morbid growths come into contact with serous† or mucous surfaces, seems almost certainly operative when we come to consider that wider distribution which is occasionally brought about through the vascular system. The potency of the 'exciting causes' are here weakened, and new growths cannot be initiated in distant parts or organs by contact with disseminated particles, unless the 'predisposing causes' are favourable and there is an ability in the part to take on the morbid mode of growth. The action may be similar in kind to that which the transplanted fragment of epidermis exerts upon the ulcerated surface. This becomes covered, not so much by an actual increase of the imported fragment as by the formative changes which its presence incites. A crystal thrown into a mixed solution of saline substances will determine, by its mere presence, the crystallisation of similar materials from the solution; nay, it may determine, in addition, the crystallisation of other products whose modes of aggregation are more or less similar (isomorphous salts). The contact of any number of germinal particles with the tissues of an organ will not produce the formation of a new growth unless the molecular actions (or modes of growth) existing in the part are such as to make the transition an easy one. The mere presence of 'germs', therefore, is not all that is necessary. Cancerous masses may grow into the vena cava, and yet no cancer springs up in the lungs: the stomach may be absolutely infiltrated with cancer, and yet, as I have recently seen, no similar growths may exist in the liver.‡ Detail,

* On the Artificial Production of Tubercle, 1868, p. 23.

† See Dr. Sanderson's 'Report on the Communicability of Tubercle by Inoculation' (Eleventh Report of the Medical Officer of the Privy Council).

‡ We find, therefore, that in the absence of any apparent predisposition, exciting causes, when potent, are sufficient to determine the occurrence of secondary growths in the same fashion that the primary growth may be determined. As the exciting

however, is needless on such a subject. The distribution of morbid growths throughout the body, as is well known, takes place, if at all, in a manner so irregular in different individuals, as to make the result wholly beyond the possibility of predication. Having to do with a case of syphilis, who would venture to fix upon the internal organs which would become affected? Who can account for all the irregularities observable in the generalisation of tubercle either in man or in the rodent animals? When cancer exists, who will affirm which organ shall be secondarily affected and which not?

The old notions as to the specific nature of cancerous and tubercular products are, therefore, supported neither by the anatomical characters of their growths, by their mode of origin, nor by their mode of distribution; and the known facts concerning the hereditary transmission of a tendency to the formation of such growths is certainly not more explicable in accordance with the old hypothesis than it is by the more modern view. And the history of these local so-called 'specific' growths will be found, as others have in part indicated, to throw much light upon the history of general so-called 'specific' affections, and their mode of distribution through communities, or from individual to individual.*

Epidemic and acute specific diseases have many characters in common; they constitute a family the members of which are united by a certain bond of unity, though at the same time they are in other respects strikingly different from one another. The 'general' character of the symptoms originally gave rise to the notion that these affections were in the main dependent upon changes in the nature and quality of the blood. This view is still the one most commonly entertained and which seems most likely to be true. And seeing that particular sets of symptoms recur with as much definiteness as individual differences of constitution will permit, we have a right to believe that the changes in the blood—however induced and of whatsoever nature they may be—are definite and peculiar for each of these diseases. The successive changes in the blood which are the immediate causes of the phenomena of small-pox, must be quite different from those giving rise to the morbid state known as typhoid-fever. Variable as these several groups of symptoms are amongst themselves in individual cases, yet is there a general resemblance which suffices to maintain the distinctive nature of each affection. In this broad sense they are undoubtedly entitled to rank as 'specific' diseases. They may be presumed to be associated with definite changes in the blood, though we have not a right to infer that such changes of state can only be induced in one way. Many well known chemical changes are capable of being brought about by more than one agency. And just as there is the best reason for believing that cancer or tubercle may be initiated *de novo* by the operation of irritants upon the tissues of certain individuals, and that such growths may subsequently be multiplied within the body by the contact-influence exerted by some of their disseminated particles; so may we suppose, not only that specific substances (contagia) may be capable of initiating specific changes in the blood, but that certain combinations of circumstances may by their action upon the human body entail similar definite changes and states of blood. Having to do with a perverted nutritive activity and mode of growth in a limited area of tissue, cancer or tubercle may make their appearance; whilst, having an altered nutritive activity and set of changes occurring in the blood, this all pervading tissue may lapse into the successive states peculiar to one or other of the specific diseases, and so give rise to the symptoms by which they are characterised. This is by no means a forced analogy. Can cancer or tubercle arise in the individual without any pre-existing 'hereditary taint'? Can the states of blood peculiar to the several specific diseases arise *de novo*, or independently of contagion? These are questions whose import is really similar.†

One of the great and distinguishing peculiarities of these specific diseases is their 'contagiousness.' Although very differently marked in the several affections, this property is as interesting as it is important. The fact of its existence seems always to have had a large share in determining the nature of the general views which have been held concerning these affections. Even in remote periods, by Hippocrates and

causes are weakened, the growths occur only under the influence of a predisposition (hereditary or acquired) or natural aptitude on the part of the tissue to lapse into the morbid mode of growth.

* See Dr. Morris, *On Germinal Matter and the Contact-Theory*, 1867.

† This double mode of causation is perfectly familiar to the chemist. Particular chemical changes may occur under the influence of certain general determining conditions, which at other times (in the absence of these conditions) may be even more easily initiated by a single specific cause. The introduction of a crystalline fragment into a saline solution, and its determination of the crystallisation of all the isomorphous salts contained in the solution, seems to be exactly comparable with the "contagious" origin of diseases. But, under the influence of certain favouring conditions, crystallisation may occur without the contact of a crystalline fragment—the process may be 'spontaneous' in the same sense that the occurrence of the blood-change may be 'spontaneous.'

others, they were commonly compared to processes of fermentation; whilst, since the time of Linnæus, more especially, attention has been often prominently directed to the many apparent similarities existing between the commencement and spread of epidemic diseases, and the "flight, settlement, and propagation of the insect-swarms which inflict blight upon vegetable life."* These analogies were seemingly strengthened by the increased knowledge which gradually arose concerning the various parasitic maladies to which man and the lower animals were liable. Writing in 1839, Sir Henry Holland says in his essay *On the Hypothesis of Insect-Life as a Cause of Disease*, "The question is, what weight we may attach to the opinion that certain diseases, and especially some of epidemic and contagious kind, are derived from minute forms of animal life, existing in the atmosphere under particular circumstances, and capable by application to the lining membranes, or other parts, of acting as a virus on the human body." Now, the fact of the multiplication of the virus within the body was the peculiarity of these diseases which, above all others, caused such an hypothesis to be received with favour. Causes which are specific and which seem capable of self-multiplication—what can such agents be but living things of some kind, plant or animal? This mode of argument was, with many, all powerful. And when, after the discovery of the yeast-plant by Schwann, in 1836, new doctrines concerning fermentation began to prevail, the views of those who believed in the living nature of the specific causes of epidemic diseases were in part strengthened. If all fermentations were initiated by the agency of living organisms, and the specific diseases were comparable to processes of fermentation, then how natural was it that many who were moreover influenced by the other analogies, should be led to imagine that the specific causes of these diseases were also living organisms? Only now, attention became directed to the much lower organisms which are so frequently associated with fermentative and putrefactive changes, instead of to insects "minute beyond the reach of all sense."

Here then is the origin of what in modern times has been termed 'The Germ-Theory of Disease.' Like homœopathy and phrenology, this theory carried with it a kind of simplicity and attractiveness, which insured its acceptability to the minds of many. Now, however, it seems to rest upon foundations only a little more worthy of consideration than those upon which these other theories are based. But, owing to its influence, in combination with the more generally received doctrines concerning the origin of life, there has gradually grown up an unwillingness in the minds of many to believe that these contagious diseases can arise *de novo*. And this being one of those theories which tends to curb inquiry, and to check the possible growth of sanitary knowledge in certain highly important directions, it seems to me necessary to look with scrutinising care to its foundations, not only with the view to the advancement of medical science, but with the direct object of removing all checks which may exist to the growth of sanitary precautions against the origin of these most pestilential affections.

Let us see, then, how far the 'theory' fulfils the conditions which all good theories do fulfil—how far it explains a great number of the phenomena in question, without being irreconcilable with others.

The advocates of the 'germ-theory' have always rested their belief in it, in the main, because they considered that it offered a ready explanation of the increase of the virus of the contagious diseases within the body of the affected person. This increase, they suppose, is not otherwise to be explained. All other considerations brought forward in support of the theory are just as explicable by another supposition. Fully admitting that the occurrence of a process of organic self-reproduction would be a very adequate way of accounting for the increase of the infecting material, we must see whether this mere hypothesis can be reconciled with other characteristics of these affections. In the first place, it may be asked, whether such a process is actually known to constitute the essence of any general diseases. Because, if so, those in which it does occur, ought, in the event of the hypothesis being true, to present a close similarity to the diseases in which such a process is supposed to occur.

Now, there are certain general diseases which do undoubtedly depend upon the presence and multiplication of organisms in the blood and throughout the tissues generally. There is the epidemic and highly contagious disease amongst cattle which is known in this country by the name of the 'blood,' and which excites in man that most

* Sir H. Holland's *Medical Notes and Reflections*, 2nd edition, 1840, p. 584. On the following page, the same author writes:—"Connected with these facts is the observation, seemingly well attested, that the cholera sometimes spreads in face of a prevailing wind, and where no obvious human communication is present—a circumstance difficult, if indeed possible, to be explained, without recourse to animal life as the cause of the phenomenon. No mere inorganic matter could be so transferred, nor is vegetable life better provided with means for overcoming this obstacle." Whilst on the preceding page, the "animal species" had been admitted to be "minute, beyond the reach of all sense."

dangerous morbid condition known as 'malignant pustule.' The researches of M. Davaine* and others have revealed the fact that this disease is essentially dependent upon the presence and multiplication of living organisms, closely allied to *Vibriones*, in the blood of the animals affected, and that similar organisms are also locally most abundant in the contagiously incited 'malignant pustule' of man. Unless this latter be destroyed in its early stages, the contained organisms spread throughout the body and the disease speedily proves fatal. Of late, moreover, attention has also been called† to Pasteur's researches on the subject of the very fatal epidemic which raged for fifteen years amongst the silkworms of France. This affection, known by the name of *pébrine*, is dependent upon the presence and multiplication of peculiar corpuscular organisms, called *Psorospermia*, in all the tissues of the body. Both these general parasitic diseases are highly contagious; both are contagious by means of organisms; and in both the virus does increase by self-multiplication within the body of the animal affected. What more suggestive evidence could there be as to the truth of the 'germ-theory,' say its advocates, than is supplied by the phenomena of these two diseases? Undoubtedly the evidence is irrefragable as to its applicability to these particular diseases; but then comes the question, whether they are comparable with the other affections to which the germ-theory is sought to be applied. And this question must decidedly be answered in the negative. These parasitic diseases are sharply distinguished from the others by the fact of their almost invariable fatality. Creatures or persons once affected in this way are, under ordinary circumstances, thenceforth on the road to more or less immediate death. Happily, however, no fatality of this kind is characteristic of even such highly contagious diseases as scarlet fever and small-pox, or any other of the maladies with which parasitic organisms cannot be shown to be associated.‡ But if living things were really present as causes of these diseases, then most assuredly ought they to conform to that fatal type which is almost inseparable from the notion of a general parasitic disease, and which we find exemplified by the course of *pébrine*, the 'blood,' and 'malignant pustule.'§ The fact then, that the general tendency in the acute specific diseases, is undoubtedly towards recovery rather than towards death, speaks strongly against the resemblance supposed to exist between them and the parasitic affections alluded to, and also against the hypothesis that they are dependent upon the presence of self-multiplying germs within the body. Such germs, when present, would be sure to go on increasing until they brought about the death of their host.

These considerations alone should suffice to inspire grave doubts as to the truth of the 'germ-theory.' And such doubts may be reinforced by many others. Thus, the several affections being distinct from one another, this theory demands a belief in the existence of about twenty different kinds of organisms never known in their mature condition, but whose presence as invisible, non-developing germs is constantly postulated, solely on the ground of the occurrence of certain effects supposed to be otherwise incapable of occurring. That, if existent, they are not mere ordinary germs of known organisms is obvious, because the presence of these has again and again been shown to be incapable of producing the diseases in question. Mr. Forster says,|| "There is not perhaps on the face of the earth a human creature who lives on coarser fare, or to a civilised people more disgusting, than a Kalmuck Tartar. Raw putrid fish or the flesh of carrion—horses, oxen and camels—is the ordinary food of the Kalmucks, and they are more active and less susceptible of the inclemency of the weather than any race of men I have ever seen."¶ It has, moreover, been frequently demonstrated, that the organisms of ordinary putrefactions may be introduced even into the blood of man and animals without the production of any of these specific diseases.** Yet is the 'Antiseptic System'

of treatment (good as it may be, irrespective of the germ-theory on which it has been based) pressed upon our attention on the assumption that the germs of putrefaction and the germs of disease are living organisms similar in nature. The strange persistency with which this view is advocated is not a little surprising when it entails the obvious contradiction that germs which do, under all ordinary circumstances, develop into well known organic forms, should, when concerned in the production of the diseases in question, induce all the effects supposed to depend upon their prodigious growth and multiplication, and yet never develop, never become visible. And whilst *Bacteria* and other organisms with which the unknown disease-germs are compared, flourish and reproduce in the much-vaunted germ-killing carbolised lotions,* still carbolic acid continues to be recommended solely on account of its germ-killing powers, and the theory on which the practice is based is thought to derive support from the results obtained by the use of this agent. Surely no theory could be weaker on which to base a successful method of treatment; and if, as its distinguished originator says,† its general acceptance is principally hindered by the "doubt of its fundamental principle," then I would deliberately say that the blame, if any, cannot fairly be said to lie with those "who have opposed the germ-theory of putrefaction." The 'Antiseptic System' of treatment needs no support from a 'germ-theory'; it can be surely and unassailably based upon the broader physico-chemical doctrines of Liebig.‡

The last blow, however, seems given to the 'germ-theory' of disease, when we are told that the blood and the secretions in sheep-pox are not infective, though this disease is most closely allied to, and even more virulently contagious than, human small-pox. If germs had existed in this general disease, and their multiplication was the cause of it, then most assuredly would they have existed in the blood and in other fluids of the body; and yet, as Dr. Burdon Sanderson tells us,§ "In sheep-pox all the diseased parts are infecting while no result follows from the inoculation either of the blood or of any of the secretions; the liquid expressed from the pulmonary nodules has been found by M. Chauveau to be extremely virulent—certainly not less so than the juice obtained from the pustules." Now, although in other of these diseases the blood does undoubtedly exhibit infective properties, still the ascertained existence of even one exceptional case amongst maladies so contagious as sheep-pox, seems to me absolutely irreconcilable with the truth of the 'germ-theory,' more especially when this theory was started principally to explain the phenomena of such highly contagious diseases.||

Rejecting the 'germ-theory,' then must we confess our absolute ignorance on the subject (a course always better than the adoption of an untenable theory), or are there facts to guide us to another view as to the nature and origin of the poisons of these infectious diseases?

It surely is a vice in argument to suppose that the increase of the virus within the body in these diseases is only to be accounted for by a

originated in man's organism. Man himself has imposed the conditions favourable to their development. Man alone is responsible for their origin. Human intelligence, energy, and self-sacrifice may succeed in extirpating them, and may discover the means of preventing the origin of new forms not now in existence." This is undoubtedly a very much less objectionable form of the 'germ-theory,' though much additional evidence would be needed before we could accept the view that contagious diseases are due to the rapid multiplication of the contagious particles within the body of the creature affected. The non-contagiousness of the blood is as irreconcilable with this as with the other form of the 'germ-theory.'

* See *Modes of Origin of Lowest Organisms*, 1871, p. 85. And in a recently published paper "On the Relative Powers of Various Substances in Preventing the Generation of Animalcules or the Development of their Germs", Dr. Dougall says, "If, as is alleged, germs are the source of putrefaction, then the strongest preventives must be the best antiseptics, and vice versa. Now, as seen in the table, carbolic acid occupies a very mediocre place as a preventive, therefore it is legitimate to conclude that it stands no higher as an antiseptic" (p. 13).

† BRITISH MEDICAL JOURNAL, August 26th, 1871, p. 225.

‡ These doctrines do not seem to have been adequately grasped by Prof. Lister. Fragments of organic matter are believed by Liebig to be capable of acting as ferments; he, however, holds that their potency is deteriorated by heat almost as much as are the qualities of living ferments. The experiments with boiled fluids in bent-neck flasks, therefore, upon which Prof. Lister so strongly relies in proof of the germ-theory, prove absolutely nothing as between the two theories of fermentation of Liebig and of Pasteur. Amongst the atmospheric particles there are sure to be dead ferments in the form of mere organic fragments. Now the doubt that previously existed was, as to whether they could initiate fermentation and putrefaction, or whether the presence of living germs was absolutely essential. In the experiments with bent-neck flasks, both fragments and germs must be simultaneously excluded or admitted to the fluids. Professor Lister's readers might suppose that Liebig had no objection to his ferments being boiled, and that the issue lay between the relative efficiency of oxygen and living germs. (See Gerhardt's *Chimie Organique*, t. iv, p. 545.)

§ Report "On the Intimate Pathology of Contagion", in Twelfth Report of Medical Officer of Privy Council.

|| Inoculation with the blood of a person suffering from measles has also in several cases failed to reproduce the disease. The different severity of small-pox taken in the ordinary way, and that induced by 'inoculation' of the matter of a small-pox pustule, is also quite inexplicable in accordance with the 'germ-theory,' although both facts are quite reconcilable with the view about to be mentioned.

* See *Compt. Rend.*, 1864 and 1865.

† *Nature*, 1870, No. 36, p. 181.

‡ Doubtless there are other general parasitic diseases amongst animals. In almost all the specific diseases to which man is liable, however, I have invariably failed to discover any trace of organisms in the blood. The experience of many other observers has been similar to my own in this respect.

§ See papers by Dr. Wm. Budd, in *BRITISH MEDICAL JOURNAL*, 1863.

|| See *Med.-Chirurg. Rev.*, 1854, vol. xiii, where the supposed connection of diseases with processes of putrefaction is ably considered by the late Dr. W. Alison.

¶ The *Bacteria* which are sure to be abundant in such food cannot, therefore, be the much talked-of 'disease-germs.' Such a diet is, of course, by no means recommended, and could probably only be borne in certain climates by persons who lead a very active life. Epidemic diseases are frequently most fatal when they once break out amongst a people whose diet is of this kind. See Dr. Carpenter, in *Med.-Chirurg. Rev.*, 1853, vol. xi, p. 173.)

** See, amongst others, Davaine in *Compt. Rend.*, Aug. 1864, and E. Semmer in Virchow's *Archives*, 1870. Dr. Lionel Beale is well aware of this fact, and he, accordingly, whilst adhering to the "germ-theory," promulgates it under a new form. He says (*Monthly Micros. Jour.*, Oct. 1870, p. 205):—"Concerning the conditions under which these germs are produced, and of the manner in which the rapidly multiplying matter acquires its new and marvellous specific powers, we have much to learn, but with vegetable organisms the germs have nothing to do. They have

process of organic reproduction. The power of self-multiplication by division is peculiar to living things, but an actual increase of any substance may be by a process of growth alone, without the aid of self-multiplication. Growth, however, takes place in not-living as well as in living matter; and, fundamentally considered, it means only increase in the quantity of the substance which grows, whether we have to do with the substance of a muscle, with a crystal, or with a complex organic poison. Liebig says: "a substance in the act of decomposition, added to a mixed fluid in which its constituents are contained, can reproduce itself in that fluid." And in illustration Sir Thomas Watson writes: "Thus the virus of small-pox (which virus is formed out of the blood) causes such a change within the blood as gives rise to the reproduction of the poison from certain constituents of that fluid: and whilst the process is going on the natural working of the animal economy is disturbed; the person is ill. The transformation is not arrested until the whole of that ingredient in the blood which is susceptible of the decomposition has undergone the metamorphosis."* The specific poison (contagium) does not, however, seem to be immediately reproduced in the blood of the person affected: rather, a set of changes are set up in the blood which ultimately lead to the evolution of such a poison in some parts of the body, either limited or widely distributed; so that, as Mr. Simon says,† "Bowels, skin, kidney, tonsils, are the favourite resorts of the several fever-poisons just as they are the surfaces by which naturally the organic waste of the several tissues is eliminated."‡

There are many organic poisons which undoubtedly produce spreading changes in the blood. Writing from Australia, Prof. Halford says §:—"In fatal cases of snake-poisoning, whether in this colony, India, America, or Africa, it may be stated as a rule, with few exceptions, that the blood loses its power of coagulation and becomes thinner and poorer." After the death of the person "it greedily absorbs oxygen when exposed to the air, and it absorbs it more than unpoisoned blood." Though the precise changes are quite unknown, its constitution is obviously profoundly modified. || The rapidity with which the symptoms are produced in the case of snake-bite do not in the least prevent our comparing the effects of snake-poison with those of the contagious zymotic diseases. In some of these the effects have been even more rapidly produced. Speaking of 'the Black Death,' which raged in the fifteenth century, Hecker tells us that, "Many were struck as if by lightning, and died upon the spot, and this more frequently among the young and strong than the old." Again, Dr. Aitken says: "When the cholera reached Muscat, instances are given in which only ten minutes elapsed from the first apparent seizure before life was extinct; whilst instances of death taking place from cholera-poison in two, three, or more hours, are well known to be extremely common.

"Its effect
Holds such an enmity with blood of man
That, swift as quicksilver, it courses through
The natural gates and alleys of the body."

The action of known poisons, whether animal or other, ¶ upon the blood and system generally, may therefore be compared with those unknown poisons of the zymotic diseases. The great difference is this. The changes in the blood induced by snake-poison are not such as to

* Ch. Robin says, in his *Végétaux Parasites*, 1853, p. 376:—"On a confondu un phénomène grossier et physique de transport de végétal d'un sol sur un autre plus ou moins favorable avec la question de contagion. Celle-ci est au contraire caractérisée par une modification moléculaire lente des substances organiques se propageant de proche en proche, sous l'influence du contact d'autres substances organiques présentant déjà elles-mêmes une modification analogue. S'il y a quelque chose de contagieux dans cette transplantation, c'est la putrefaction des substances azotées qu'on transporte, et elles déterminent dans les mucus sains une altération analogue à celle qu'elles ont éprouvée. Mais il n'y a rien là qui appartienne en propre au végétal et doive lui être attribué." See also pp. 307-309.

† Lectures on Pathology.

‡ A similar view has been advocated on more than one occasion by Dr. B. W. Richardson. He says (*Medical Times and Gazette*, November 5th, 1870, p. 539):—"A person suffering from a communicable disease is poisonous precisely as a cobra di capello is poisonous—that is to say, he is producing by secretion an organic poison, which, if it comes into contact in the right way with a healthy person, will reproduce disease." See also *Trans. of Epidem. Soc.*, vol. i.

§ On the Treatment of Snake-bite.

|| Dr. Richardson has ascertained that, unlike vaccine lymph, the snake-poison becomes weakened by dilution; and similar observations have been made by others. The 'particulate' nature of the poison in vaccine lymph, which has been demonstrated by the skilful experiments of Chauveau and Sanderson, is a condition in which it very probably exists in many other contagia.

¶ That such effects are in no way necessarily dependent upon the fact that the poison may contain living elements, we may imagine from the influence of prussic acid, morphia, etc. Nay, more; I have had frequent personal experience of the fact that a spasmodic and catarrhal affection somewhat resembling hay-fever may be produced by emanations from certain Nematoid worms, even after they had been preserved for two or three years in spirits of wine, and macerated for a time in calcic chloride (see *Philosoph. Transact.*, 1866, p. 583). Effects somewhat similar, though not so lasting, are produced upon some persons by the smell of powdered ipecacuanha.

terminate in the elaboration of a similar poison in any part of the body of the person bitten, whilst the bite of a mad dog does lead to changes which culminate in the reproduction of the hydrophobic poison; and similarly with those of scarlet-fever or small-pox—contact with these poisons entails changes which result in an enormous production of similar poisons. There is probably no fundamental difference between the two sets of cases. The malarial *miasm* of intermittent fever, and the poisonous state of the blood which leads to the production of rheumatic fever,* as a rule produce effects which are more strictly comparable with those of snake-poison, though there is reason to believe that these diseases may merge into other affections which are admitted to be contagious, as when intermittent or remittent fevers develop in warmer climates under the aggravated form of contagious yellow fever. In this way may the gulf be bridged which seems to separate the effects in snake-bite from those of hydrophobia. As Liebig pointed out, what occurs in the former case may be compared to the action of yeast upon a simple solution of sugar, and in the latter to the action of the same ferment upon a solution of sugar which also contains nitrogenous materials at the expense of which the ferment itself may grow. Thus, then, just as the presence of a crystalline fragment may determine the synthesis of its elements† from a solution in which they are contained, and as the living ferment may bring about that much more complex synthesis which occurs during its growth, so may an organic poison having an intermediate molecular complexity by its contact with the fluids or mucous surfaces of the body, be enabled to determine a series of changes leading to the synthesis of a similar poison.‡

If we find that amongst this class of general or specific diseases some are non-contagious, others only slightly so, whilst the remainder present increasing degrees of contagiousness; that diseases, which sometimes or under some conditions are non-contagious, under others become contagious; and lastly, if we find that even the virulently contagious poisons of some diseases are undoubtedly capable of arising *de novo*, then have we certain reason for the supposition, that the contagiousness or non-contagiousness of particular general diseases is a quasi-accidental feature, and that there is no real difference in kind between the poison of a serpent which does not occasion the production of a similar venom, and the poison of a mad dog which does seem capable of undergoing self-multiplication.§

Let us take a brief survey of some of the facts which are known concerning these specific infective diseases.

Glanders is an affection which is in many respects analogous to syphilis, and is almost, if not quite, as highly contagious a malady. Both these diseases, too, form extremely interesting links between such specific tissue affections as cancer and tubercle, and such infective blood-diseases as small-pox and scarlet fever. Like the former, they are apt to involve the presence of morbid growths scattered in different parts of the body, though, like the latter, they are commonly spread by contagion from individual to individual. However little we may

* I agree with Dr. Richardson in thinking that this affection really belongs to the zymotic class of diseases. Dengue seems to be a slightly contagious affection somewhat intermediate between rheumatic and scarlet fever. The 'sweating sickness' of the middle ages was considered to be an aggravated epidemic form of rheumatic fever, and so also with the various forms of 'miliary fever.' The contagiousness of these diseases, according to Hecker, seemed to vary in different epidemics.

† Which, as Prof. Graham showed, really exist separately in the solution, since they are separable by dialysis.

‡ Sir Thomas Watson says, in explanation of Liebig's doctrine, "In order, then, that a specific animal poison should effect its own reproduction in the blood, and excite that commotion in the system which results from the formation and expulsion of the new virus, it is requisite that a certain ingredient (analogous to the gluten in the brewer's wort) should be present in the blood, and this ingredient must have a definite relation to the given poison. And he subsequently adds, (*Principles and Practice of Physic*, vol. ii, p. 790):—"This theory of Liebig's offers, then, an intelligible explanation of the curious facts that certain contagious disorders furnish a protection, temporary or permanent, against their own return; that they have a tolerably definite period of incubation, and run, for the most part, a definite course; that some persons are less susceptible than others of the influence of these animal poisons, or not susceptible at all; and that the same individual may be capable of taking a contagious disease at one time, and not at another." The same facts, it may be observed, are almost inexplicable in accordance with any rational rendering of the 'germ-theory.'

§ In snake-bite the symptoms are due to the effects of an habitually poisonous secretion which has a most rapid and deadly action; whilst hydrophobia is due to the effects of an occasional quality of the salivary secretion. This occasional quality, characteristic of rabies, is generally admitted to arise independently in the dog, and yet the poisonous salivary secretion sets up a similar disease in other dogs which may be bitten. Nay, more, this affection at times prevails in an epidemic fashion. Dr. Gavin Milroy says (*Transactions of the Epidemiological Society*, vol. i, p. 173): "Hillary, in his work on *Barbadoes*, described *rabies* as common in the West Indies. Moseley, having never seen a case of it for a series of years, doubted the correctness of the statement; but, in 1783, it unexpectedly broke out with violence at Hispaniola, and also in Jamaica, where it prevailed from June to the following March. Dogs were seized with it that had no communication with others, and some dogs not brought on shore went mad in the harbours of the island. On *Tropical Diseases*, 1803." There are those, however, who still doubt whether rabies is capable of arising *de novo*. (See Art. in *Reynolds's System of Medicine*, vol. i.)

know concerning the actual origin of syphilis, no doubt seems to remain in the minds of most of those who have studied the question, as to the possibility of producing glanders in the horse. After referring to the highly contagious nature of the affection, Dr. Gavin Milroy says, on this subject: "It is also very generally admitted that glanders is a general as well as a propagable disease; and that it is extremely apt, especially in some seasons, to develop itself in foul, unventilated stables, or (as was often the case during the continental war) in the filthy between-decks of crowded transports."*

Here too may be mentioned such affections as purulent ophthalmia, gonorrhoea, croup, and diphtheria—the two former at least yielding local secretions which are virulently contagious, although assuredly they are not necessarily produced by specific infecting agents. The secretions of croup are only slightly contagious, though those of diphtheria often exhibit this quality to a more marked degree. Yet, even this last is generally regarded as an aggravated form of angina, which is apt to prevail occasionally as an epidemic affection.†

Turning now to the infective diseases of a more general character, we find a group of the utmost importance to the surgeon and to the obstetrician—between the members of which there is the closest alliance and even interchangeability—and concerning the possibility of whose *de novo* origin no surgeon or physician can entertain any reasonable doubt. These are erysipelas, puerperal fever, pyæmia, and hospital gangrene—fearful affections, but all only too easily producible.‡ Not to mention idiopathic erysipelas, which is also a contagious affection,§ how frequently does an ordinary inflammation assume an erysipelatous character in certain individuals—more especially in those who are the subjects of renal disease: and yet hospital gangrene, pyæmia and puerperal fever are but different modes in which this morbid process repeats itself in certain constitutions and under certain conditions. How easily erysipelas is set up in some persons by the mere contact of a wounded surface with the fluids of a dead body, is well known; and how fatal and frequent may be the attacks of puerperal fever due to the same cause has been fully established by melancholy experience at the Vienna Lying-In Hospital. Yet that such effects are in no way attributable to, or comparable with, ordinary processes of putrefaction is also a matter of absolute certainty. Again, we know that in certain cases where symptoms of poisoning result from eating mackerel or some shell-fish, these effects are not due to the putrescence of such articles of food. And similarly in reference to the many cases in which symptoms of poisoning have been produced in Germany by sausages, we learn from Liebig that "the sausages are poisonous only at a particular stage of decay, and cease to be so when putrefaction is advanced so far that sulphuretted hydrogen is evolved; the central part being often poisonous whilst the surface is wholesome." There seems every reason to believe that in the changes which may take place in these substances, short of actual putrefaction, a "peculiar poisonous principle is evolved." And so in certain cases, where an *unhealthy process* of suppuration occurs, poisonous products may be generated in a wound, whose absorption into the system is capable of bringing about those general symptoms of blood-poisoning which are characteristic of puerperal fever or of pyæmia.||

* *Transactions of Epidemiological Society*, vol. i, p. 175. The same author adds, however: "The converse of the proposition is happily no less true; experience having abundantly shown that its development may be controlled even to absolute prevention by the same simple sanitary rules, the observance of which has banished from our jails and workhouses the disease to which I shall next refer, viz., typhus."

† After referring to the exaggerated notions which were at one time entertained with regard to the contagiousness of diphtheria, Mr. J. Netten Radcliffe (*Trans. of Epidem. Soc.*, vol. i, p. 332) says:—"Subsequent observation has shown, moreover, that contagion plays but a very limited part in the epidemic extension of diphtheria. . . . The times of occurrence of the forerunners of the epidemic, the scattered and disconnected centres of manifestation, and the slow growth, extending over a period of several years, would seem to point to developing causes, slowly originating over the whole, or the greater portion of the surface of the kingdom, and culminating more rapidly in the southern than in the northern districts." Mr. Radcliffe adds, "If we would successfully study the etiology of the epidemic, we cannot disconnect that study from the observation of allied affections prevailing contemporaneously." An examination of the statistics relating to the prevalence, during the same period of scarlet fever, croup, thrush, quinsey, and laryngitis lead to the conclusion that "all the affections allied to diphtheria prevailed epidemically contemporaneously with diphtheria."

‡ Sir William Jenner says (*Practical Medicine of To-day*, 1869, p. 56), "We know that the zymotic element which produces contagious pyæmia may be generated in the frame of man *de novo*. A most important problem to be solved is that of the spontaneous origin of other zymotic diseases."

§ Sir Thomas Watson's *Practice of Physic*, vol. ii, p. 917.

|| Just as contact with particular compounds (e.g., cadaveric poison) seems to favour the production of such poisonous compounds in a wound, so may the presence of carbolic acid tend to hinder those poison-generating changes which are otherwise apt to occur in some wounds. The success which attends the use of carbolic acid may, therefore, be quite independent of its germ-killing powers, or even of its ability to arrest putrefactive processes in general. It has been shown, indeed, to act quite differently with different fermentable fluids. (*Modes of Origin of Lowest Organisms*, 1871, pp. 81-85, and Dr. Dougal's pamphlet, p. 6.)

If we refer, now, to the diseases which are most frequently endemic or epidemic in nature, we find them presenting very different degrees of contagiousness. The communicability of some of these affections seems to vary in different epidemics, and also, even during the same epidemic, in different places. Independently of this individual variability, however, the diseases, looked at as a series, present remarkably different degrees of contagiousness. In some this property seems to be absent, whilst in others it presents a most sure and deadly virulence.

Ordinary intermittent and remittent fevers, are, like rheumatic fever, endemic rather than epidemic, and may, as we know only too well, be developed in almost any individual, and especially in a new comer who ventures into a malarious district. All attempts to connect malaria with the presence of organisms have signally failed; these fevers, indeed, prevail in the most variable sites, and are by no means restricted to marshy districts. Dr. Fergusson says: "The first time I saw intermittent and remittent fever become epidemic in an army was in 1794, when, after a very dry and hot summer, our troops, in the month of August, took up an encampment at Rosendaal in South Holland. The soil was a level plain of sand with perfectly dry surface, where no vegetation existed or could exist, but stunted heath-plants. On digging, it was universally found percolated with water to within a few inches of the surface, which, so far from being at all putrid, was perfectly potable in all the wells of the camp." These diseases, under all ordinary circumstances, are most certainly not contagious, and yet all the best authorities on the subject are agreed that yellow fever, which is capable of being propagated by contagion in circumstances favourable to its extension, is but an aggravated form of remittent fever, as it occurs in warm countries.* This gradual conversion of a non-contagious into a contagious form of disease, combined with the limitations as to the nature and degree of its contagiousness, which the widest experience compels us to accept, are facts of the utmost importance for those who seek to learn the nature and origin of the contagious influence. And, as almost similar limitations have to be accepted with regard to the contagiousness of cholera and dysentery, it is of the greatest importance to ascertain the nature of these limitations. Facts abound, and speak most plainly to those who will read them dispassionately. Referring to the prevalence of yellow fever on the coast of Brazil, Dr. Mc Kinlay† wrote:—"Almost every person who joined the *Vestal* during the prevalence of fever was affected by it; but no person leaving her, under the disease, communicated it to another, in another place." That is, as he afterwards explained, so long as the affected persons went to a healthy place in which the disease was not prevailing.

Facts of this kind are most notorious; and, when an epidemic of yellow fever occurs on land, it has often been found that there are boundaries at no great distance from the tainted district where the disease has not, and to which it will not, spread.‡ The value of migration from the affected region is a matter of history, and the circumstances which have revealed it have all the value of experiments conducted upon a large scale. "During the epidemic of 1800, at Cadiz, 14,000 persons left that city when the disease became suspected. These people fled to the country, where they remained free from the epidemic; while of the 57,499 who remained, 48,520 were attacked, of whom 6,884 lost their lives." And, again we read§:—"It was calculated that from Barcelona, in 1821, about 80,000 persons fled; and, except some who departed with the disease already upon them, or who were on the eve of being attacked, all remained exempt from the reigning malady." But, when individuals from an infected district pass into a region where conditions prevail which are favourable to its spread, or which are themselves capable of engendering typhus or other fevers, then yellow fever appears to be a contagious disease. A good illustration of this is supplied by Sir Gilbert Blane.|| He says:

"On the 16th of May, 1795, the *Thetis* and *Hussar* frigates captured two French armed ships from Guadaloupe, on the coast of America. One of these had the yellow fever on board; and, out of fourteen men sent from the *Hussar* to take care of her, nine died of this fever before she reached Halifax, on the 28th of the same month, and the five others were sent to the hospital sick of the same distemper." So far, there is nothing whatever unusual; but what follows is a good example of the

* "On Marsh Fever", in *Edinburgh Philosophical Transactions*, vol. ix, p. 274. And yet, concerning this disease, Dr. Milroy says:—"That yellow fever is constantly making its appearance, at intervals more or less distant, in various tropical countries, quite independently of any suspicion of antecedent importation, just as malignant cholera does in Hindostan, does not admit of doubt. In some seasons, from causes which we have hitherto failed to discover, it exhibits a much greater diffusion and migratory power than in other seasons. . . . Malignant cholera is much more diffusible and migratory than yellow fever; few regions of the world have escaped its assault."

† *Monthly Journal of Medical Science*, November 1852, p. 425.

‡ See *Med. Chir. Rev.*, 1854, vol. xiiij, p. 338.

§ *Second Report on Quarantine*, etc., p. 202.

|| *Diseases of Seamen*, p. 606.

kind of testimony which exists as to the occasional contagiousness of the disease. "Part of the prisoners," we are told, "were removed on board the *Hussar*, and, though care was taken to select those seemingly in perfect health, the disease spread rapidly in that ship (formerly healthy),* so that near one-third of the whole crew was more or less affected by it." Now, these facts which are recorded concerning yellow fever, are very comparable with what would have to be stated concerning dysentery. This also is "a disease liable to be engendered at any time by foul, damp air, and the use of bad food and drink, and which, at first, shows little, if any, power of communicability, but which, as cases multiply, and when the sick and the well are congregated together, unquestionably acquires contagious properties"†. The same power of arising *de novo*, and the same absence of contagiousness, except under the influence of favouring circumstances, seems to distinguish the direst of our modern epidemics—cholera. As Dr. Gavin Milroy says: "The whole history of the disease proves that contagion plays a very small and subordinate part in its diffusion; and nowhere has the attempt to exclude it by barring intercourse with places already affected succeeded in protecting a country from its invasion." Out of the area in which it habitually exists as an endemic disease, malignant cholera does not seem to be directly generable "by any known or appreciable conditions of local insalubrity, however much these conditions may favour its development or aggravate its intensity when it is once present, or is close at hand." The spread of the disease from its endemic site seems undoubtedly to be influenced by obscure atmospheric or other unknown conditions, comprised under the term 'epidemic influence'. Sir William Jenner asks: "What is the specific cause-relation between cholera and choleraic diarrhoea, and between severe summer diarrhoea and choleraic diarrhoea? Is cholera, in the form of choleraic diarrhoea, always amongst us?" And Mr. Macnamara, in part, replies from Calcutta that "cholerine is simply a modified form of Asiatic cholera, and is capable of engendering this more deadly form of the disease in other people by means of the dejecta." He says, also: "I know that several of the leading practitioners in this part of India are of opinion that cholera is 'a something generated in the bodies of those attacked by it, quite independently of all external influences.‡'"

Turning, now, to such affections as influenza and parotitis, these also are diseases which present various degrees of contagiousness, and are frequently epidemic in their mode of onset. Both are believed to be capable of arising *de novo*§, although the spread of influenza is undoubtedly promoted by unknown 'epidemic influences.' Sir Thomas Watson says: "The visitation is a great deal too sudden and too widely spread to be capable of explanation" by mere contagion. He adds: "It has been observed to occur also at the same time on land, and on board different ships, which have had no communication with the shore nor with each other.||"

If, however, we direct our attention to such affections as typhoid fever, relapsing fever, typhus, the plague, and cerebro-spinal meningitis, we meet with a group in which different degrees of contagiousness are presented, but concerning the origin of which *de novo*, or, independently of contagion, there can now be little doubt. Although this is a doctrine which has long been supported by many who have paid most attention to these diseases, it has of late years been much enforced and strengthened by the investigations of Dr. Murchison. The contagiousness of typhoid or enteric fever is very low; and, as Dr. Murchison says, "although enteric fever is, under certain circumstances, communicable, a large number of cases commence under circumstances which appear to exclude every possible source of contagion. The truth of this observation is almost universally admitted; and it is, therefore, necessary to search for some other cause of the disease than contagion". An

* That is, free from yellow fever.

† Dr. Gavin Milroy, *loc. cit.*, p. 176.

‡ *A Treatise on Asiatic Cholera*, 1870, p. 327. It is only fair to add, however, that Mr. Macnamara does not give his assent to this view. He is a firm believer in the communicability of cholera. He admits that 'sporadic cholera' is easily generable *de novo*, and that 'cholerine', from which it is often quite indistinguishable, is capable of giving rise in others to malignant cholera; and yet he wishes to maintain the distinctiveness of the latter form of the disease. Other affections also exhibit different degrees of contagiousness, and it would seem to us that 'sporadic cholera', which is easily generable in certain parts of India, cannot be really distinct from 'cholerine.'

§ Dr. Morris says (*Germinal Matter and the Contact-Theory*, 1867, p. 70):—"A curious contagious disease is recorded by Huxley to have arisen on board the surveying vessel *Rattlesnake*, characterised by glandular and diffuse cellular inflammation, by common and phlegmonous erysipelas, and by mumps."

|| *Principles and Practice of Physic*, vol. ii, p. 43; where examples are given. On this subject, also, Dr. Gavin Milroy says: "It has been confidently stated that every known visitation of the epidemic in the Faroe Islands has been preceded by the arrival of a vessel or vessels from Denmark, when it was prevailing there. But such a statement must not be too readily received; as it is well known that other islands, equally distant from any continent, has been visited, quite independently of arrivals therefrom." See also the articles by Dr. Parkes on this disease in Reynolds's *System of Medicine*, vol. i.

enormous amount of evidence tends to show that emanations from sewage and from some forms of putrefying matter are capable of exciting the disease in those who are favourably predisposed, although in other cases it seems to be more directly communicated by means of drinking water contaminated by sewage containing the dejections from a typhoid patient.*

Relapsing fever and typhus present many points of resemblance: both are essentially epidemic diseases; both are undoubtedly contagious. They generally occur during seasons of great scarcity, and they prevail more widely amongst the poorest class of the population. Overcrowding and defective ventilation, especially when associated with bad and insufficient food, "not only favour the propagation of typhus, by concentrating the emanations from the sick, but appear to be capable of generating the poison *de novo*." After alluding to the mode in which epidemics commence, Dr. Murchison adds: "I would allude in particular to an epidemic of true typhus which occurred in 1843, at Broulhaç, an elevated village in the Canton de Puy, in France. Most of the inhabitants were in a state bordering on starvation; and the first cases were traced to a house where there was overcrowding and no ventilation. It is impossible to conceive that the disease was imported, inasmuch as true typhus was not prevalent at the time in any other part of France.†" With regard to relapsing fever, on the other hand, it has been shown‡ that this (which is essentially the famine fever) is more dependent upon extreme starvation than upon overcrowding. Although it is not always easy to separate these two causes, it has been ascertained that in mixed epidemics of typhus and relapsing fever, relapsing fever is most prevalent towards the commencement, and typhus towards the close, of the outbreak. Then, again, we know that relapsing fever is not confined to large towns, but that it also decimates the starving inhabitants of country places.

Cerebro-spinal meningitis is believed by many to be only a modified form of typhus§, though this is more certainly the case with the plague, in which the typhus poison is evolved in its severest form. Undoubtedly contagious, though formerly believed to be infectious, in the very highest degree, Dr. Gavin Milroy says: "The whole history of medical opinion on the subject of the plague affords one of the most remarkable instances on record of fanciful speculation taking the place of sober and careful inquiry." And then he adds: "That the plague has frequently become developed *de novo*, and quite independently of any antecedent infection, cannot be doubted. The recent outbreak at Bengazi, on the Barbary coast, only confirms previous testimony; and as this outbreak occurred after many years' disappearance of the pestilence in that place, as well as throughout Egypt and Turkey generally, no other interpretation is possible. Then, as on many other occasions, the disease sprung up

* Referring to the views of Dr. W. Budd and others as to the disease being propagated only by sewage which is contaminated by typhoid stools, Dr. Murchison says:—"Admitting fully that this view offers the best explanation of those cases where the fever is propagated by the sick, many, if not most, of the facts adduced in its support are explicable on the theory of spontaneous generation, while in the others the mode of transmission is less clearly established than might be desired. On the one hand, facts are adduced to show that the disease is contagious; and, on the other, cases are mentioned to demonstrate the intimate connection between its origin and bad drainage. The evidence, however, is still insufficient to prove that the stools of the sick have constituted the medium of communication. This conclusion, it seems to me, has been jumped at from the unwillingness to admit that a communicable disease can ever have a spontaneous origin. But, in the second place, there are many facts which show that enteric fever often arises from bad drainage, independently of any transmission from the sick. As long as the current flows freely through a drain, there is little danger of the emanations from it giving rise to enteric fever. The danger arises when the drain becomes choked up, when the sewage stagnates and ferments." The dejections from a typhoid patient being remarkably prone to undergo decomposition, Dr. Murchison adds: "It is possible that the stools of enteric fever are more prone than ordinary sewage to the peculiar fermentation by which the poison is produced, and that even in certain cases the fermentation may have commenced before their discharge from the bowels. In this way, enteric fever may occasionally be propagated by the stools, but even then it seems more probable that the poison is always the result of decomposition, than that it is derivable from a specific eruption like that of small-pox." ("On the Causes of Continued Fevers," in *Lond. Med. Rev.*, 1863.)

† Dr. Murchison very aptly remarks:—"It has been the custom with many writers to refer epidemics of typhus to some subtle 'epidemic influence'; and thus when a failure of the crops has been followed by typhus, both of these disasters have been ascribed to a common atmospheric cause. But of such atmospheric influences, capable of producing typhus, we know nothing; their very existence is doubtful, and the employment of the term has too often had the effect of cloaking human ignorance, or of stifling the search after truth. If typhus be due to any 'epidemic influence', why does this influence select large towns and spare the country districts? Why does it fall upon large towns in exact proportion to the degree of privation and overcrowding among the poor?" (*loc. cit.*) Still, although the prevalence of typhus fever may be in great part accounted for without resorting to unknown 'epidemic influences', it must not be supposed that there are no unknown cosmical influences which have to do with the outbreak and spread of various epidemic diseases. Let us rather admit that which seems so probable, and live in the hope that we may one day ascertain more concerning their nature.

‡ See *Continued Fevers of Great Britain*.

§ Doubts, however, are entertained on this subject. (See Mr. Radcliffe's article in Reynolds's *System of Medicine*, vol. ii.)

amongst want, wretchedness, and squalor, and its true nature was not recognised for many weeks, in consequence of its close resemblance to ordinary typhus, to which it seems to be nearly allied."*

Now the remaining members of the group of specific infective diseases are varicella, hooping-cough, measles, scarlet fever, and small-pox. The knowledge which we possess concerning the mode of origin of these otherwise than by infection is almost *nil*. They differ amongst themselves, it is true, as regards their degree of infectiousness; but, as others have suggested, they are probably more strictly dependent upon individual states than upon external conditions, and, consequently, are more baffling to those who attempt to fathom their causes. Measles, scarlet fever, and small-pox, are undoubtedly amongst the most contagious of diseases, and, therefore, the chances are always strongly in favour of their contagious origin in any given case. But should this satisfy us? Should we be content to say that even measles, scarlet fever, and small-pox, are propagable only by means of contagion, and cannot arise *de novo*? Are they not strictly comparable with many other general infectious diseases which undoubtedly arise 'spontaneously'? Do we not see amongst those which may so arise that the degree of contagiousness is altogether variable? Does not this seem gradually to increase in each affection, as the off-cast particles have tendencies to undergo molecular change which are more and more capable of initiating chemical actions of a spreading character in the blood or mucous surfaces of ordinary individuals? And does not the diminishing contagiousness of different diseases seem to be due to the fact that off-cast particles are less and less capable of acting upon the healthy fluids and mucous surfaces of the body, but require that these should be altered, now by one set of agencies affecting the general health, and now by another, before such particles can initiate those changes which lead to the evolution of one or other of the specific poisons within the body? Hooping-cough, measles, scarlet fever, and small-pox, would in this case be merely the last terms of a series, differing from the other members simply in degree, but not in kind—and therefore as capable of being generated *de novo* as either of the others, although much more capable than they are of being disseminated by means of contagion.

If we reject this notion, what remains for us? The germ-theory is quite untenable—the analogy which has been thought to exist between the causes and nature of certain diseases and the specific and unalterable characters of living organisms is erroneous in both its aspects. And even if the diseases are *now* only propagable by contagion, just as the higher living things are propagable by reproduction, they must nevertheless have originated once; and, if once, why not now? Or, declining to admit even so much, shall we refuse to bear our own burdens? Shall we shift the difficulty, and suppose that the poisons of syphilis, measles, scarlet fever, small-pox, and other diseases, have been evolved amidst the unknown conditions obtaining upon the surface of an unknown world, whose disruption has scattered them broadcast, and conveyed them to us, with other never-dying germs, upon the verdant surface of a "moss-grown fragment"? With such alternatives, surely our choice cannot be doubtful.

If we turn to a sober survey of the facts which lie before us concerning the infective diseases as a class, our difficulties will be much diminished: simple and obvious conclusions will appear. (See Table.)

In the first place, we find a group of diseases due to the presence upon or within the body of parasitic organisms. These are partly local and partly general affections, the latter being intensely contagious, and on that account frequently confounded with other general infectious diseases in which living organisms do not occur. These general parasitic diseases are propagated by the presence and multiplication of living units, whilst those of the next great class are not.

* *Transactions of Epidemiological Society*, vol. v, p. 174. This is generally the rule with regard to epidemics. They occur mostly at times when other ordinary or non-specific affections to which they are most closely related are prevalent. And during the period of their decline, the more virulent epidemic forms of the affection again seem to lapse into more ordinary forms of disease.

† It seems to me that at present the facts are looked at much too exclusively from one point of view. It is fully admitted by many persons that during epidemics, more especially, a large number of cases of small-pox occur, even in isolated situations, in which it is quite impossible to obtain any evidence of contagion. When we consider, further, that the disease is epidemic at times, and then almost dies out, although multitudes remain who might be infected, we must admit that something besides contagion is undoubtedly operative in facilitating its spread during these times, and therefore we may assume it to be possible that this 'epidemic influence' of itself might, in certain persons, suffice to engender the disease without contagion. Dr. Gavin Milroy (*loc. cit.*) says: "This most interesting subject has not been investigated with that patient and searching care which all physical problems demand. The prevailing negative belief rests on merely presumptive grounds, rather than on sifting inquiry. That outbreaks of measles, hooping cough, etc., have been observed in various remote islands, and at distant intervals of time, without any traceable connexion with previous cases, either in the country itself or amongst recent arrivals, can scarcely be doubted. Hillary particularly alludes to his having noticed such occurrences in Barbadoes; and the medical history of other West India islands would, I believe, similar evidence." See also Hecker's *Epidemics*, pp. 215-218.

PARASITIC DISEASES AFFECTING:

External (cutaneous) surface.
Internal (mucous) surfaces.
Closed (serous) cavities.
Tissues of organs or parts. (*Psorospermia*, *Cysticerci*, *Nematoids*, etc.)
Blood. (*Bacteridia* in 'Malignant Pus-tule', *Psorospermia* in 'pébrine', etc.)

Caused and propagated by the presence and self-multiplication of living units.

TISSUE DISEASES.

A. Diseases of Internal Formed Tissues and of Mucous Membranes.

Fibro-plastic growths.
Cancerous growths.
Tubercular growths.
Glanders.
Syphilis.
Gonorrhœa.
Purulent ophthalmia.
Diphtheria and Croup.

Principally sporadic.

B. Diseases of the Blood (principally).

Erysipelas.
Puerperal fever.
Surgical fever.
Pyæmia.
Hospital gangrene.
Rabies.
Rheumatic fever.
a. Dengue.
b. Sweating sickness.
Intermittent fever.
a. Remittent fever.
b. Yellow fever.
Summer diarrhœa.
a. Choleraic diarrhœa.
b. Cholera.
Dysentery.
Influenza.
Mumps.
Relapsing fever.
Typhoid fever.
Typhus fever.
a. Cerebro-spinal meningitis?
b. Plague.
Varicella.
Hooping cough.
Measles.
Scarlet fever.
Small-pox.

Principally Endemic.

Often Epidemic.

Caused and propagated by chemico-physical agencies, and not by the multiplication of living units.

COMMUNICABLE DISEASES.

The tendency in the former is towards death; the tendency in the latter towards recovery. The non-parasitic infective or specific diseases are also partly local and partly general affections. The local affections are closely allied to other morbid states, such as cancer and tubercle, with which they are not usually classed. Many of these local diseases tend to become general diseases. Similar morbid growths spring up in various parts of the body, and the blood itself becomes affected. They are also more or less apt to spread from individual to individual. All are capable of being generated *de novo*. Such local affections are united by the closest bonds of similarity to the more general zymotic diseases, amongst which all degrees of contagiousness are manifested. The members of the whole series, however, are intimately related to one another; and their mode of propagation is essentially similar, even though the readiness with which contagion occurs is variable. Very many of them are undoubtedly generable *de novo*; and the others are probably also capable of arising 'spontaneously', though the proof of this, on account of their highly contagious nature, is difficult to establish.

All these latter diseases, therefore, are dependent upon local perverted modes of growth, or upon chemical changes of a definite, though unknown, character taking place in the blood—partly under the influence of general causes, and partly owing to the initiation of chemical changes induced by contact-action of contagious particles or fluids. As with diseases in general, so with these, two sets of factors are frequently concerned in their production. There are the 'predisposing causes' pertaining to the condition and tendencies (either inherited or acquired) of the individual, and there are the 'exciting causes' or external influences (usual or unusual) at the time operative upon this individual. The combined influence of these causes of disease are often called into play in the production of the infective malady, just as much as they are influential in the origination of non-infective diseases. But predisposing causes may, in conjunction with ordinary external agencies, suffice in some cases; just as, in other cases, the exciting cause or causes may be capable of initiating the affections in the average healthy individual, without the aid of any predisposition.

Unless we entertain opinions of this kind, facts which are admitted by all seem quite incapable of being explained, whether they have

reference to the 'generalisation' of morbid growths within the body, or to the spread of infectious diseases amongst the community. Cancerous particles in the circulation are inoperative in certain individuals, or in many parts of other individuals, however numerous they may exist. Contact with the contagia of ophthalmia or diphtheria will excite the disease in some persons and not in others. Yellow fever and cholera are 'contagious' only when certain favouring conditions are present to facilitate the operation of the specific poisons of these diseases. Rabies cannot be communicated to certain dogs. Professor Gamgee* mentions a case in which a pointer did not contract the disease although it was bitten seventeen times by mad dogs. And, even the most contagious affections—those in which the poison is usually sufficiently potent to act upon the average individual—does not seem capable of being communicated to some persons. Do we not see individuals fully exposed to the contagion of measles, scarlet fever, and small-pox, and yet fail to contract the disease? Facts of this kind are familiar to all medical men. Sir Thomas Watson has referred to the case of "an old woman who for years had been in the habit of going from village to village as a nurse; and of nursing a great number of persons labouring under small-pox, which she had never had, and against which she (naturally enough) believed herself proof": but, he adds, "at length she was taken ill, and died of small-pox in the eighty-fourth year of her age." Again, he says: "In 1845, a lady with whom I am acquainted went through an attack of measles, that disease being prevalent in the village where she was then residing. She had never had the measles previously; yet she had long before personally tended eleven of her twelve children when ill of the same complaint."†

Such facts are quite inexplicable in accordance with the vital or 'germ-theory' of causation of these diseases,‡ though they become much more easy to understand in accordance with the views which have just been laid before you. They are, further, thoroughly harmonious with the results of experiments made by myself and others with reference to the causes of fermentation. These have led me to reject, as too narrow and exclusive, the 'vital theory' of Pasteur, and to adopt the broader physico-chemical doctrines of Liebig, which appear to be harmonious with all the facts. In endeavouring to explain the initiation of fermentation in any particular fluid which has been boiled, we have also to consider the influence of intrinsic tendencies in the fluid, in combination with the exciting or external agencies to which it is subjected. In some cases, the intrinsic tendencies may of themselves be potent enough to initiate the process; whilst in other instances the mere contact-action of an unheated organic fragment combines with weaker inherent tendencies to incite the fermentative process.§ Fermentations may be associated with the presence of organisms, or they may occur independently. The ordinary zymotic diseases are comparable with fermentations of the latter class; and their several contagia act after the fashion of the mere dead organic fragment upon the fermentable fluid.||

* In Reynolds's *System of Medicine*, vol. i, p. 717.

† *Principles and Practice of Physic*, vol. ii, p. 782.

‡ The lowest kinds of living germs with which the hypothetical disease-germs are compared, will live and flourish in various media, and will infallibly set up fermentative changes in fluids which differ very considerably from one another. The contagiousness of general parasitic diseases also manifests itself equally well upon persons of all ages, and at all times.

§ Look, again, at the great moral epidemics which were so prevalent in the middle ages, and which in their most marked form have extended almost to our own times. Here, also, we have a changed mode of action in certain parts of the body, brought about partly by 'predisposing', and partly by 'exciting causes.' We may read in Hecker (*Epidemics of the Middle Ages*, p. 142) as follows: "In a Methodist chapel in Redruth, a man, during divine service, cried out with a loud voice, 'What shall I do to be saved?' at the same time manifesting the greatest uneasiness and solicitude respecting the condition of his soul. Some other members of the congregation followed his example, cried out in the same form of words, and seemed shortly after to suffer the most excruciating bodily pain. This strange occurrence was soon publicly known; and hundreds of people who had come thither, either attracted by curiosity or by a desire, from other motives, to see the sufferers, fell into the same state. The chapel remained open for some days and nights, and from that point the new disorder spread itself, with the rapidity of lightning, over the neighbouring towns of Camborne, Helston, Truro, Penryn, and Falmouth, as well as over the villages in the vicinity. Whilst thus advancing, it decreased in some measure at the place where it had first appeared, and it confined itself throughout to the Methodist chapel. It was only by the words which have been mentioned [contagia] that it was excited, and it seized none but people of the lowest education. Those who were attacked betrayed the greatest anguish, and fell into convulsions. . . . According to a moderate computation, 4000 people were, within a very short time, affected with this convulsive malady." The various signs and symptoms of the malady are then described.

|| It is, however, quite conceivable that, in certain cases, the changes in the blood might, in the last stages of the disease, assume such a character as to lead to the evolution of *Bacteria* in this fluid. This change, which may occasionally occur during life, does undoubtedly occur very soon after death, in some diseases. In two cases, one of rheumatic fever and one of typhoid fever, in which the temperature had gone up to 108-110 deg. Fahr. a few hours before death, I found the vessels of the brain and of other parts of the body containing myriads of *Bacteria* even within forty hours after death, and whilst the temperature of the air had not been over 65 deg.

Some boiled fluids are quite incapable by themselves of initiating a fermentative process; but this tells no more against the positive abilities of other fluids, than does the fact that certain diseases are unable to spring up amongst a particular community, tell against the circumstance that they do so arise amongst other communities where a number of unhygienic surroundings, previously absent, are also operative in producing the result.*

Amongst the 'exciting causes' of disease, there must be many which are to us at present utterly obscure. More especially is this the case with epidemic diseases. There are, undoubtedly, 'epidemic influences' concerning which we know scarcely anything, but whose existence is only too surely attested by the history of the great epidemic and epizootic affections. As Fleming says, in his *Animal Plagues*, "it has been a matter of common observation from the earliest times, and our history will testify to its accuracy, that wide-spread pestilence in plants, and murrain in animals, have frequently either preceded, accompanied, or followed closely on those visitations which caused mortality and mourning in the habitations of men; showing an identity of causation or affinity, which strongly tempts the inquirer to solve the secret of their joint production."† 'Causes' of this kind, however obscure, are undoubtedly none the less real. Whilst we may hope, therefore, that increasing knowledge will ultimately enable us to throw more light upon their nature, we may at least feel assured that the efficacy of these 'causes' may be increased or diminished by us at will. 'Exciting causes' of all ordinary severity require to be supplemented by the action of 'predisposing causes' existing in the individual himself before disease can be generated. Although we are comparatively powerless to rectify mere individual idiosyncrasies, of the very nature and existence of which we may be ignorant, still these constitute a mere fractional part of the predisposing causes which favour the spread of epidemic affections. These are, in the main, produced in the individual by the operation of the more general exciting causes of disease, such as bad or insufficient food, bad water, and impure air; or they are dependent upon more special causes, such as depressing emotions, excessive muscular exercise, or the occurrence of any unusual amount of degenerative changes within the body. As Dr. Carpenter pointed out nearly twenty years ago, in a very able article on the 'Predisposing Causes of Epidemics',‡ these causes are reducible to one or other of three categories: "1, those which tend to introduce into the system decomposing matter that has been generated in some external source; 2, those which occasion an increased production of decomposing matter in the system itself; and 3, those which obstruct the elimination of the decomposing matter, normally or excessively generated within the system, or abnormally introduced into it from without." Now, the common characteristic here is that "any one of these causes will tend to produce an accumulation of disintegrating azotised compounds, in a state of change, in the circulating current"; and observation seems to tell us that either of the causes leading to such a result may, when potent, suffice to assist the spread of epidemic diseases, though two or more in combination lead to much more certain results. Much has been done to diminish the prevalence of these conditions,

Fahr. The blood was blackish and fluid, the organs were much blood-stained, and in addition to other marks of putrefaction, bubbles of gas were abundant in the meshes of the pia mater. The blood of such, and of other similar patients examined during life, have never revealed to me the least trace of *Bacteria*. Dr. Burdon Sanderson, moreover, has ascertained that the blood and other fluids of the body do not generally exhibit any zymotic tendencies (see *Thirteenth Report of Medical Officer of Privy Council*). Some of the *Bacteria* which were found after death, I believe to have been evolved *de novo*, whilst others were descendants of those which had so arisen, in the putrescent blood. No other view seems to me to be so tenable as this. The fluids in a pyæmic abscess may occasionally be on the road towards similar results, and, even if no *Bacteria* exist, such fluids might exhibit 'zymotic' properties.

* There is, however, a great tendency to draw such conclusions; just as there is a tendency with others to conclude that *Bacteria* do not arise *de novo* because there is no evidence of such an occurrence when dealing with Pasteur's solution or a few other fluids, different from those in which the process is stated to occur. Let any person, for instance, repeat Dr. Sanderson's thirteenth experiment (*Thirteenth Report of the Medical Officer of the Privy Council*) with a strong infusion of hay or turnip, rather than with Pasteur's fluid, and then such results will occur that, from Dr. Sanderson's data, he will have no option but to admit that *Bacteria* do arise *de novo*. It is surprising that such an experiment was not tried in the face of all that has been said concerning the productivity of such fluids. The real laws by which contagion is regulated can never be adequately understood unless one knows whether the contagia with which one is concerned can, under any circumstances, arise *de novo*. This seems to me to be the point which should be first ascertained.

† If additional reasons were needed to enforce the vast importance of the fullest knowledge concerning these diseases, they are not wanting. The same author writes:—"The losses from only two exotic bovine maladies ('contagious pleuropneumonia', and the so-called 'foot-and-mouth disease') have been estimated to amount, during the thirty years that have elapsed since our ports were thrown open to foreign cattle, to 5,549,780 head, roughly valued at £83,616,834. The late invasion of 'cattle plague', which was suppressed within two years of its introduction, has been calculated to have caused a money loss of from five to eight millions of pounds."

‡ *British and Foreign Medico-Chirurgical Review*, 1853, vol. xi, p. 175.

which act only too surely upon the individual in arousing the 'predisposing' causes of disease, though far more still remains to be done. Happily, however, public attention is now becoming slowly aroused to the importance of pure air, pure water, efficient drainage, and wholesome food, as instruments for maintaining the health of the community.

Let us not be blinded, however, by any narrow or exclusive theories which would teach us that epidemic and infective diseases cannot arise *de novo*. Let us, instructed by a broader survey of the facts, assign no such limits to natural possibilities, and not lightly accept theories which lead to supineness, when we ought to be stimulated to exertion. Whilst accepting to the full all doctrines which inculcate the necessity of diminishing the chances of contagion by every available means, let us, full of hope, diligently seek also for the causes which engender even the most contagious of diseases. Prevention of disease is *the* grand end and aim of medicine; if, then, we have learned from the sad lessons of experience that scarlet fever and small-pox are virulently contagious diseases; if, even in ninety-nine cases out of a hundred, or even in a still larger ratio, both of these diseases are acquired by contagion, then is it all the more important that we should strive to ascertain what are the invariable and immediately antecedent sets of conditions, or states of system, which suffice actually to engender these maladies. In such cases knowledge and power are most frequently convertible terms. Next to typhus fever, the most fatal of the infective diseases which occur in this country are scarlet fever,* small-pox, measles, and whooping-cough. The ravages of typhus in our crowded cities and in our jails have been enormously curtailed, not so much because of its diminished spread by contagion, but rather because we have learned what are the causes which engender it, and are therefore better able to prevent its occurrence. Let us strive, then, to acquire a similar knowledge concerning scarlet fever, small-pox, measles, whooping-cough, and other contagious diseases, and so endeavour, in the most efficient manner possible, to check the ravages of these *morbi populares*.

Time will not permit me even to allude to the many other interesting and important problems which still remain to be solved in reference to these diseases. What I have said, however, will, I hope, suffice to inspire you with a sense of the great difficulty of the problems which you will subsequently have to face; and, therefore, to make you feel the urgent need for diligent, patient, and honest work all through your career—without which you will not be able conscientiously to accept the high responsibilities that will subsequently devolve upon you as practitioners of medicine, and without which no real advance in knowledge can ever be made.

* Mr. J. Netten Radcliffe says (Ranking's 'Abstract', vol. xli, 1865): "The Registrar-General's returns of scarlet fever for the whole of England, include two periods of five and sixteen years respectively. The first period extends from 1838 to 1842, and the second from 1847 to 1862 inclusive. The total number of deaths registered from the disease in the twenty-one years was 310,720; the annual average mortality for the whole series of years was 14,796." "The history of the progress of scarlet fever in the metropolis differs from that of the entire kingdom in this, that it shows a great augmentation of the mortality from the disease in the last quarter of a century. The annual average mortality from the malady in London during the past twenty-six years was 83 per 100,000 population. The average varied from 32 in 1841 to no less than 174 in 1863. In the quinquennium 1839-43 the annual average was 78; in the quinquennium 1844-48 it increased to 88; in the quinquennium 1859-63 it advanced to 115. The death-rate of 1863 (174) was more than double the annual average of the twenty-six years, 1838-64."

UNIVERSITY OF CAMBRIDGE.

ANATOMY AND PHYSIOLOGY.—Professor Humphry gives notice of lectures and practical teaching as follows. Lectures on Anatomy and Physiology in the new Museums, on Tuesdays, Thursdays, and Saturdays, at 1 P.M., commencing on Saturday, October 21st.—Lectures on Practical Anatomy on Mondays, Wednesdays, and Fridays, at 6 P.M., commencing on Monday, October 16th. These, together with the Lectures on Anatomy and Physiology, constitute the course for M.B. and M.C., and for the Royal College of Surgeons.—Microscopical Demonstrations on alternate Tuesdays, at 6 P.M., commencing on Tuesday, October 31st.—Practical Histology on Saturdays, at 11.30 A.M., commencing October 28th. This, in conjunction with the Practical Physiology by Dr. Michael Foster, constitutes a course of Practical Physiology.—Superintendence of Dissections daily.—Instruction on Practical Anatomy will be continued in the Christmas vacation.—The Downing Professor of Medicine (Dr. Fisher), or his deputy (Dr. Latham), will deliver a course of lectures on Materia Medica and Therapeutics during the ensuing Michaelmas and Lent terms. The lectures during the Michaelmas term will be delivered in Downing College, on Tuesdays, Wednesdays, Thursdays, and Saturdays, at 9 A.M., commencing on Tuesday, October 24th; and during the Lent term on Tuesdays and Saturdays. Fee for the course, £3 : 3. The Museum of Materia Medica at Downing College is open daily to all students of medicine.

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS,

On OCTOBER 2nd and 3rd, 1871.

ST. MARY'S HOSPITAL.

THE introductory Address was delivered by Dr. ALFRED MEADOWS, Physician-Accoucheur to the Hospital and Lecturer on Midwifery.

The lecturer commenced by defending the system of the delivery of introductory addresses, which, like other institutions, had become subjected to the "ruthless scrutiny of the nineteenth century", and had indeed been tried and condemned at one of the oldest of the metropolitan schools. He thought that "one obvious use of these introductory lectures is the tendency which they have to keep alive that bond of Freemasonry which ought to exist between all the members of a profession such as ours, and notably between the pupils and teachers of each medical school. It is almost the only occasion in the academical year on which, being free from other collegiate duties, we, teachers and pupils of all years, meet together for the special purpose of being together, and for the mutual interchange of thought with thought."

Referring to the changes which had taken place in the school during the past year, Dr. Meadows said: "By the mere lapse of time (we may indeed be thankful it is from no other cause), we have to regret the partial loss of three of our most distinguished colleagues—Dr. Sibson, Dr. Tyler Smith, and Mr. Lane. I say partial loss, because their names are still on our staff, their hearts are yet in the place and in the work, and their spirit still energises the labours of their successors. We have also to regret the loss of Dr. Russell as Lecturer on Chemistry, and of Dr. Payne as Lecturer on Pathological Anatomy. But we can generously afford to congratulate the schools of St. Bartholomew and St. Thomas, which have gained their services, while we welcome their successors—Dr. Wright to the Chair of Chemistry, and Dr. Reginald Stocker as Medical Tutor and Pathologist, an appointment now for the first time made in this school. In the latter, we believe that a colleague has been found to whom you will feel more than ordinarily grateful, if you will use him as he would wish you to do."

The lecturer explained the duty of the office of medical tutor, to which Dr. Stocker had been lately appointed, to be that of assisting the students in their studies—"to help them to use their eyes, their ears, their hands, and above all, their understandings". The instruction conveyed by the medical tutor was, in a measure, a substitute for that gained by apprenticeship—the nearly complete discontinuance of which Dr. Meadows regretted. He referred also to the lately instituted scholarships in Natural Science; remarking that there was an obvious fitness in the foundation of such scholarships in a medical school, inasmuch as no one could doubt the enormous value to the practitioner of medicine of a thorough acquaintance with natural science, and at no time could this be so well acquired as at the commencement of medical study.

Leaving matters of local interest, and turning to the question of the selection of a subject for discourse, Dr. Meadows referred briefly to the relations of medicine to science in general, to society, to politics, and to theology. Regarding its social aspects, he observed: "It may be said, in truth, that society itself could not exist independently of the profession of medicine. In political life, also, the medical profession is yearly growing in influence and importance; and no politician can, with any hope of success, aim at influencing the government of the country if he be indifferent to the value of medical opinion in public affairs. Indeed, I have the best reasons for knowing that the political leaders of both sides of the house would gladly welcome a much larger number of medical men to the House of Commons than at present belong to it."

After a few more remarks, the lecturer proceeded to comment on the relations of science to religion. "We hear a good deal nowadays, and some people seem to take a special delight in talking about the conflict between science and religion. Now, I am not one of those who believe that true science is, or can be in any way or degree, opposed, either in theory or in fact, to what is called revelation. I have too strong a faith in the latter, and too high a love for the former, ever to believe in such a possibility, or to entertain the shadow of a doubt as to their complete oneness in all essentials. It has always appeared to me a simple impossibility that true science and revelation should ever

contradict each other. Speculative science, or, perhaps, I ought rather to say, speculative thought, may, and very possibly will, be frequently at variance with revealed truth. But true science, real scientific thought, and most of all the demonstrative facts of science, never have done, and never will do, violence to the undoubted will of the Creator, as exemplified in his revealed word. Reason herself revolts from such a thought. For what are we to understand by the terms science and revelation? It seems to me impossible to deny that, in regard to their relation to the Great Architect of the Universe, they are and must be absolutely identical. Science I take to be the discovery or demonstration of abstract truth in the laws which govern the natural world, and making deductions therefrom. But those laws must have had a lawgiver: there can be no such thing as self-made law: the very idea is an absurdity. Law, then, implies a lawgiver; and he who created the law must also have created that which the law governs, whether it be in the organic or inorganic world, in the animal or vegetable kingdom. In short, the whole realm of what we call Nature, governed as it is by law, witnesses to the Lawgiver as the author of its dynamical agency, while at the same time the material Universe, as we now see it, is a necessary consequence of the operation of law.

"On the other hand, revelation is nothing more than the proclamation, through certain specified channels, of the laws of the machinery, if I may say so without irreverence, by which God wills to govern the moral world, and to bestow upon man a higher existence than his present life. In fact, if I might venture upon a parallel, I should say that revelation is the scientific authority for the moral law, just as the recorded observations of facts in Nature become the scientific authority for natural law. Both authorities are of equal value as bases of truth and as expressions of the Divine will; and just as ignorance of natural science engenders among the proud and foolish contempt for scientific things, so ignorance of theological science is apt to engender, with the intellectually proud, indifference to sacred things.

"In trying, then, to discover the secrets of Nature, to unfold her laws, and to lay bare her operations, we are all the while endeavouring, though we know it not, to extract, as it were, more and more of the Mind of the Creator as it lies hid in the works of His Hands. But what, I ask, is this but an attempt to complete another revelation? And can we suppose that He, who is the author of the written revelation of His will, will contradict Himself in that other revelation which man is permitted to read from the Book of Nature? If this contradiction were possible, then God would be proved to be a Being absolutely less trustworthy than many of His creatures."

Dr. Meadows then examined the opposite views held as to the nature of Life; expressing himself in favour of the doctrine that it is distinct and separate from ordinary physical forces. This view was, he thought, "greatly strengthened by the consideration of what takes place in an organic body when, as we say, life has fled. Then at once the physical forces, such as chemical action, which have been kept in check, if not by the vital force, at least during vital action, exercise an undisputed sway over the now dead body; and the result is that its component parts gradually but surely lose all trace of structural character, and are resolved into their ultimate chemical constituents: *construction* is at an end; *destruction* is rampant, and no power suffices to avert the catastrophe." With reference to the bearing of the question of the nature of life on medicine, he said:

"Our whole course of study, dealing as it necessarily does with material objects, not only in physiology, but also in pathology and therapeutics, is apt to engender a too materialistic view of disease, and to obscure our view of the morbid processes by which disease is brought about, processes which are essentially deviations from the normal evolution of the life-force, whatever the nature of that force may be. It is so much easier to recognise the effects of what we call disease, the mind comprehends so much more readily what the eye sees, and the hand can touch, that we are almost inevitably drawn to the recognition of the organic lesion as the alone cause of the patient's distress, and as the object towards which our remedial efforts should be directed. But it is certain that, if we inquire into the matter, we shall find in most cases evidence of what is called functional, or as I would term it, dynamical derangement, long before the existence of organic lesion, and a little thought will suffice to convince us that functional derangement is but another term for the abnormal operation of life-force. For, as the force or dynamical agency which is inherent in the life-germ secures the normal growth and development of the body of which it is the germ, so deviations from that force necessarily lead to abnormal tissue-change; in other words, to disease, either during growth and development, or in subsequent maturity.

"Here, then, we see the importance of studying the laws which regulate the operation of that force, and their effects upon the bodily structure. By observing these actions during health, we may in time hope to

gain some clearer conception of the causes of disease—those causes which are at present enveloped in so much obscurity that we can hardly be said really to know the *modus operandi* of any one of them. It is through the subtle workings of the life-force that minute tissue-changes are produced; and it is here, therefore, that we must look for the earliest indications of the coming disease. When the grosser manifestations of organic lesion are apparent, it is then too late to trace out the ultimate cause of the evil; and that which, if it could have been recognised and appreciated in its earliest stage, might, perhaps, have been combated successfully by a very simple remedy, now baffles and defeats all our efforts. Recent observations have shown how, by the thermometer, timely warnings of impending mischief are often given long before any other indications are apparent. It is in this direction that we must look for future advance in medicine, and each one of you may, if you will, be of infinite service in this work. There is yet an abundant harvest for the honest, painstaking, humble labourer in the medical vineyard."

In concluding, the lecturer urged his hearers to remember that the one object of their lives should be to seek after and to maintain truth. They must practise truth persistently, not only in their profession, but in every minute particular of their daily life.

KING'S COLLEGE.

THE Introductory Address was delivered by Dr. RUTHERFORD, Professor of Physiology.

After stating that the chief objects sought for by those who profess medicine are to preserve health and cure disease, Dr. Rutherford pointed out that a knowledge of the healthy state and of the conditions necessary for its preservation, must necessarily precede a knowledge of the diseased state and the means required to rescue an individual from it. After referring to some of the attractive features of biological science, he stated that, although medical studies deal to some extent with metaphysics, they nevertheless chiefly concern the two great factors of the physical world—to wit, matter and energy. "The first great idea which those who enter upon the study of living beings should lay hold of is, that the matter and energy which are found in them are derived from the dead world around them. Things that live, although they can transform matter and energy in the most marvellous ways, can neither create nor destroy them. A continual stream of matter and energy flows from the dead into the living world, serves its time there, and returns to the dead world. . . . Seeing that the matter and energy found in the organic come from the inorganic world, it might be anticipated that the changes through which they pass in the world of life are subject to the same laws which govern them in the world that is lifeless. Such appears to be the case. The law that rules the chemical changes taking place in a muscle does not differ from that which regulates the chemical changes that go on in a steam-engine. The laws that preside over the movements of the blood are just those which control the movement of any other liquid. The metamorphoses which matter and energy undergo in the living world are many of them infinitely more complex and difficult to follow than those through which they pass in the inorganic world. It is therefore necessary that one should be acquainted with the character of the phenomena found in the inorganic ere we attempt to follow or comprehend the more intricate nature of those found in the organic kingdom. In short, the chemistry and physics which immediately concern lifeless things must be studied before the chemistry and physics which immediately apply to things that live can be comprehended. In other words, a knowledge of inorganic chemistry and physics must be acquired before organic chemistry and physics can be understood."

He then, with the aid of some familiar illustrations, explained the methods of observation and experimentation by which facts in natural science are ascertained, and pointed out the disastrous results that follow hasty observation, careless experimentation, too rapid digestion of facts, and the substitution of fiction for truth. The truly scientific method of investigating the events of life was begun three-and-twenty centuries ago by Hippocrates, and fortunate would it have been had the path which he opened up been pursued; but the dark ages enveloped it in obscurity, and it was not fairly reopened until our immortal countryman Harvey found his way into it, and Bacon shed the light of his genius upon it.

In indicating the present position of medicine, the lecturer stated that in inquiries regarding living things in a state of health or disease students should particularly attend to—1. Their physical or structural composition. 2. Their chemical composition. 3. The functions or actions which they perform. He stated that the four great essential subjects in medicine are physiology, pathology, hygiene, and thera-

peutics, and proceeded to explain what was meant by these subjects, and to give an account of their present position. "The most advanced part of physiology and pathology is that which refers to the structural composition of the body. Our knowledge of the chemical composition of the body is not so advanced, because of the excessively difficult nature of the inquiry. Very much has been learned regarding the actions of the body in health and disease; but, although we know a great deal regarding these actions, we are far from having ascertained all about them. No stone, however, is being left unturned. The secrets are being sought out with the aid of the most refined physico-chemical instruments and processes.

"The causes that give rise to the phenomena of life have, ever since the first glimmerings of science, formed a deeply engrossing subject for inquiry; and assuredly, as time runs on, the interest and importance that attach to such a question, far from diminishing, continue if possible to increase. For centuries there has been a keen controversy between the vitalists and physicists. The vitalists first took up the ground, and ascribed the operations of the body to spirits—good during health, and evil during disease. Hippocrates, three-and-twenty centuries ago, started the hypothesis that the actions of the body are presided over and directed by a spirit termed Nature. Aristotle called this spirit Vegetable Soul; and said that it is common to all plants and animals. In modern times this spirit, or principle, has received various names, and its existence is still believed in by some physiologists. By them it is looked upon as directing the various operations necessary for the life of plants and animals. In opposition to this idea, many physiologists have come to the conclusion that the existence of such a spirit is a myth; and they believe that the ordinary vital operations of plants and animals are due to the ordinary attributes of matter and energy. There has been some extravagance on both sides. Some vitalists have called the holders of the physical view materialists, even if they refuse to believe that a cabbage is possessed of a vegetative soul; alleging that if we deny the existence of such a soul in a cabbage, we must deny the existence of man's rational soul, and even the existence of a God. On the other hand, some upholders of the physico-chemical views have absurdly maintained that the properties of matter and energy may be regarded as sufficient to explain all mental phenomena. The controversy is still unsettled."

In alluding to the spiritualists of the present day, the lecturer said: "We have been informed by a noble lord that a certain Mr. Home is able to defy the law of gravitation to an extent which is, to say the least, very remarkable; we have been seriously told that he can fly through the air by a mere effort of his will. The number of those who possess this marvellous power would seem to be very limited; and it is fortunate for cab-proprietors and railway shareholders that the number is likely to remain a small one. As yet Mr. Home and his disciples do not seem disposed to make a public exhibition of their marvellous powers. Probably they still continue to ride in omnibuses, cabs, and railway carriages, and find it safer to trust themselves to such modes of conveyance rather than to their newly discovered method of aerial flight. Spiritualism of the sort now fashionable is not so very novel as the spiritualistic media would fain have us believe. Within the memory of most people, miracle-workers have been ever and again starting up. The tricks of the mesmerists, spirit-rappers, and table-turners made dupes of a great many simple-minded persons. Possibly the media have now become so dexterous, that they can make dupes of persons whose minds cannot be exactly charged with simplicity; but, nevertheless, it is probable that ere long their tricks will be exposed, just as all similar tricks have been."

Hygiene, the lecturer said, is in a state of considerable advancement. We know well the ordinary conditions necessary for preserving health; but we have yet much to learn regarding measures sufficient to protect man from the malignant agencies that produce disease. Nevertheless, the great success of vaccination leads us to expect great achievements in this direction.

He explained many of the reasons why therapeutics are in a state which, though rapidly improving, is still far from being satisfactory. "The mechanical appliances adopted by the surgeon are, on the whole, eminently satisfactory. Nothing can surpass the cunning and dexterity with which he uses his knife to remove a diseased member. Still, in the majority of cases, the use of the knife in disease implies the confession that the surgeon has failed to arrest the diseased condition of the part. Both surgeons and physicians experience extreme difficulty in exercising a really curative influence over disease. Petronius Arbitrator was wrong, however, when he said that 'a physician is nothing but a satisfaction to the mind'. Happily there are many diseases which can be completely cured, and a great many more that can be influenced for good, by the use of remedial measures; but still the achievements of medical men are circumscribed by a circle which, though ever widening,

is yet a narrow one. The chief reasons for this limited success are, that we are still unacquainted with many of the healthy actions that take place in the body. The causes of many diseases are as yet unknown. It is not yet possible to ascertain precisely what parts of the body are affected by some diseases. Obscurity still hangs over the significance of many of the altered bodily actions that are observed in disease. Some of these actions have a fatal, others have a beneficial, tendency; and the difficulty is to know which to favour and which to repress. The actions of many drugs, and other remedial agents, are only partially known; and even where these actions have been ascertained, there remains the difficulty that the precise influence of the drug differs in different individuals, and even in the same individual at different periods of his life. But we are not possessed of the power of ascertaining beforehand what are all the respects in which one man differs from another, and therefore we are not by any means always able to predict what will be the precise influence of the remedial measures which we adopt: hence it is that medicine does not present the characters of an exact science. We cannot, in many instances, say what is or what will be, nor can we always with precision wield those powers which we already possess for influencing the constitution of the body and its actions. We have, for the present, to weigh probabilities, and to hit the mark as nearly as we can. This fact need not, however, dismay those who are entering upon the study of medicine. She is daily becoming more exact; and the pleasure and satisfaction which result from an honest and earnest attempt to render her more scientific quite outweigh any disappointment one may be inclined to feel at finding that she lacks much of that precision which gives such charm to physics, chemistry, and mathematics. The great fact to be remembered is, that medicine must be pursued in a scientific spirit. Only by cautiously comparing and weighing all the facts of any case, and coming to just conclusions from these, can we hope to advance medicine. We have to bear in mind that whenever we give a man a dose of medicine we really perform an experiment—an experiment which is important to the person and important to the science of medicine. . . . Observe all the conditions of the experiment, and write them in a book, so that they may never be forgotten by your memories, which are treacherous at the best. Old Hippocrates showed us a splendid example. He wisely saw that to get at accurate facts is the backbone of all science. He did not content himself with remembering his facts; he wrote them on tablets, so that they might never be forgotten or altered."

The lecturer said: "A great and attractive feature connected with the prosecution of medicine is the open-handedness that everywhere prevails with regard to discoveries. The moment a medical man makes a discovery, however valuable, he tells it to all the world, so that every one may have the advantage of any good contained in it. In consequence of this absence of secrecy, it is in the power of every one to acquaint himself with and to adopt any measure that is proposed for the treatment of disease. Nevertheless, although there is free intercourse between medical men in every part of the world, medical science presents somewhat different aspects in different countries. Diseases which are rare in this are sometimes common in other lands. The type of disease which may be rare here may prevail elsewhere. The mode of treating some diseases differs in different schools. The methods adopted in the tuition of medicine are not everywhere the same. It often happens that certain schools are famed for the facilities with which certain subjects can be studied: for example, although the surgery in England is in many respects decidedly superior to the surgery of France, nevertheless students have greater facilities for the practice of operative surgery in France than they have in England. Although physiology and pathology are in many respects just as advanced in England as they are in Germany, nevertheless many inquiries connected with these subjects can be prosecuted in Germany with less expense and greater facility than in this country; for in Germany the Imperial powers liberally support physiological and pathological laboratories, and happily in that country physiologists and pathologists are not pursued by a herd of anonymous scribblers, who, while they wink at all manner of sports, however cruel and meaningless, are ready to thrust their waspish stings into any one who dares to decapitate a frog in the interests of the healing art. Seeing that the aspects of medicine are not anywhere alike, it is very important that you should visit different schools of medicine in order to get an education as comprehensive as possible. It is well to visit the chief schools of France and Germany. The Germans and the French have much to learn from us, but at the same time we have not a little to learn from them."

The lecturer concluded with some practical remarks concerning the mode of study which should be adopted by the students.

WESTMINSTER HOSPITAL.

THE Introductory Lecture was delivered by Dr. BASHAM, physician to the Hospital. He commenced by observing that it might be to the advantage of those now entering the profession to have placed before them the relative position assigned to medicine and surgery among the other arts and sciences. These words were so constantly employed almost as convertible terms, that it was expedient to give such a definition as would enable the student to comprehend clearly the position held by medicine among other branches of human inquiry. The word science comprehended investigations into the powers and properties of matter, inorganic as well as organic; the mutual action of forces and masses; the laws of matter, statical and dynamical. The term art was applied to everything which was the product of the mental or manual skill of the individual. Science, properly so called, was either deductive or inductive. The first comprised the exact sciences—mathematics. The second, inductive, included the natural sciences, or physics; and the object of these was a knowledge of the laws of the material world. The natural sciences were then classified, and the necessity for a knowledge of them to the student and practitioner of medicine was insisted on. It was shown that all these branches of knowledge rested on a correct and trained observation. The arts were then enumerated. They severally included whatever was effected or produced by the mental conception or the manual skill, or both, of individual minds, art producing combinations or effects which could not happen or exist except through the conceptions of individual intelligence. The highest efforts or products of art might be accomplished without any specific knowledge of natural science. But when art was aided by natural science, the result was greater perfection. But if science was not absolutely necessary to the existence of art, very different was it with the practice of medicine. There was not one of the natural sciences, some knowledge of which was not imperatively required in medicine. The aim and scope of medicine as an art was the preservation of the body in health, and the freeing it from those evils and disorders which neglect of the laws which govern and minister to life most surely entailed. These could only be accomplished by a thorough knowledge of the nature and force of those laws. The first essential was a minute and searching knowledge of structure, both human and comparative; the second, a knowledge of the functions of the several organs. On a thorough knowledge of anatomy and physiology the whole fabric of medicine rested. The vital forces were examples of the economy of the natural laws of the material world. Not only did these vital forces work in accordance with the physical laws, but they were evolved in strict obedience to, and dependence on, those laws. The functions of the heart, of the lungs, the action of the muscles, the structure of the eye and ear, were illustrations of the adaptability of structure and function to the laws of the natural world. The position of medicine up to this point was that of a science strictly inductive.

After an allusion to the causes of disturbed function and the relation of medicine to the study of epidemic disease, the lecturer proceeded to sum up the attributes of medicine both as a science and an art. It was a science in relation to the means and sources from whence it was derived, for it was built up of many, if not all, of the other natural sciences. It was an art, however, in its exercise; and its value was proportioned to the scientific training, the tact, and judgment, of the individual practising it. It was an art which, for extent and variety of knowledge possessed by its more distinguished members, was not exceeded, scarcely equalled, by any. Its utility was universal, for it was with advantage and benefit exercised in every region of the world, alike useful to all nations, peoples, or creeds. Medicine was the science of observation applied to the investigation of everything which related to the health of man, individually or socially. It was based on a thorough knowledge of the structure of man and of the chief families of the animal and vegetable world, to which must be added a knowledge of the laws pertaining to matter and force. To be educated in such an art, brought to the possessor all the advantages and graces of an enlightened education. It trained the mind to understand the laws regulating the evolution of the germ out of which his organisation sprang. It taught him the conditions governing nutrition, regulating development, or ministering to decay, the premature tendency to which it was the effort of the art to avert. As an art, it dealt in no dogmas; it regarded, as reliable and true, only that which was susceptible of demonstration and proof. It sought no converts, for the essence of its teaching was, that its followers must be for ever students; for the words of Harvey were ardently accepted by all workers, "that all we know is infinitely less than all that remains still to be known". In this art there was no fealty sworn to authority; and that which was ancient held its ground only so far as experience or science proved it to be true. The sciences on which this art rested could not be learnt from books alone. The fabric

of Nature and of the material world must be searched and studied, and each step must be steadily made from one demonstrated fact to another. The theories of incomplete observation were constantly tested by more numerous and reliable facts, and scientific experiment eventually verified or ignored them. Thus gathering within herself the tributary streams of many branches of natural science, each contributing some truth or fact applicable to the interpretation of the laws of health and disease, medicine might consistently take her place among the arts and sciences, and claim a prominent position among the most useful and beneficent of those scientific pursuits to which the intellect of man might be devoted.

CHARING CROSS HOSPITAL.

DR. GREEN delivered the Introductory Address.

The lecturer, in the first place, alluded to the irreparable loss which the hospital and medical school had sustained in the death of the late Dr. Hyde Salter. He then proceeded to review the improvements which, during the past year, had been made in the hospital and school premises—the new wards and the increase in the number of beds, the new dissecting-room, library, *post mortem* room, and physiological laboratory; and the valuable additions which had been made to the staff. In seeking for a special subject upon which to address his audience at the commencement of another medical session, Dr. Green said that that which appeared to him to be the most deserving of attention was the necessity which exists at the present time for a more *practical* study of medicine and surgery. The time was gone by when a few hours spent in the lecture and dissecting-room, and the commission to memory of a small volume of multifarious facts, was all that was required of the medical student. The medical profession was essentially a practical one, and medicine, no less than surgery, demanded a practical education. The lecturer then proceeded:—

"It has been argued, and students have left their medical schools with the impression, that a practical knowledge of our profession is easily to be acquired after going into practice—that the engagement in the attempt to treat disease brings with it the knowledge which it is necessary to possess. I do assure you, gentlemen, that nothing can be more erroneous. I do not mean to deny that an educated student, a man well-grounded in what we may call the elements of medicine and surgery, may and does derive very much additional knowledge from the practice of his profession. On the contrary, an educated man engaged in practice is in the most favourable position for acquiring an increasing store of knowledge. He starts upon a firm basis, and one upon which he can, year by year, continuously and successfully build. But I do maintain that, if a man upon leaving his hospital studies do not possess a large amount of practical knowledge—knowledge, remember, which can only be obtained by systematic work in the wards and in the out-patient room—the chances are very much against his acquiring this knowledge after he has once commenced to practise. If he do not acquire such essential elementary accomplishments, for example, as how to put up a fracture, how to palpate the abdomen, how to distinguish between the systolic and diastolic cardiac sounds, or how to recognise urinary deposits under the microscope whilst he is a student, the probabilities are that he will never do so at all. It is to prevent the possibility of the student finding himself in such an unenviable condition that the examining boards have recently made these changes in the curriculum and in the character of the examination; and it is in order to stimulate you to do your best to prepare yourselves for all that will be required of you, that I have ventured to bring this subject before you on the present occasion."

After alluding briefly to the nature of examinations, Dr. Green continued:—

"Be assured then, gentlemen, that which will be required of you is such a knowledge of your profession as is not to be obtained from the attendance upon lectures or from a perusal of books, but can be acquired only by the *practical* study of disease. This will be required of you not only by your examiners, but also by the public. The time, we believe, is rapidly passing away when mere professional tact will suffice to ensure success in the practice of our profession. Tact must always be an important element in the acquirement of success, but, as education advances, and as medicine and surgery continue to approach that high position which they justly deserve, we shall find that there is an increasing demand for real knowledge, and that tact without this will no longer be accepted."

In order to obtain this knowledge, the lecturer impressed upon the students the necessity of availing themselves of all those opportunities which, in consequence of the regulations passed by the examining boards, were presented to them. They should hold clerkships and dresserships with the determination to acquire from them all the practical know-

ledge which the filling of such offices is eminently calculated to convey; the various means provided for practical instruction should be utilised; and these should no longer be regarded as optional, but as necessary parts of education. He then pointed out the importance of students studying disease for themselves, and said:—

"If I mistake not, the knowledge we derive from even one half-hour devoted to the careful and painstaking study of a single patient will be more valuable to us than many hours spent in listening to the teaching of others. It is this kind of clinical work which appears to us to be the great want in our education at the present day. We do not, I think, sufficiently recognise its importance, and hence, except in the case of those comparatively few students who are fortunate enough to secure resident hospital appointments, and of some of the more studious clerks and dressers, it is almost unknown. We do not mind going round the wards or into the out-patient room, and listening to the clinical remarks of our teachers; but we do not consider it at all necessary to examine the patients for ourselves, and even if we are asked to do so, we perhaps hardly take the trouble to do it in anything like a thorough manner. And yet, surely, it is from such study as this that we are most likely to derive that practical knowledge which we shall stand in need of when we are thrown upon our own resources. How many hours of our student life do we spend in the dissecting-room studying the dead body? Ought we not to spend a more proportionate amount of time in the wards studying the living body?"

The lecturer then remarked upon the insufficiency in the amount of time set apart in the curriculum for systematic clinical work, and continued:—

"Examine the patients for yourselves. Form your own conclusions as to the nature of their diseases. Decide upon the plan of treatment you would adopt, and make your own prognosis. And, by all means, be very thorough in what you do. Spare no pains and grudge no time in learning all that you possibly can of the case you are observing. Remember that more mistakes are made from want of care than from want of knowledge. Do not attempt to observe too many cases at a time. One done well is far better than a dozen done incompletely. Watch the same case carefully from day to day. Note the natural course of the disease, and the way in which it is influenced by remedies, and if it should terminate fatally, let nothing prevent your being present at the *post mortem* examination."

The lecturer concluded by an allusion to the rapid advances which are being made in the knowledge of pathology and therapeutics, and by an exhortation to the students to use all diligence to acquire during their student life what in the present age would be required at their hands.

LONDON HOSPITAL.

DR. LITTLE, formerly physician to the Hospital, delivered the Introductory Lecture. He was tempted, he said, to look back to the time—forty-three years ago—when he for the first time sat on the benches of the old anatomical theatre, listening to the introductory lecture of Mr. Headington. Of those who were his fellow-students, one at least—Mr. Curling—"by his persistent exertions in the cause of practical and scientific surgery, his researches in pathology, by his readiness to adopt all novelties that promise to be beneficial to humanity, has shown the present generation of students how the advantages of the London Hospital can best be utilised. He can recall, we doubt not, the glories of the discoveries and improvements of the previous forty years, as related to us in language unsurpassed for accuracy and for freedom from exaggeration—in language pure in diction, noted for clearness, quietness, and perspicuity." Mr. Headington, the lecturer remarked, "was an accomplished and sound surgeon, who had more the appearance of the learned and well-bred physician of that day. He early handed over the operating knife to the able hands of Mr. Luke, then his assistant-surgeon. The greater number of my hearers", said Dr. Little, "may never have heard the name of Headington: in fact, he lived, he practised, and died, in a part of London—Spitalfields—then wealthy and of comparatively fashionable resort. It has been a loss to surgery that he was not addicted to spreading his fame by any writings; but it is a sufficient proof of the distinguished hold he possessed on the respect and affection of his colleagues and pupils, that he was one of the few whose busts and portraits adorn the building in which we are now assembled." Mr. Headington was accustomed to make known to his pupils the labours of the men to whom the advances in medicine of the previous forty years were due; and Dr. Little occupied a large portion of his address in taking a brief retrospective view of the leading characters referred to—*e.g.*, John Hunter, Jenner, Davy, Black, Priestley, Dalton, Cuvier, Bichat, Brown, Broussais, Dupuytren, Larrey, Cline,

Cooper, and others. The lecturer then noticed the changes which have taken place in medicine during the last forty years. Each of the two periods to which he referred was preceded by great changes in the world at large. The beginning of the first of these periods might be regarded as having been ushered in by the American War of Independence and the great French Revolution. "The consequent agitation of men's minds, as well as the acquisition of a new power supplementary to man's individual physical force, in the application of steam to the purposes of mankind in branches of the arts into which it had not been previously introduced, were probably all momenta aiding the progress of man in the departments of science and learning embraced by the cultivator of medicine. In this country eminent medical men worked on in our thoroughly English way, little aided by state assistance, except in the happy circumstance of the purchase by Government of Hunter's museum. Hunter's fame needed not even the preservation of his museum to render it *vere perennius*. It cannot be doubted that Hunter's career exercised considerable influence on the progress both of English and foreign medicine during the first thirty years of this century. But in France in particular, at the beginning of the present century, a great impulse was given to medical studies by the appointment of a government commission on the reorganisation of the medical schools of Paris, Montpellier, and Strasburg. The names of many of the ablest physicians and philosophers of that country appeared upon that commission. In Germany, also, the younger University of Berlin, fostered by the wide confidence in the future of German science, was beginning to emulate the reputation of Leyden, Göttingen, Upsal, Halle, and Vienna." Speaking of the forty years now past, Dr. Little said: "Possibly we may be disposed to regard the cautions necessary in mistaking the *propter* for the *post*," but it appears, nevertheless, true that the last forty years, like the former period of similar duration, was ushered in by stirring changes in the world at large. One of these was the reform movement about 1830, of which certainly one consequence has been that of a greater attention to, and diffusion of, education—a direct result of the accelerated movement of ideas of that exciting period, and a great extension of periodical and higher class of literature within and without our profession. During this period the application of steam to land-travel, and especially to transatlantic and other distant maritime locomotion, followed, as it soon has been, by electric telegraphy, have all contributed to bring peoples of different countries to mutual intercommunication of ideas, opinions, and discoveries, and have stimulated improvement in our art during the last forty years, equally with other arts, professions, and pursuits."

Dr. Little remarked that anyone whose memory could carry him back to the state of medical affairs in 1830 would agree that whatever influence was exercised upon English medicine from abroad was mainly derived from the schools of Holland, Italy, and France. By far the greater part of that which came to us from the Continent proceeded from French sources. This was particularly the case during the fifteen years following the peace of 1815, which opened Paris to our predecessors, with the treasures accumulated by Dupuytren, Larrey, Corvisart, Laennec, and a host of other distinguished men. Since 1830 the most superficial student of medicine could not fail to have noticed the influence of German anatomical, physiological, and pathological discoveries, as well as of practical medical and surgical improvements, upon English medicine.

Having noticed some of the improvements effected since 1830—such as the introduction of tenotomy and lithotripsy, the researches of Bright on disease of the kidneys and of Addison on that of the spleen, the employment of auscultation, percussion, and thermometry, the discoveries in diseases of the nervous system and in syphilis, the lecturer referred to the prospects of medicine during the coming forty years. Among the departments of medical practice still requiring earnest study, he specially referred to the prevention of disease, and the successful treatment of such diseases as algid cholera, hydrophobia, and advanced consumption. "Are we too sanguine," he said, "when we express a hope that before another forty years shall have elapsed some of the diseases last named shall have become more tractable to our art?"

In giving some concluding advice to the students as to the manner in which they should endeavour to profit by the instruction afforded in the hospital, Dr. Little said: "Never be content with superficial observation; whatever you undertake to inquire into, look below the surface of things, employ all your senses in your investigations, avail yourselves of all the modes of inquiry taught you. In the present day it is useless to be merely a good auscultator, well up in the chemistry of the urine, familiar with the names and varieties of the excretions, skilful at anatomy and the setting of fractures; you must apply *thoroughly* all your ability. In fact, the English word *thorough* should be your watchword and guide in all your doings. Your first duty is so to profit by the instruction here provided that you may make capable members of

an active, honourable, and useful profession. . . Schiller says of Science and her followers—

“Einem ist sie die hohe, die himmlische Göttin, dem andern Eine tüchtige Kuh, die ihn mit Butter versorgt.”

“Let it be your resolve, whilst seeking an honourable existence through your profession, to cultivate it more in the spirit of the first of these lines than in that of the second. This alone can make you satisfied with it.”

THE MIDDLESEX HOSPITAL.

DR. JOHN MURRAY delivered the Inaugural Address. The lecturer commenced by urging the new students of medicine to inquire of themselves whether they were adopting a profession for which they were naturally fitted. According to the comparative vivacity and force of a young man's intellect, his fitness for a profession should be gauged. If a youth afforded no evidence of predominant interest in literary study and the delights of scholastic ambition, he ought not to be encouraged to adopt a profession requiring that considerable amount of application to such pursuits demanded by medicine. He referred to the unhappy instances daily to be seen, of men possessed of excellent abilities engaged in the half-hearted pursuit of occupations wholly unsuited to their natural turn of mind—abilities which, if they had been directed into the proper channels, would have placed the possessors in positions in which they would not only have excelled, but would have increased their enjoyment of life—perhaps also the depths of their pockets, and certainly their value to the public. Most young men's minds, he believed, afforded a clue, if properly scrutinised, to their natural fitness, to ascertain which was the duty of parents and guardians; and this was becoming daily more and more imperative as free trade, the correlative of natural selection, was, in this country at least, in the ascendant. To make the most of this natural fitness, the preliminary education of the young man should be of a most liberal character. The great acuteness in the observation and treatment of disease displayed by men of the present day distinguished in medicine does not, he believed, rest on the possession of medical facts alone, but on a sound general education, aided by natural ability for the practice of their profession. He decried the growing tendency amongst the advocates of the real or modern or so-called useful studies to underrate the value of classics, by the study of which we are made acquainted with the spirit and power of Greek and Roman antiquity, learned from its original works. A liberal education should make a man know himself and the world, not in a narrow sense, as Matthew Arnold expresses it, “to make a man a good citizen, or a good Christian, or a gentleman, or to fit himself to get on in the world, or to enable him to do his duty in that state of life to which he is called. There is a wider and a more noble sphere—to do good to mankind, and to advance his fellow-creatures.”

After offering a few words of advice as to the manner in which the student of medicine should proceed in surmounting the mass of work before him, Dr. Murray continued: “To assist and guide the student in his studies, medical schools have been formed, in which more or less compulsory attendance is required; the different subjects taught being arranged in such a manner as to afford a very considerable amount of assistance to the pupil. Our metropolitan system of medical schools, as it at present exists, has found many able opponents, men whose opinions carry with them great authority, and in whose views I am prepared largely to sympathise. But, while we should sanguinely look forward to a future still greater than the present in the medical education of the metropolis, there still can be no doubt that even now, with its disadvantages, London affords many unrivalled opportunities for the study of medicine unattainable elsewhere.

“The mission of a medical school, it seems to me, should be not alone to cram the student with facts, but to effect as far as possible his total cultivation in his strictly medical studies. What is to be avoided is, the degeneration of the instruction into a preparation for examination, instead of providing that the pupil may have the requisite time to come steadily and without hurrying to the fulness of the measure of his powers and character; that he may be securely and thoroughly formed, instead of being bewildered and oppressed by a mass of information hastily heaped together. Do the medical schools of London effect this? That there is much room for improvement in their teaching, that the tutorial system might be with advantage grafted more largely into them, less stress laid upon certain subjects, and other compulsory courses instituted, I am very strongly of opinion; but that they do much to develop general medical education, I most certainly assert. If this desirable object be not attained, it is not entirely the fault of the schools. What faults they do possess are in a great measure due to the baneful influences of certain of our licensing bodies, which do not demand a sufficiently high standard for qualification, and do not

allow the schools time to develop the student. That systematic teaching is, as asserted, carried to an excess in them I do not believe; in fact, the very reverse. That students should be allowed to study wheresoever and howsoever they please, as recommended by not a few, is a doctrine which I think should be resisted as opposed to reason, and a retrograde step in education. Were it possible, as is proposed, to render the examinations all-sufficient as tests, which I deny they can be made to be, the more or less want of system in the preparation for these examinations would entail a waste of time and strength, and by reaction, tend to reduce the standard of examinations. It is this absence of system which, I believe, is the bane of education in this country. In everything we lean upon our energy and wealth to overcome the drawbacks necessarily dependent on our want of gradual training and method. We forget that, ‘if the iron be blunt and a man do not whet the edge, then must he put forth the more strength: but wisdom is profitable to direct’.

“How are students, I would ask, to be guided in their studies unless in a systematic school? where are they to learn exact habits of mind? Not in books, certainly. They must be brought to the water and taught systematically and gradually how to drink. But they must be compelled to do so; and I believe in spite of all that has been said to the contrary, this can be done if properly tried. Most students are willing and anxious to learn if intelligently managed; and if the teacher fail, it is, in the majority of cases, as much the fault of the teacher as of the pupil. If there be those indisposed to apply themselves to their work, much can yet be done to make them learn by methodical and compulsory teaching. Were it not for our compulsory system, however, what would become of students? One would stay at home and cram; another would go Will-o'-Wisp from place to place, ‘taking tithe of mint and anise and cummin’, but neglecting the principles and more important matters of his profession, picking up crumbs which he would mould together into some crude idea representing his peculiar notions of the theory and practice of medicine; while only a comparatively small number, chiefly through their inherent natural good qualities, possessed of a comprehensive medical education, would pass their examinations. A considerable number would probably be able to pass the examinations, however strict and searching they might be; but their minds would not have been gradually formed, and taught that exactness of reasoning which is likely to be engendered by a proper system of teaching, such as is aimed at in some at least of our medical schools. I would have you, therefore, to bear in mind that system and regularity in your work are all-important.”

The remaining portions of Dr. Murray's address were chiefly directed to detailed advice in reading, in attending lectures, and in clinical work—in the last of which he pointed out that our metropolitan system is deficient. He earnestly urged upon students the desirability of going abroad for a time, and extending their term of student-work beyond that required by the licensing corporations, and advised them to obtain the highest qualifications possible; and alluded to the shameful state of ignorance in which some young men commence practice, possessed though they be of one or more British qualifications.

The lecturer concluded his address by reminding his hearers that beneficence formed medicine's highest title to respect; that their duty, their real pleasure, would be found in allaying misery, in assuaging suffering, and advancing the physical and moral well-being of man. He pointed out that *succurrere miseris* was the first lesson of their profession; and in carrying out their great and noble object they should do it as best as they could.

QUEEN'S COLLEGE, BIRMINGHAM.

THE Introductory Lecture was delivered by Dr. JAMES RUSSELL, Professor of Medicine.

He commenced by quoting the introductory remarks with which Burton opens the chapter on the cure of “Melancholy,” because, as he observed, they present a more correct representation of the function of the medical practitioner than that which generally obtains. In place of imposing the entire responsibility in treating disease upon the medical adviser, leaving the patient to digest the medicine and swallow the advice he receives without co-operation on his own part, the author regards the patient as an active agent in effecting his own cure, and reminds him that, if the doctor has a duty to perform towards him, he has also a duty which he owes the doctor. Dr. Russell was thus led to dwell upon the two-sided character presented by the medical profession, its relation to medicine as a science, and its relation to the society in which the science is to be applied. The lecturer commented on the influence which public thought has exerted over the interests of the medical profession viewed merely in its scientific relation; noticing how

universally medical opinion has been the reflection of the opinion of the age in which it has been formed. In one particular, however, he believed that medical science stood in contrast to the philosophy by which it was surrounded, at least in the earlier periods of its history. If Macaulay has rightly stated, as the characteristic element of the ancient philosophy, that "it disdained to be useful, and was content to be stationary," that it "could not condescend to the humble office of ministering to the comfort of human beings," then medicine must claim to have had a higher aim throughout its various fortunes, that aim being "the multiplying of human enjoyment, and the mitigating of human suffering."

Dr. Russell observed that the evils with which medical science has had to deal have been in no small measure the product of human passion, and in a still greater measure have resulted from ignorance of those laws which have been imposed by Providence as necessary conditions for the preservation of health; and he noticed that the success, or want of success, which has attended the efforts made for the removal of such evils, has depended in no small measure upon the degree of intelligence with which the subject has been regarded by the public at large. This statement may be applied to disease in all its forms, but it is illustrated on a large scale by the history of nations. He glanced at the pestilences which form so prominent a feature in past ages, preceded in almost every instance by famine, the consequence sometimes of bad seasons, but rendered fatal in their results through ignorance of agriculture, through defective legislation, and through want of free intercourse between different districts; but far more frequently the consequence of civil and foreign war and of political disturbance. He then passed to other causes of public disease connected with social or private life, as exemplified by the mode of living prevalent in the middle ages, by the condition of the land, by the state of our prisons as revealed by Howard, of our ships and hospitals as disclosed by Lind, Blane, and Pringle. In the present time, sanitary inquiry is announcing the presence of evils of precisely the same kind, and is tracing up to these evils precisely the same effects. It is of vast moment to the interests of humanity that both the profession and the public should understand their part in the responsibility to be borne. An enlightened public must be the correlative of an educated scientific body, or nothing can be done.

The medical profession is in the position of having to study science with reference to its immediate application; and the aspect in which the subject presents itself to the minds of medical men is not that of abstract truth, but of truth valuable in proportion as it can be made available for the benefit of mankind. Their discussions, therefore, must be influenced by a consciousness of the momentous nature of the interests involved, and by the knowledge that the main responsibility rests upon their own shoulders. On this account it is natural and proper that medical men should throw their whole heart into the controversy. Thus it has happened that the relation held by the public towards the advocate of medical truth has not always been consistent; sometimes he is credited with possessing precise knowledge, such as can belong to the student of physical science only; at others he is regarded with absolute scepticism because he does not, like Molière's M. Purgon, "believe in his set rules more than in all the demonstrations of mathematics, finding in medicine nothing uncertain, nothing difficult."

The language of the student of medicine will be modest in exact proportion as he has obtained a better acquaintance with his subject and a larger view of its several relations. Yet he is no stranger to the tone of authority when circumstances justify its assumption. He knows that the conditions with which he deals are regulated by fixed laws; and where such laws have been clearly eliminated he announces them with all the authority of ascertained truth. And in the operation of these same laws he recognises a limitation placed upon his own power. He knows that it is impossible for his science to avert the effects of sensuality upon the bodily functions, as for the ethical philosopher to prevent its exerting its baneful influence upon the mind. Nor can medical science be expected to shield a community from the consequences of violating the conditions imposed by Providence for the preservation of health. Foul drains will generate fever, let science say what it will; overtaxed brains will fail; overstrained muscles will ache. But if, in a large part of her utterances, medical science wisely uses a less dogmatic tone, it is because the interests with which she concerns herself are closely interwoven with those moral and physical conditions which constitute the discipline of life, and determine a man's moral position in the world. Hence, doubtless, the reason that many of the problems of health and disease appeal to men as free agents, and call upon them to assume a share of responsibility in the use which they make of the knowledge afforded to them.

The lecturer concluded with some remarks addressed specially to the students of the College.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

THE Address was delivered by Dr. G. H. PHILIPSON, M.A., and was devoted to the subject of medical education. The aphorism of Paley, that "education, in the most extensive sense of the word, may comprehend every preparation that is made in our youth for the sequel of our lives," was commended as the lesson to be inculcated at the inauguration of a new session of medical study. To some it might appear commonplace; but there was one way of giving it freshness and importance, by reflecting on it, in direct reference to our own state and conduct, to our own past and future being. The mind of the boy was contrasted with that of the youth about to pass into the man; also the education of the school with that of the college; an important difference being, that the serviceable routine, the fundamental and obligatory teaching of the school, gave place to the more varied and more self-imposed duties of the college. The mind, in just proportion to its progress, was allowed liberty of action. The lecturer was able to show the way, and to cheer and encourage by example, sympathy, and advice; but the internal impulse to study was to be given by the student himself. It was always, however, to be borne in mind, that the course of study and the examinations to be gone through were ordained by the authority which has power over the different licensing and qualifying bodies. Whatever the feeling that might be engendered, it would be for the student's welfare and after-success strictly to adhere to the plan recommended; for it was constructed, or rather it might be used, in conformity with that which was the character of all good education—namely, to give useful knowledge, and at the same time to cultivate the mental power, by which a well educated man could always continue to educate himself. The effect of medical studies upon the intellect was then considered; the training of the powers of attention and of memory being of primary importance, and afterwards the faculty of judgment, observation, and close reasoning; the labour of such cultivation, and the means whereby the difficulties could be overcome, being set forth by a reference to human anatomy, physiology, and chemistry; the lesson of an orderly arrangement was also drawn from the study of physiology and chemistry, and *materia medica* was instanced as a kind of trial or test of the mind, as far as such was concerned. After such a preparation, the student was able to advance to the study of medicine, surgery, and midwifery, which would be to him all-important, as from them he was to learn the art to which his life was to be devoted—the art which related to the preservation and restoration of health, and the alleviation of human suffering, the true art of which was not a mere guesswork of empiricism, but an art based on observation and supported by science—a study as elevating as it was instructive, and one in which the student would find ample occupation, as it would test most severely his power of memory and observation and the calmness of his judgment. The necessity, then, for cultivating the power of observation was enforced. For in studying medicine, and still more in practising medicine, as every disease was a problem half veiled in darkness and only half known, and as every patient presented not only what was known, but something that was peculiar, the practitioner had to make a constant reference to his memory and to his judgment; it being to the discriminating exercise of observation that we were indebted for all that was known of the causation of disease, of the recognition and interpretation of symptoms, and of the safe and efficient mode of administering remedies. The importance of constantly aiding the teaching in the lecture-room by the practice of the hospital was then insisted on. Both methods of study were absolutely necessary, and were to be pursued together. The knowledge contained in books was to be imprinted by the lesson of the ward; and the actual phenomena of disease were to give life and interest to the systematic description. By the bedside the student would be taught to exercise his senses, how to recognise the origin and the progress of disease, how to elicit a clear and concise history, and how to sift and balance the evidence concerning it. He would also learn how to connect symptoms with pathological changes, and how to modify remedies and appliances to suit special requirements. No student would do justice to himself or his art if he should neglect either mode of teaching. The half-uttered denunciations of the present day against lectures were due to their former abuse and to the neglect of clinical instruction. If both methods of study were made to aid and complement one another, the end in view would be best accomplished. The student was recommended to repress all independent inquiry, to accept what was told him without seeking to pass beyond it, and to be satisfied with what might be termed the routine of science, until he was quite sure that he would avoid confounding probability with ascertained fact. For as, in his case, speculation could not be corrected by direct experiment, and as his imagination would not be kept within bounds by a sufficient

breadth of knowledge, he would, in all probability, arrive at conclusions which were utterly untenable, and form inferences which a deeper study would have shown him to be impossible. After alluding to the obligations of the profession, its trials and difficulties, the lecturer reminded the student that the college-life possessed peculiar advantages as a training for the moral faculties, as well as the mental; and expressed the hope that he would emerge from its influences loving truth and honour, and actuated by high and noble motives in his dealings with others. In this spirit, if he were true to himself, he would never have reason to regret that he had entered upon a profession which had not only the power of cultivating the mind, but of purifying the heart.

"Yea, when the shattered globe shall rock in the throes of dissolution,
Still will he stand in his integrity, sublime, an honest man."

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

THE Introductory Lecture was delivered by Dr. W. CARTER, Lecturer on Botany to the School, and Medical Officer to the North Dispensary. Addressing himself partly to new and partly to older students, the lecturer said: "Using the word medicine in its broadest sense, viz., as synonymous with the art of healing, I will presume that you have made up your minds that you are fitted for it, and it for you; that, after reflecting on your capabilities of body, mind, and temper, you have attained a well-grounded conviction that this profession will be better adapted for you than any other." Considering, then, the apparently formidable array of subjects, on the study of which they were about to enter, he commended to them the consolation given by the dial-plate to the discontented pendulum, when he suddenly stopped swinging through fright at the work which had to be got through. He did not complain of six strokes, after finding that he could manage that number with comfort, but of millions. "Very good," said the dial-plate, "but recollect that, although you may think of a million strokes in an instant, you are required to execute but one; and that, however often you may hereafter have to swing, a moment will always be given you to swing in."

The difference between preliminary education and that on which the students were about to enter having been pointed out—viz., that every subject of study in the medical curriculum had a practical side—the lecturer pointed out some very obvious truths, such as that when the hour for a lecture was announced, it was not five minutes after the hour that was meant; insisting on the importance of attending to this as a means of forming a habit of the greatest value to the medical man, on whose punctual fulfilment of an engagement much often depends; that they came to a school of medicine to learn how to mitigate or cure disease, and should never, therefore, stop short anywhere on the way, charmed with merely accessory subjects, or captivated by simply the intellectualities of medicine, as distinct from its practice; that the truest guide to a successful practice was a large experience, and that the man who refused to listen to the teachings of a rational empiricism—who refused, for example, to give a dose of medicine till perfectly sure as to the theory of its action—was like a man who declined to accept the revelations of the microscope so long as he had any doubt about the undulatory theory of light; and that in order to gain this experience the hospital-wards should be visited every day, and the progress of cases carefully noted. In illustration of the value of the last practice, the example of Laennec was quoted, the minute history of nearly four hundred cases which he drew up when a pupil at La Charité serving as the groundwork of all his future researches and discoveries. On the subject of reading, every man was advised to be his own measure as to the quantity to be gone over, no more being at any time read than could be healthfully assimilated; and reading and practice being made mutually illustrative—the folly of reading about disease merely, and imagining that it could be thus understood, being especially insisted on. The practice of reading too little, and relying on some manual which presented the whole circle of the medical sciences in duodecimo, was deprecated as strongly as the habit of overloading the brain with too much reading; and the student was advised to study with a view to practising well, in which case he would not fail to pass, and not to look at everything in the light of an examination.

To the students who were drawing near the close of their academical career the lecturer addressed some special remarks, chiefly with reference to their conduct in practice. He directed attention to the advisability of a study of hygiene, even though it were not yet a compulsory subject for many diplomas; to the advisability of caution in the giving of certificates; to the folly of the not unprevalent fashion of adopting a specialty for the mere purpose of getting on, without special education for its exercise; to the temptation to write of peculiar cases and peculiar methods of cure; and to the still more dangerous practice of enunciating novel dogmas in medicine on insufficient grounds and from doubtful motives; and lastly, to the temptation which many young men had to

relax all mental effort, and to settle down into a lazy routine so soon as they had gained their diplomas—warning them that if, with human life to deal with, and the honour of a ceaselessly advancing profession to maintain, they ever permitted themselves to do so, they would be morally guilty, and only less so than those who, from interested motives, disseminated principles directly injurious to life and health.

LEEDS SCHOOL OF MEDICINE.

DR. CLIFFORD ALLBUTT, President of the School, delivered the Introductory Address. He said he hoped that his hearers would bring back with them the same free, joyous, and hopeful spirit to their work which they had enjoyed in their recreation. He himself rejoiced in a holiday as much as any, but he thought there was one greater enjoyment, and that was the returning home with clear brain and steady pulse, full of courage for duties. No questions could be more urgent than the two which he would now endeavour to answer, viz.: first, What is disease? and, second, Can we cure it? He then referred to the various ways in which these two questions had been answered, in various ages of the world; and he pointed out how important the knowledge of the opinions of the past was to those who would really understand the present. During the present century, the rapid development of anatomical knowledge, and a growing sense of the awful complexity and mystery of the human frame, had deterred men from having a lively faith in their own power of usefully interfering with it. Hence a school who disbelieve in medicine and would leave all to nature. For his own part, he held this doctrine to be as dangerous as the more ancient doctrines, which allowed men to undertake cures in rashness and ignorance. He believed the powers of medicine—when guided by acute intelligence and tact, an extensive knowledge of remedies, and a wide acquaintance with science—to be astonishing to one who cannot but feel, on the other hand, the difficulties and the dangers of the work to be done. But he believed it to be of enormous importance to take care that the hand was guided by an active and observing mind, with the full light of modern observation and experiment, and, above all, by true conceptions of the nature of disease. Hence the urgent need of a true answer to the question—What is disease? In times gone by, nay, even now, there was one very common answer; namely, that disease was something foreign to a man, something which had to be purged out of him, drawn out of him by blisters, expelled through the pores of his skin, or otherwise eliminated. But this theory must be given up, and its place taken by the view that the human body is like the solar system—a system of parts moving together in balance and harmony. In health, this movement should be so even that all our bodily functions go on unconsciously to ourselves; and disease, on the contrary, is that state when these movements are disordered either by some disturbance from without or by some failure within. The medical art consists, then, not in the hope of expelling disease and leaving a sound man behind, but in learning the balance and harmony of the functions, detecting their first deviation from true running, and finding means for helping the system to recover its equilibrium. Dr. Allbutt described the important information of disordered nutritive balance which the thermometer had revealed in fevers, making their treatment in many cases impossible without watching the thermometer. He explained, also, how in this way it had been discovered that death in many cases of fever was directly due to the overheating of the system, and that this mode of death resembled that called sun or heat stroke, and could be induced artificially in animals. Hence the rational and wonderfully successful method of treating fevers by judicious applications of cold, or coolness, in exact proportions to the indications of the thermometer; a practice long ago recommended by Currie, largely extended within the last few years in Germany, and which had lately received brilliant illustration in some cases published by Dr. Wilson Fox. The next point which the speaker took up was that of the individual treated. The same disease in different persons presented often quite distinct features, and it was for the physician to recognise this, and not to rely upon stock formulas, but to treat the individual as a whole. Probably, much might be done by dividing people into classes, according to the chief varieties of constitution and temperament. By recording and putting together all the various complaints which ran in particular families, an unsuspected relationship might often be detected between two diseases which at first sight, and seen separately, appeared wholly different. The various morbid tendencies of rheumatic, gouty, scrofulous families, etc., were then sketched, and a new class of persons was described, whom the speaker proposed to call the neurotic class, and who presented certain marked features, both in health and disease. The lecturer desired the younger students to remember that at Leeds there was no intention of instructing them in systems of opinion, in dry dogmas, or in strings

of hard words; but they would be taken to Nature and to the bedside, and there so associated with their teachers that, on the one hand, the teacher would freely express to them his ideas, his difficulties, his doubts, and his ignorance, and would lead them to see the movement and springs of his own mind and knowledge; the student, on the other hand, would, by inquiries and criticisms, keep alive in the teacher a dread of standing still, a freshness of mind, and a continual openness to new ideas and discoveries. The teacher would give to the pupil accumulated knowledge and maturity of judgment; the student would infuse into the teacher flexibility of mind and renewed enthusiasm. In conclusion, the speaker earnestly called upon his hearers, old and young, to give the heart to their work. "In your own lives", the speaker said, "strive not for things afar; cast not, as we are wont to do, all blessings save gold in the face of God; but learn to see and to delight in those simple pleasures which ambitious men too often trample upon. He is happiest who can gather flowers in every pasture, and man can find no better earthly reward when his work is done than cheerfulness and contentment."

SHEFFIELD SCHOOL OF MEDICINE.

THE Introductory Lecture was delivered by Mr. ALFRED H. ALLEN, Lecturer on Chemistry. He said that the advantage of a study of chemistry to the student and medical practitioner is daily becoming more widely recognised. It is not sufficient to say to chemists, "Prosecute your researches and give us the benefit of your discoveries," but there should be an earnest desire to keep pace with the progress of scientific discovery in all that relates to the practice of medicine. Believing that no effect is without its cause, we should leave no means untried to ascertain *why* various remedies produce certain physiological effects; and great as has been the advance in this direction of late years, much more remains to be done. The interesting researches of Matthiessen and Wright on the derivations of morphia and codeia, and the curious change of physiological action established, are a striking illustration of the assistance rendered by chemistry to medicine. Speaking of the nature of infection, the lecturer said that, although the question of spontaneous generation can scarcely be said to have met with a final solution, the general balance of evidence seems at present to be against it. The majority of biologists are strong advocates of the germ-theory of infectious disease—a theory which has many arguments in its favour, and has met with great additional support from the recent beautiful researches of Dr. Thudichum. But there is another very ingenious theory due to Mr. Simon, which also explains the extraordinarily rapid development of infectious disease while ignoring the multiplication of germs by fission. Mr. Simon supposes that the infectious principle of small-pox or other disease has the power of causing some chemical change in the body analogous to fermentation, with formation of a larger or smaller amount of the specific poison, and that the patient has the disease severely or lightly accordingly. By vaccination, therefore, all the substance susceptible of change by the virus becomes so altered, and an additional inoculation can produce no further quantity, so the person becomes insensible to its influence. A very minute portion of virus has the property of causing the chemical change in an almost infinite quantity of convertible matter—the matter so changed having all the characters of the original virus. Some years ago Mr. Simon obtained the opinions on the question of vaccination of upwards of five hundred professors of medicine and surgery at various universities and hospitals, and the striking accordance in the views of these competent authorities is a most convincing proof of its extreme value. Of all those consulted, none doubted the efficacy of vaccination as a preventive agent, and but very few believed that any disadvantage could possibly attend its universal employment. Yet the enforcement was at one time a dead letter with respect to Sheffield; and the House of Commons recently inserted a clause in the Vaccination Act, making two small fines the maximum penalty for omission of the precaution, thus virtually permitting a man to buy the right to spread death, disease, and disfigurement. This was only prevented from becoming law by an amendment of the Upper House. Perhaps it might be found practicable to adopt a somewhat similar course to that of Mr. Simon, to obtain the opinion of every qualified practitioner in the country on that confessedly difficult subject for legislation—the terrible scourges of errant humanity known as "the contagious diseases." If, in the probable absence of any active proceeding on the part of the Government, one of the recognised medical journals would take the necessary steps to obtain such a registration of opinion as that suggested, the expression could scarcely fail to have its due weight with Parliament, as it would be the result of the collective experience of those who, from their position and education, are the most qualified judges of the moral, social, and physical effects of those diseases.

On the subject of cholera the lecturer said: After all that has been written and said on the subject, the real cause and origin of cholera have scarcely been ascertained beyond doubt. The absolute immunity which some places (*e.g.*, Birmingham, Lyons, Versailles, and Würzburg) have enjoyed from its attacks, while it has raged fiercely in localities immediately adjacent; the well-known deterrent effects of the sea upon its development, and various other circumstances, all seem to point to some suitable condition of the soil as necessary for its virulent development—places where the underground water is subject to great changes of level being apparently most liable to its attacks. But, whatever other conditions may be necessary or accessory to its development, there can be no doubt that impure water is one of the principal sources of infection; and some observers have gone so far as to assert that the fact of a person having contracted cholera is an absolute proof of his having imbibed choleraic germs together with the excremental matter of a previous sufferer. It is quite certain that not only cholera, but all zymotic diseases, are the result of bad sanitary arrangements, unworthy of any community professing civilisation; and the epidemics from which we so frequently suffer should not be regarded as visitations from heaven, but as the direct and logical consequences of our own neglect of sanitary matters. The lecturer hoped we may live to see the time when the elements of sanitary science will be taught with "the three R's" to every child in the kingdom. The University of Dublin has gained a most honourable distinction by being the first to establish a much-wanted degree in sanitary science; and he trusted this step in the right direction will meet with all the success it merits, and lead to similar advances in other universities.

THE LONDON SCHOOL OF DENTAL SURGERY.

ALTHOUGH it is not the custom to inaugurate the session by a general address to the students, as at the medical schools, Mr. TURNER, the newly appointed Lecturer on Mechanical Dentistry, at his opening lecture, offered some introductory remarks to the students entering for the first time on the study of dentistry, an abstract of which we now present to our readers. In the course of his address, the lecturer referred to the responsibility which attached to those entering a profession which has only of late years assumed an organised condition in this country, which has yet to pass through many phases of modification and reform before it can finally be established in the position in which its members aspire to place it. After asserting the title of dentistry to a position amongst the professions, Mr. Turner proceeded to point out that this profession was not so circumscribed in its field of work as might be supposed, and not only advocated an extended education as demanded by the College of Surgeons for the licence in dental surgery, but urged the students to aim higher, and, if possible, to pass through the complete curriculum required for the membership of the College, which qualification they should strive to obtain. He alluded to the number of pupils of the school who, following out this higher object, had raised the dental profession by good work in other departments of the healing art besides their own. Strictures had, indeed, been passed by some persons on the extensive curriculum demanded of dental students; but, on the other hand, the leading men in the profession had acknowledged the advantages they had received from the liberal education insisted on. He alluded to the improved social position of dentists since he had commenced his career, and the scientific spirit now characteristic of many in their ranks; and in this he paid a handsome tribute to their brethren in America. The lecturer then proceeded to give an interesting and comprehensive retrospect of mechanical dentistry, in which he alluded to the valuable labours of Mr. Hepburn, his predecessor.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At a meeting of this corporation held on the 2nd instant, the following office-bearers were elected for the ensuing year:—*President*—J. G. Fleming, M.D. *Visitor*—George Buchanan, M.D. *Treasurer*—John Coats, M.D. *Honorary Librarian*—J. D. Maclaren, M.D. *Vaccinator*—James Dunlop, M.D. *Councillors*—The President and the Visitor, *ex officio*; W. Weir, M.D.; James Stewart, M.D.; R. S. Orr, M.D.; R. H. Howatt, M.D.; James Steven, M.D. *Board of Examiners*—Andrew Fergus, M.D.; G. Buchanan, M.D.; R. S. Orr, M.D.; W. Leishman, M.D.; W. Lyon, M.D.; Eben Watson, M.D.; James Morton, M.D.; R. Perry, M.D.; P. A. Simpson, M.D.; A. Lindsay, M.D. *Clinical Examiners in Medicine and in Surgery*—The Physicians and the Surgeons of the Royal Infirmary. *Examiners in Arts*—John Coats, M.D.; J. Steven, M.D. *Inspectors of Drugs*—W. Eadie, M.D.; J. Morton, M.D. *Representative to the General Council of Medical Education*—J. G. Fleming, M.D.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 7TH, 1871.

THE MISSING INTRODUCTORY.

WE hope our readers will think that they have no reason to grumble at the selection we have made for their benefit from the introductory addresses of the new session. There was this year a more than ordinary wealth of oratory from which to select, and we could name more than one lecture besides those of Mr. Le Gros Clark and Dr. Charlton Bastian with which we should have been glad to adorn our pages. We have again to congratulate St. Bartholomew's on the wise and truly British determination to do their talking chiefly after dinner, and to convert the annual gathering into an occasion of gastric rather than of cerebral congestion, and of ventricular rather than mental fullness. There is good authority for regarding that which goeth into the mouth as less open to objection than that which cometh out. Besides this introductory, there was also another, we hear, which, as the critical moment drew near, was missing. Twenty-four hours before one of the introductory lecturers was about to face a critical audience, the bag which had contained his MS. was floating empty down the Tay, stripped of all its belongings by ruthless and sacrilegious hands. However, the lecturer proved more than equal to the occasion; and it is the general belief that the real impromptu cannot have been surpassed in excellence, if indeed it were equalled by, that which had been carefully prepared.

The lectures which we present *in extenso* speak for themselves. Mr. Clark's is pregnant with the interest which attaches to the revival of the glories of a great historic school and hospital, and happily combines tribute to the great ones of the past who connect the history of St. Thomas's with the history of medicine, of surgery, and of science, with a clear sense of the modern *status*, and an appreciation of the larger responsibilities which attend a school that aims at filling a great place in modern education. Dr. Bastian's lecture deals with a more abstract question. We shall not need to do more to-day than to bespeak for it the steady attention and careful thought of our readers.

We have now for some years taken pains to put in the foreground what seems to us the most important problem in medical science—the solution of the questions of the origin and correlations of disease. At the root of the inquiry lay the question of the modes of origin of primitive form of life, and the truth of the “germ-theory”. In this important inquiry, and in familiarising the professional mind with the different aspects of the question to be solved, we have had from the first the invaluable assistance of Dr. Bastian; and his active mind and remarkable powers of investigation have since carried him into the foremost rank amongst physical investigators of the purely scientific parts of the subject. He returns to-day to the application of these researches to recognised and familiar medical doctrines, and we shall not withhold the opinion that his argument is not only most able and interesting, but is marked by so much originality and well-applied illustration, that it marks an era in medical thought, and is destined to light up a discussion of which the end is not yet clearly to be foreseen.

Looking through the abstracts of the introductions which it is our misfortune to be unable to publish in full, we miss from all some sentences, which surely must have been delivered, and which ought to have been allowed to stand. Surely some one must have had the courage to tell the students the plain truths which they ought to know, and to vary the uniform tone of congratulation, which acquires at last a mawkish flavour. Or is there a missing introductory, of which the abstract has not been sent to us, and which ran briefly thus? ‘The entrance to the medical profession has lately been barred by a not very lofty or

impassable barrier. Gentlemen of seventeen years of age, about to enter on a liberal profession, are required to prove that they possess the elements of a liberal education; that they can read, write, and sum, and have a smattering of French and Latin; Greek is “not required”, not even the alphabet; and chemistry is optional, even the elements. About one-third of those who desire the privilege of dealing with the lives of their fellow-creatures have failed to pass the limits of duncedom, and something like thirty per cent. are unable to pass the preliminary examination. Of those who pass through and become students of our schools, and of the schools themselves, there is something to be said, which, on this opening day of our session, demands the most earnest consideration.

‘There stands in Lincoln's Inn Fields a venerable edifice which is not credited with extreme severity of tests, or with more than usual unwillingness to swell the number of its members. Recently, however, in obedience to a demand which arose throughout the profession, and indeed throughout the country, the College of Surgeons raised the standard of its examinations to a position which rendered it no longer probable that those whom it had authorised to practise in civil life should in large proportions be ignominiously rejected as ignorant of the elements of professional knowledge, and unfit to be trusted with the lives of soldiers and sailors. In the outcry which led to this gentle and slow elevation of the test, the teachers of the schools were foremost, and some of the students applauded. It certainly cannot be said that it is now too high. Our schools—we dare not say our school, for this school has (in every case) been extremely fortunate in passing its pupils; but our schools have failed to rise even to this low level. Of 603 candidates who presented themselves for primary examination in Anatomy and Physiology in the period dating from July 19th, 1870, to May 10th, 1871, 179 were rejected—about 30 per cent. Of 382 candidates who presented themselves for the final diploma, 76 were rejected. More than this, it may be stated as a necessary and inevitable fact, that so large a proportion of total failures indicates a general failure to come up to the height of the standard; and where so many are perforce rejected, a great many have to be passed through “with a shrug”. It will be generally acknowledged, and each of us ought individually to remember, that this discloses an altogether unsatisfactory state of things. It behoves us to know with whom the fault lies, in order that all may not suffer for the fault of the few. We shall never thoroughly improve till we face the truth. To know what is wrong, we must know whence the failures come, and whence the successes; and, to do this, it is essential that the College of Surgeons should publish every year returns of the number of candidates coming from each school, the numbers passed, and the numbers rejected. Good schools and good scholars will be encouraged; bad schools will be stimulated to improve, or will have to make way for better. Judgment will be founded upon results. At present, we are all congratulating ourselves, and some of us at least are living in a fools' paradise, which we are inviting fond parents to send their sons to share with us. One thing is wanting—more light. Let us have light; these returns, and nothing else, will give it.’

This is an abstract of an introductory lecture which must, we are persuaded, have been delivered somewhere, but of which the manuscript failed to reach us.

DENTAL DIPLOMAS.

WHEN the long agitation for satisfactory means of organising dental education on a satisfactory footing, and establishing an adequate test for practice, resulted in a supplementary charter being granted to the College of Surgeons of England, and in that body taking in hand the business of organising the dental profession twelve years ago, there was reason to hope that the future of the profession was satisfactorily moulded. It was expected that so great a majority of the respectable existing practitioners of dental surgery would join the College, as to

make the licence in dental surgery henceforth the indispensable necessity of every respectable practitioner entering the profession of dentistry. The following figures, however, which we have obtained, show how far that hope has been disappointed. The number of dentists in England is, we are informed by Mr. Fox, 2000; in Ireland, 150; in Scotland, 25. The numbers of those who presented themselves for examination before the expiration of the time of grace are: in 1860, 99; 1861, 25; 1862, 23; 1863, 116; in all, 263—an average of 65 *per annum*. Those who have taken the diploma after fulfilling the curriculum were: 1864, 4 in number; 1865, 2; 1866, 10; 1867, 4; 1868, 3; 1869, 6; 1870, 8; 1871, 6; in all, 43—in eight years, an average of 5 *per annum*. This, it will be acknowledged, indicates a dead failure. It is not surprising, therefore, that a movement has been set on foot in reference to dental reform aiming to remedy this disaster; and the medical profession and the general public should alike take interest in the nature and progress of the proposals.

A Dental Diploma Committee has been formed, in order to persuade the Royal College of Surgeons to open its doors again to those dentists who were in practice prior to September 1864, but who did not present themselves for examination within the time of grace allowed by order of Council of the College. This holding back from attachment by examination and diploma with the College of Surgeons was in a large manner produced by a division of feeling, that existed at the time in the dental profession, as to what were the best means to adopt in order to raise the position of its members in the esteem of the medical profession and the public. The division of opinion was at the time mischievous, and has since been a stumbling-block in the progress of much reform in this special branch of surgery. It is contrary to all precedent that an order of Council of a College should limit the time wherein men may present themselves for examination, if they can show that they were engaged in the legitimate practice of the profession at the time when the Act of Parliament was passed empowering the College to hold such examinations. In a word, no legislation is intended to be retrospective (nor was this so intended by its Parliamentary promoters); but, by the resolution passed by the College of Surgeons, it has become so; and to the existence of this state of things we must mainly attribute the difficulty of making such changes in the profession as require uniform and concerted action.

By a resolution of Council this regulation can be revoked; and we have reliable information on which to found our assertion that such a step would bring in a large number of men of undoubted skill and position to take the diploma in dental surgery. Let the dental profession be once united by a common bond such as would exist if each member of it possessed the L.D.S., and we shall have a great motive power by which we can effect urgent and valuable reforms.

The want of this is felt, and we can hardly think that, if the matter be put in its true aspects before the College of Surgeons, they will allow much time to elapse before they grant the petitions of the Dental Diploma Committee, representing, as it does, the wishes of a large and daily increasing number of the dental profession. There can be no valid reason why practitioners actually in practice at the time of the granting of the charter should not be allowed to submit themselves to examination at any date convenient to themselves; and we advise the withdrawal of the obnoxious and unnecessary restriction of date, which has proved injurious to the objects of the College and the interests of the dental profession. We cannot see that it has any foundation in reason more than in expediency, and it is certainly contrary to precedents.

MR. JOHN FOSTER has been elected President of the Bradford Medico-Chirurgical Society for 1871-72, in succession to Mr. E. Sugden.

THE funeral of Mr. Samuel Solly, F.R.S., took place on Saturday at Chislehurst Church, Kent, in the presence of a numerous assemblage of the medical profession. It is contemplated by his former pupils at St. Thomas's Hospital to erect a memorial to his memory.

DR. HENRY S. WILSON has been appointed Demonstrator of Anatomy in the University of Cambridge. Dr. Wilson was formerly demonstrator under Professor Goodsir in Edinburgh.

DR. JOHN LOWE of Lynn has been appointed Medical Attendant to the Household of their Royal Highnesses the Prince and Princess of Wales at Sandringham.

THE deaths in Paris last week amounted to 831. Of these, 40 were from bronchitis, 35 from pneumonia, 61 from diarrhoea, and 35 from typhoid fever.

THE Queen has contributed £100 to the Working Men's Extension Fund for the Queen's Hospital, Birmingham. Baroness Burdett-Coutts has consented to lay the foundation-stone of the new buildings, which will have space for 190 beds, and suitable out-patient and separation wards.

THE Secretary of State for War has, with the concurrence of the Lords Commissioners of the Admiralty, appointed Sir Alexander Armstrong, K.C.B., Director-General of the Medical Department of the Navy, a member of the Senate of the Army Medical School at the Royal Victoria Hospital at Netley.

HER MAJESTY has been suffering quite recently from a sharp rheumatic attack in the foot and hand, and the brief notices of indisposition in the *Court Journal* have caused some anxious misgivings; but we are happy to state upon the best authority that the Queen is doing very well, and that there is no cause for anxiety.

THE fatal cases of small-pox registered in London last week, though less than in the two previous weeks, when they were 57 and 89 respectively, were 39 in excess of the corrected average number in the corresponding week of the ten years 1861-70. The deaths from diarrhoea, which in the five previous weeks had steadily declined from 487 to 205, further decreased to 153 last week, which was, however, just double the corrected average number in the corresponding week of the ten years 1861-70.

THE LONDON MEDICAL SOCIETIES.

THE meetings of the session of the Royal Medical and Chirurgical Society commence this year in October; but, in consequence of the incomplete state of the alterations which are being made in the Society's premises, the first meeting will not be held until Tuesday, October 24th.—The first meeting of the Clinical Society will be held on Friday next, at half-past eight P.M.

MEDICO-LEGAL EXAMINATIONS OF THE PERSON.

AT the annual meeting of the Herefordshire Medical Association, held at Hereford on September 27th, the following resolution was passed unanimously: "That this Society hereby expresses its sympathy with Messrs. Barnett and Chattaway in the painful position in which they have been placed by the unjust comments which have appeared in several publications upon their conduct in the recent case of suicide at Kingsland. This Society is of opinion that their conduct, acting as they did under the written order of the coroner, was marked throughout by delicacy, kindness, and propriety." We may say that, looking to all the facts which have transpired, we are of opinion that this resolution is entirely justified. The unfortunate lady being truly in custody of the police, and the coroner having issued an order requiring these gentlemen to attend for the purpose of making a physical examination, it is certain that they, both by their manner and by the delays which they made, evinced every desire to show consideration for the feelings of the unhappy woman. It is, of course, quite proper for medical men to attend under such an order—as, for instance, in the case of Boulton and Park, and numerous others. It seems, however, equally clear, and always has been so, that a physical examination cannot be enforced against the wishes of the accused person; and this cannot be too clearly borne in mind by medical men under similar circumstances.

ARMY MEDICAL SCHOOL.

THE winter session of the Army Medical School commenced on Monday, October 2nd. Dr. Parkes, F.R.S., delivered an admirable introductory address on the occasion in the presence of the heads of the service. A large number of candidates for commissions, as well as commissioned medical officers of both services, were present.

COTTAGE HOSPITAL AT TENBY.

ON September 22nd, one of these useful institutions was opened here by the Mayor, who, in his robes and attended by the members of the corporation, walked in procession from the Town Hall to the building, where he was received by the medical officer, Mr. J. Griffith Lock, and the Honorary Secretary and Treasurer, Mr. H. Forde, and several of the trustees. After a careful inspection of the building by the Mayor, the rector, the Rev. G. Huntingdon, offered a prayer; after which the Mayor and Dr. Dyster addressed the visitors present, and the building was declared duly opened. The idea of a hospital was suggested by Mr. Lock last November; and at a public meeting held then, the proposal was so well received that the committee then chosen immediately went to work, and the effect is that in a capital situation there is a comfortable building containing a kitchen, bath-room, lavatory, nurses' bedroom, two wards with two beds in each, a special ward for one bed, a committee or operating-room, a store-room, and an extra bedroom. There is also outside the building a mortuary, which can at all times be used as a laundry—not a very judicious arrangement if any cases of infectious disease should be admitted. Among the contributors to the Building Fund are: Dr. Dyster, £230; Mr. C. Allen, £35; Mr. Scourfield, M.P., £20; Mr. J. Griffith Lock, £21; Mr. Chater, F.R.C.S., £10:10; Mr. Saunders, £20:10.

NEW PORTUGUESE MEDICAL JOURNAL.

WE have received the first numbers of a new medical journal, which has lately made its appearance in Lisbon with the title of *O Correio Medico*, under the able editorship of Dr. Alves Branco, Physician to the Royal Hospital of San José, and of Dr. Silva Amado, Pathologist and Curator of the Museum at the Royal School of Medicine of Lisbon. Its first numbers are vouchers of promise for its future success; and from the information which is afforded in them, more especially upon the "African Lethargus," a disease but little known to British medical men, we feel bound to recommend this journal to the profession as a valuable contribution to medical literature.

MANCHESTER MEDICAL SCHOOL.

THE winter session opened on Monday, October 2nd, with an address by Mr. Hunt, amidst the most riotous uproar, we should imagine, that ever greeted a lecturer. An introductory address which consists of a series of carpings at and warnings against such advances of modern science as the microscope and the ophthalmoscope, and which vaunts the educational system of the past as contrasted with the present, is little adapted to the tastes or requirements of the day. It is easier, too, to sneer at the theories of Darwin and Huxley, than to confute their arguments. But at the same time it is no less true, that no eccentricity on the part of a lecturer justifies students in behaving more like noisy incoherent Communists than gentlemen entering upon the serious study of a profession which needs as much as any the "white light of reason."

THE SANITARY STATE OF SALFORD.

OUR Manchester correspondent writes:—The Salford death-rate has for the last five weeks averaged fifty-one per thousand, and has called forth a report from the Officer of Health for the Borough, Dr. Syson. This mortality is chiefly due to the prevalence and fatality of infantile diarrhoea; and Dr. Syson accredits two agents as mainly responsible for this high death-rate—firstly, improper feeding; and secondly, the miasmata arising from open middens, of which he states that there are no fewer than fifteen thousand within the borough. The Officer of Health for Manchester, Dr. Leigh, on the other hand, considers that the consumption of unripe fruit is in a large measure the cause of the

prevalent diarrhoea; but this can scarcely hold good, for, as Dr. Syson observes, the deaths occur at an age when no fruit of any kind is eaten. In this same report he strongly condemns the conduct of the Registrar-General for not only usurping the functions of the College of Physicians, but for acting in direct antagonism to their opinions by prescribing an astringent beverage to meet the evil. The report is an able one, and clearly enough shows that the high death-rate of Salford is not in any way attributable to want of activity or ability on the part of its officer of health.

NEW ENGLISH HOSPITAL IN PARIS.

SIR RICHARD WALLACE has established on a permanent basis the English hospital in Paris, which during the sieges was maintained at his cost in the Rue d'Aguesseau. Two months ago, the English patients remaining in that hospital, and about twenty of the wounded remaining in the ambulance adjoining, were transferred to a temporary hospital in a suburb of Paris. A new hospital has been established by Sir Richard Wallace, and will be opened on the 15th instant, when the English patients in the temporary hospital, and the two remaining siege-casualties—gun-shot fractures of the thigh—will be transferred to it. The hospital, which is situated in the Route de la Rivolté, beyond the Porte Maillot, will be called the "Hertford Hospital", in honour of the late Marquis of Hertford, whose large fortune was inherited by Sir R. Wallace. It will contain thirty beds, and the medical staff will consist of Dr. Rose Cormack and Dr. Herbert. From the beginning of the rule of the Commune, Dr. Cormack has done most of the work in Sir Richard Wallace's ambulance and English hospital.

THE MANCHESTER INFIRMARY AND ST. MARY'S HOSPITAL.

WE learn from our Manchester correspondent that there is a scheme on foot at present amongst the Boards of the Infirmary and St. Mary's Hospital for Women and Children to amalgamate the two charities under one common government—a scheme which in a great measure means adding women's and children's wards to the Infirmary. There are several obstacles in the way, which must be removed before this scheme can be carried into effect; and, amongst others, not the least difficult will be the composition and functions of the respective medical and surgical staffs. The fact, however, that Dr. Reed is in favour of this arrangement, is in itself a strong argument that it will be accomplished. Dr. Reed's desire is to convert the Manchester Infirmary into a sort of medical university, where a student may prosecute the study of every branch of his profession without leaving its walls. In a word, he desires to see the Manchester Infirmary an institution where facilities will be afforded for the study of diseases of the eye, the ear, and the skin, besides the special affections of women and children.

OPERATIONS AT THE HOSPITALS.

THE first fortnight of the Winter Session is to the metropolitan hospital surgeon a regular campaigning season. He has been for weeks, or months perhaps, accumulating material wherewith to satiate and astonish the youthful Æsculapians. The custom, although sometimes it has a tendency to degenerate into an advertisement, is a good one. By concentrating a number of operations into one day, a great deal of the students' time is saved which would be wasted if the operations were prolonged over several weeks; and, at the same time, the custom affords an opportunity to old pupils who may come to London for a few days to see as much as possible of operative surgery and its improvements. At the London Hospital this week, Mr. Hutchinson removed a large blood-tumour of the scrotum, Mr. Maunder a tumour involving the nostril, orbit, temporal and zygomatic regions of the left side, and Mr. Couper operated for an ununited fracture of the left femur, sawing off the edges and bringing them together by drilled holes and cat-gut ligatures. At University College Hospital, Mr. Erichsen performed an amputation of the thigh, Mr. Berkeley Hill varicocele by Wood's new spring, and Mr. Streatfeild extirpation of the eyeball. A few small operations were also performed in the theatre.

THE MIDDLESEX HOSPITAL.

THE vacancy caused by the promotion as extra-surgeon of Mr. George Lawson has been filled up by the appointment of Mr. A. Clark, a former house-surgeon of the hospital.

UNIVERSITY COLLEGE HOSPITAL.

A VERY beautiful mosaic tablet, by M. de Triquetri, has been placed in one of the wards of this hospital, in memory of the late Mr. Edward Yates, who bequeathed an endowment of £46,000 to the funds of the hospital. The tablet was erected by Dr. Hare, late Physician to the Hospital, and Mr. Yates' trustee, and rests on a massive polished chimney-piece of Peterhead granite.

THE NATURAL SCIENCE SCHOLARSHIPS AT ST. MARY'S HOSPITAL.

THE open scholarship in Natural Science, lately established at St. Mary's Hospital Medical School, has this year been gained by Mr. E. J. Edwards. It is of the value of £40 per annum for three years. The Exhibition of £20, awarded at the same examination, has been gained by Mr. Giles.

THE LONDON SCHOOL OF DENTAL SURGERY.

SINCE the opening of this now flourishing school in 1860, the original staff of lecturers remained unbroken until very recently, when Mr. Ibbetson and Mr. Hepburn resigned their lectureships on the Anatomy and Physiology of the Teeth and on Mechanical Dentistry respectively. These vacancies have been filled up by the appointment of Mr. Charles S. Tomes and Mr. James S. Turner. The number of entries at this school promises, we understand, this year to be fully as large as usual.

DEATH OF DR. BEAUPERTHUY.

INTELLIGENCE has been received that this physician expired suddenly, only two days after his interview with Dr. Milroy, who, it will be recollected, was sent out to the West Indies by the Colonial Office to investigate the reality of the alleged cure of leprosy by a plan of treatment which Dr. Beaupertuy has for a considerable time followed.

ROYAL COLLEGE OF SURGEONS.

THE annual registration of medical students at the metropolitan hospitals was commenced on Monday last, and will be brought to a close on the 16th instant. The examinations for the present session will take place on the 4th and 10th of November respectively, and the examinations for the Fellowship on the 18th. The library and museum were reopened on Monday last. In the latter, several additions have been made, especially a rare and valuable whale, obtained through the liberality of Professor Erasmus Wilson.

THE ASSOCIATION OF CERTIFYING MEDICAL OFFICERS.

THE fourth annual general meeting of the Association of Certifying Medical Officers of Great Britain and Ireland will be held at the Adelphi Hotel, Liverpool, on Friday, October 20th, at 2 P.M. The members will afterwards dine together. Gentlemen intending to be present at the dinner are requested to notify the same to the Honorary Secretary, Mr. Stansfeld, Redlands, Bristol, on or before Tuesday, October 17th.

MEDICINE AND THEOLOGY.

DR. CHARLES HENRY LEET, assistant-surgeon Royal Engineers, Chatham, has, on the nomination of the Rev. J. G. Bailey, M.A., chaplain to the Garrison Hospital, Fort Pitt, been formally admitted and licensed by the Lord Bishop of Rochester to the office of reader in lay orders of the Church of England. The Chaplain-General of the Army, at his recent visit to the garrison, expressed his approval, and also his earnest wish, that many more officers might be induced to do likewise. He regarded the assistance of such officers, holding a recognised position in the Church of England, as invaluable to the military chaplains, and gave his assurance that, wherever these readers might be stationed, whether at home or abroad, he would take the liveliest interest in their work and welfare.

DEATH UNDER CHLOROFORM.

AN inquest was held at Manchester this week (says the *Manchester Examiner and Times*) before Mr. E. Herford, the city coroner, respecting the death of a drayman named Isaac Grundy, late of 19, Queen Street, Bedford Leigh, aged 34. On Thursday last deceased was admitted to the Manchester Royal Infirmary, suffering from a fracture of the leg. Mr. J. G. Gordon, junior house-surgeon, attempted to reset the limb, but, after several trials, failed, as the deceased shrank from the operation. Mr. Gordon suggested that chloroform should be administered, and Grundy acquiesced. A rag saturated with chloroform was accordingly placed several times to the deceased's face, and Mr. Gordon repeatedly essayed to reset the injured part, but the deceased could not be got sufficiently under the influence of the anæsthetic, and each attempt was unsuccessful. The pulse of the deceased suddenly ceased to beat, and the usual methods for resuscitation were resorted to, but without effect. Mr. S. Buckley, physician's assistant at the Royal Infirmary, said he had made a *post mortem* examination of the deceased's body, and discovered fatty degeneration of the liver and kidneys. The brain was softened, and the heart flabby and much dilated. The deceased was a powerful man, and appeared as if prone to indulge in alcohol. There was, however, no trace of it in the stomach. The witness was of opinion that death resulted from shock to a dilated heart whilst deceased was under the partial influence of chloroform. He considered that chloroform would not have had such an effect had not the heart been diseased. The jury returned a verdict in accordance with the evidence.

THE FRENCH AMBULANCE COMMITTEE.

THE Committee of the Ambulances of the French Press during the late siege of Paris, desirous of expressing their sense of the cordial reception given to their delegates in London at the banquets offered at Greenwich by Colonel Loyd Lindsay, M.P., V.C., and in London by the metropolitan medical body, have forwarded for acceptance, through the French Ambassador, gold medals of the Ambulance de la Presse to Colonel Loyd Lindsay, Sir William Fergusson, Sir Henry Thompson, and Mr. Ernest Hart; and have also forwarded bronze medals for the acceptance of the stewards of the London banquet, including Dr. Burrows, President of the Royal College of Physicians; Mr. Busk, President of the Royal College of Surgeons; Dr. Paget, President of the General Medical Council; Sir William Armstrong, K.C.B.; Sir William Jenner; Sir James Paget; and the other hospital physicians and surgeons who associated themselves in this mark of international friendship. Dr. Markheim has, on the part of M. de la Grangerie, the General Secretary of the Committee, accompanied the medals with a gratifying communication.

HEREFORDSHIRE MEDICAL ASSOCIATION.

THE annual report of this Society has been forwarded to us. It states that the following resolutions have been carried at meetings of the Association. "1. That this meeting disapproves of the system of giving certificates in favour of any particular line of practice, medicine, or article of diet, as derogatory to the profession; and hopes that, in future, the members of this Association will abstain from lending themselves to such a course." "2. That this Association strongly disapproves of medical men publishing scales of charges, or otherwise advertising for practice—the more particularly so when done for private motives under the guise of charity." "3. That it is the opinion of this Association that the utmost caution should be used by all members of the profession in expressing opinions about each other, but especially in giving evidence in courts of law, to the prejudice of any gentleman legally qualified to practise." "4. That the system of gratuitous medical advice and assistance has outgrown all necessary and reasonable limits. With all its acknowledged benefit—and may the full extent of its true charity never be lessened—in the excess to which it is now carried it is largely productive of the serious evil of checking those habits of providence, forethought, and independence, which it is always so desirable

to encourage among the working classes ; and that it will, therefore, be of great advantage to introduce the self-supporting principle, in whole or in part, in the formation of all new dispensaries, and in those already existing, wherever it may be practicable to do so." "5. That the discussion, by members of the profession, of medical subjects with reference to the treatment of disease, in the public newspapers, is much to be regretted : it is futile for any useful result, and seldom fails to compromise the dignity of true science." "6. That in the opinion of this meeting, it would be desirable that medical attendance upon sick assurance societies (clubs) should be exclusive of medicine, and that the rate of remuneration should not be less than 4s. per head *per annum* ; or in country districts, where it may be desirable, for obvious reasons, that medicine should be supplied by the medical attendant, the rate should not be less than 5s. per head *per annum*."

CONVALESCENT INSTITUTION IN CONNECTION WITH BETHLEHEM HOSPITAL.

AMONG the local Acts of the recent session was one to enable the Governors of Bethlehem Hospital to establish and maintain at Witley, near Godalming, a convalescent establishment in connexion with, and as part of, Bethlehem Hospital. The statute recites that the charter of the Hospital was granted by his late Majesty Henry VIII for the house and Hospital at Bishopsgate, in the city of London, and an Act was passed in the 22nd of George III, and the mayor and commonalty constituted governors. The original Bethlehem Hospital was destroyed in the great fire of London, and the building substituted was found insufficient. A hospital for the reception and maintenance of lunatics was therefore built in St. George's Fields, and maintained out of the revenues and property belonging to the governors. Further, the statute states that it is of great advantage to the persons so received that the governors should be able to send away from the Hospital, for the benefit of their health, but without relinquishing the care and charge of them as lunatics, such of the same persons as are convalescent and such others of them as the governors may think fit to send away. A convalescent establishment at Witley may be established "for the reception of convalescent and other patients". Regulations are to be made for the new establishment, and the Commissioners of Lunacy are to visit the place as if the same were registered as a hospital.

THE SEWAGE OF LARGE TOWNS.

ABOUT six weeks ago, the Town Council of Birmingham had under discussion a scheme in reference to the sewage of the borough, submitted to them by the Public Works Committee. The Council were dissatisfied with the scheme, and appointed a special committee to inquire into the subject and report to a subsequent meeting of the Council. Their report was a very long document ; but their recommendations include the following : The gradual abolition of middens, and substitution of a new privy system, based upon the principle of exclusion from the sewers and weekly collection of all excrementitious matter, solid and liquid. A system to be developed in connexion with the above, of exclusion from the sewers and collection of refuse from slaughter-houses, cattle-markets, urinals, cow-houses, and stables. An experimental trial of the Rochdale and Manchester systems, on a sufficiently large scale, and under the strictest supervision ; and ultimately an extension to the whole town of that system which shall be found to be the most efficient. The imposition of a rate on occupiers, in respect of water-closets connected with the sewers, on a scale to be sanctioned by the Council. The exclusion from the sewers of the refuse from the works of German silver manufacturers, galvanisers, wire-drawers, and manufacturing chemists, and from such other works the refuse from which may, from time to time, be found to interfere with the utilisation of the sewage of the borough, unless such refuse shall, previously to being discharged into the sewers, have been so treated as not to interfere with such utilisation.

SCOTLAND.

DR. JOHN CHIENE and Dr. Alexander Miller are candidates for the vacant appointment of Assistant-surgeon to the Edinburgh Royal Infirmary.

IRELAND.

THE SANITARY STATE OF DUBLIN.

THE Health Committee of the Corporation of Dublin have, says *Saunders's Letter*, been roused into action by the recent letter of Dr. Grimshaw, which appeared in our columns. Bridgefoot Street has been visited, and an attempt made to get rid of the abominations described. In one of the worst of the houses, we understand, the inspector found two cases of fever, which were removed by a magistrate's order to Cork Street Hospital, making in all seventeen cases from this house within a comparatively brief period. Let it be observed that nothing was done during a period of two months, during which the frightful condition of this and other localities was repeatedly brought under the notice of the committee ; but the moment public attention was called to the subject, the committee began the performance of a long-neglected duty. The committee certainly cannot claim credit for much vigilance or energy when they allowed the state of things in Bridgefoot Street which Dr. Grimshaw described to remain so long unremedied.

THE MEDICAL SCHOOL DINNERS, ETC.

ST. BARTHOLOMEW'S HOSPITAL.

NEARLY ninety of the old students of this hospital met at dinner in the great hall on Monday evening, Dr. Black presiding. Amongst those present were Sir James Paget, Bart., Professor Owen, Dr. Burrows, Professor Humphry of Cambridge, the Treasurer of the Hospital, and others. After the usual toasts, Professor Owen proposed "Prosperity to St. Bartholomew's Hospital and Medical School", referring in terms of affection to his student days when he was a pupil of John Abernethy, and subsequently to his having given his first course of lectures at St. Bartholomew's Hospital. Professor Humphry proposed "The Health of Sir James Paget", who replied with all his accustomed eloquence and felicity. The toast "The Chairman's Health" was proposed by Dr. Wood, and "The Visitors" by Dr. Monro. Dr. Burrows, the President of the College of Physicians, replied to the toast of "The Medical Corporations." Mr. Luther Holden proposed "The Health of Mr. Willett, the Steward of the Dinner." The meeting proved very successful, and was continued till a late hour.

THE MIDDLESEX HOSPITAL SCHOOL DINNER.

THE past and present pupils of the Middlesex Hospital held their annual dinner at the Freemasons' Tavern on Monday evening. Thomas Taylor, Esq., F.R.C.S., occupied the Chair, and there was a large attendance. The toast of the evening, "The Middlesex Hospital Medical College," coupled with the name of Mr. De Morgan, elicited a very warm response. Amongst the other toasts were those of Mr. Taylor, the Chairman ; the orator of the day, Dr. John Murray ; and the Past and Present Pupils, coupled with the name of Mr. R. Lucas, Resident Medical Officer. The success of the evening was in no small measure due to the unusually excellent music of Mr. G. Anderson Critchett, Mr. Semple, Mr. Hailstone, Mr. Turner, and Mr. Burnett ; Mr. Ganz kindly assisting at the piano.

THE LONDON HOSPITAL.

THE Biennial Dinner of the past and present students of the Hospital and College took place at the London Tavern on Monday evening : Mr. Curling, Consulting Surgeon to the Hospital, in the chair. There was, we hear, a large attendance of old pupils of the hospital, and the meeting passed off in every respect very successfully.

ST. GEORGE'S HOSPITAL DINNER.

THIS dinner, which passed off with more than usual success, was held on Monday evening at Willis's Rooms : Dr. Pitman, Consulting Physician to the Hospital, in the chair. Among those present was Sir John Fisher, who, during the course of the evening, stated that he had

entered St. George's Hospital as a pupil sixty-five years ago. The toast of the evening, "Prosperity to St. George's Hospital and School", was very warmly responded to. The attendance was very large, over one hundred being present.

At St. Mary's, Charing Cross, and the Westminster Hospitals, *conversazioni* were held after the Introductory Addresses.

THE CHOLERA.

THE Sanitary Council of Hamburg has officially announced that the cholera, which had made its appearance there, is now extinct.

In Königsberg the fatality from cholera is declining. In the week ending last Thursday, 23 deaths were reported, against 52 in the week ending 14th ult. In Stettin, three fatal cases occurred last week.

CHOLERA has broken out severely in Constantinople. A Constantinople telegram states that the Government has ordered a sanitary cordon to be drawn around one of the quarters in Pera ravaged most severely by the cholera. No one is permitted to cross this cordon. The local journals severely criticise this measure as useless, and tending to spread a panic among the inhabitants of the quarter, besides exposing them to privations. A medical man and a priest, purposing to tend the sick, have been prevented crossing the cordon.

A CORRESPONDENCE has taken place between the Local Government Board and the Metropolitan Asylum District Managers on the subject of accommodation for cholera patients in the event of that epidemic reaching the metropolis. The managers, while expressing their willingness to receive a limited number of patients at the Hampstead Hospital, suggest that, as cholera would probably first appear in the port of London, the *Dreadnought* should be used as a floating hospital for the purposes of isolation, and that in each union workhouse a cholera ward should be prepared. In reply to this, the Assistant-Secretary of the Local Government Board, writing on the 29th September, says: "For the purpose of enabling the managers to provide suitable hospital accommodation, in the event of the metropolis being again visited by cholera, the Board proposes to issue an order combining the several unions and parishes constituting the Metropolitan Asylum District into a district for the relief of poor persons who may be attacked by that disease, and directing that the managers of the present Metropolitan Asylum District shall also be managers for the district so contemplated to be formed."

ASSOCIATION INTELLIGENCE.

SOUTH MIDLAND BRANCH.

THE next meeting of the above Branch will be held at the Town Hall, Wellingborough, on Tuesday, October 10th, at 2 P.M.

Gentlemen who intend to read papers or cases, are requested to forward the titles of the same forthwith.

J. M. BRYAN, M.D. } *Honorary Secretaries.*
WM. MOXON. }

Northampton, September 11th, 1871.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE next meeting of the above Branch will be held at the Council Room of the Midland Institute, on Thursday, October 12th, at 3 P.M.

Mr. Lawson Tait will move that a Committee be appointed to consider the mode of election of the Officers and Council of the Branch.

The following papers are promised:—On some points of Surgical Experience, by Mr. H. D. Carden; Old and New Methods of Water Analysis, by Dr. Alfred Hill; On the Lactic Acid Treatment of Rheumatism, by Dr. B. W. Foster.

Members are invited to exhibit pathological specimens at the commencement of the meeting.

T. H. BARTLEET, *Honorary Secretary.*
Birmingham, October 1871.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the Session will be held at the York House, Bath, on Thursday evening, October 26th, at seven o'clock. CROSBY LEONARD, Esq., President.

R. S. FOWLER, Bath, } *Honorary Secretaries.*
E. C. BOARD, Clifton, }

6, Belmont, Bath, October 1871.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at the King's Arms Hotel, Wigton, on Wednesday, October 25th, at half-past twelve o'clock. The President, Dr. ELLIOT of Carlisle, will occupy the Chair.

Gentlemen intending to read papers or cases, are requested to communicate with the Secretary at their earliest convenience.

HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, October 3rd, 1871.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:

ORDINARY MEETING.

THE next Ordinary Meeting of this Branch will be held on Tuesday, November 7th, at the Town Hall, Cardiff, at 1.30 P.M. The Council will meet at 12.30 P.M.

The Dinner will take place at 5.30 P.M.; and members may introduce professional friends to the meeting and dinner.

Members intending to read papers or notes of cases are requested to communicate the titles thereof as soon as possible to one of the Honorary Secretaries.

All members who purpose joining the dinner, will oblige by communicating their intentions to one of the Honorary Secretaries before the 31st instant.

ANDREW DAVIES, } *Honorary Secretaries.*
ALFRED SHEEN, M.D., }

October 4th, 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

A MEETING of the members of this district was held at the Castle Hotel, Hastings, on Friday, September 29th. Fourteen members present, and two visitors. Dr. J. M. CUNNINGHAM of Hailsham was elected Chairman.

Secretary.—Dr. Trollope of St. Leonard's was appointed District Honorary Secretary in the place of Mr. Mudd of Uckfield, who resigns in consequence of leaving the neighbourhood.

New Members.—John Cooke, M.B., of Hastings, was elected a member of the Branch. George B. Turner, M.D., of St. Leonard's, was nominated as a member of the Association and of this Branch.

Communications.—1. Dr. G. MOORE of Hastings read a paper on a case of Diabetes of three months' standing. The patient had previously been rigorously dieted. Under a bread-and-milk diet (three pints of the latter daily) and the administration of effervescing salines, with iron, the urine became perfectly free from sugar in a fortnight, and the patient speedily gained flesh and strength. Dr. Moore expressed himself strongly in favour of the free use of milk in such cases.

2. Mr. G. F. HODGSON of Brighton exhibited a pair of Long Forceps with the handles curved backwards, according to the suggestion of Dr. Aveling, and claimed for his instrument its adaptation for all cases in which the use of the forceps was required.

3. Mr. BUXTON SHILLITOE of London, who was present as a visitor, explained the process of the A B C Company (of which he is a director) as now in course of application to the sewage of Hastings.

Dinner.—Fourteen gentlemen subsequently dined at the Castle under the presidency of Dr. Cunningham.

The next meeting will be held in November at Brighton, Dr. Alfred Hall in the chair. The Honorary Secretary requests early notice of intended communications.

OBITUARY.

CHARLES A. HARRIES, M.R.C.S., OF BATH.

THIS gentleman was born on February 19th, 1808. He was engaged in the practice of his profession upwards of forty years. An ardent lover of science; a man of genial and amiable disposition, ever ready with a cheering smile and kindly word; a zealous discharger of every private and public duty; he won the respect and affection of a very large circle of patients and friends. He was a town councillor of Bath for many years, and rendered valuable services to his fellow-citizens. So attached was he to his work that, although ailing for some time, he only ceased his labours a few months since, being compelled to resign his practice by the progress of cardiac disease, which ended fatally on September 22nd, 1871.

GEORGE CURSHAM, M.D., F.R.C.P.

ON Saturday, September 23rd, full of years and honour, there passed away at the age of 75, George Cursham, M.D. Paris, F.R.C.P. Long will Dr. Cursham be mourned and his memory affectionately cherished by those who were admitted to the privilege of his intimate acquaintance. Dr. Cursham's high principle and unfailing rectitude, combined with his clear judgment, made him highly respected by his professional brethren, who must feel that one has gone forth from amongst them whose place will not easily be filled. Dr. Cursham was for many years Physician to the Brompton Consumption Hospital and to the Asylum for Female Orphans; he was also for some years Secretary to the Royal Medical and Chirurgical Society, and held up to the time of his death the post of Inspector of Anatomy to the provincial schools.

JOHN SCOTT, F.R.C.S.ED., OF CULROSS.

It is the wish of some medical men to die in harness, but it is seldom that such is so fully carried out as in the sudden and sad death of Mr. John Scott of Culross. He went out on the morning of the 15th August apparently in good health, and had visited one or two of his patients and was on his way to see another, when he felt the first symptoms of the fatal seizure. After three such warnings he came out of his gig, told his boy not to leave him, and lay down by the road-side and died. Such was the sad end of one who, in his lifetime, gave comfort and strength to many a sufferer, and whose cheering words revived the heart of many a drooping one. He was born in Culross in 1807, and received his diploma from the Royal College of Surgeons, Edinburgh, in 1829. In 1856 he had the fellowship of the same college conferred upon him. His first intention was to join the Army or Navy Medical Service; but, through great persuasion, he consented to remain in his native place, where he successfully practised, without intermission, till the day of his death. He was the only recognised consulting practitioner in the district, and his loss will not only be felt throughout his native parish, but for many miles round.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, September 28th, 1871.

Elam, Shrofield, 40, Woburn Place, W.C.
Mountaine, John, Wise's Hill, Sunday's Well, Cork

The following gentlemen also on the same day passed their first professional examination.

Bennett, William Edward, Guy's Hospital
Evans, John, London Hospital
Nix, Edward James, Charing Cross Hospital

At the Preliminary Examination in Arts, held at the Hall of the Society, on the 29th and 30th of September, 1871, 159 candidates presented themselves; of whom 66 were rejected, and the following 93 passed, and received certificates of proficiency in general education; viz., in the First Class, in the order of merit.

1. E. J. Morshead, 2. H. P. E. Freund, 3. A. C. Routh, 4. A. S. Eccles, J. C. Hayward, F. Nicholls, and H. C. Taylor. 8. H. R. H. Bigg, F. S. Edwards, F. G. Hayes, P. Hookham, J. L. Jacquet, W. B. Johnson, R. D. Perry, and Thomas Tomlinson. 16. J. R. Blackie, L. Druitt, C. G. Emson, E. Ground, A. G. Lacy, Stephen M. Smith, and J. Wishaw.

In the Second Class, in alphabetical order.

L. M. Anderson, P. W. Ashe, H. Baker, Henry Bartlett, T. A. Bell, J. S. Biale, George S. K. Bigg, Archibald Blair, H. Blake, G. C. Bouton, G. R. Bonsall, A. L. Bowen, C. J. L. Bowling, Francis W. Brown, Thomas L. Brown, A. H. Burlton, H. C. Burton, G. W. Butler, W. F. Campbell, G. R. Chadwick, E. T. Chamberlain, H. B. Crofts, Edmund Da Costa, H. E. Daniell, A. M. Davies, H. P. Downing, D. W. Fergusson, William Foresythe, E. G. Francis, Walter Gray, W. H. Grigg, G. W. Hambleton, Howard Harris, A. Harding, W. K. Hatch, Alfred Hodgson, C. A. Holmested, Reginald Humphry, Robert Dennett Jones, William Jones, N. T. King, J. Tomlinson Knight, J. L. Lampray, S. E. H. Lane, John Lawson, Joseph Lewes, E. H. MacLaughlin, D. D. Malpas, W. H. Manwaring, Ernest Martyn, Joseph W. Moore, T. C. Mugliston, Richard Pinnell, J. H. Poland, P. A. Rigby, R. R. T. Risk, Alonzo Roberts, John T. Roberts, Harvey Robins, G. F. H. Rule, W. Scholfield, Richard Steele, John J. Stephenson, John G. Swaine, John Symons, John Thomas, Henry Thomas Tomlinson, Charles P. G. Townsend, Ethelbert Wade, Austin George Ward, and Arthur Frank Wilson.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ATCHAM UNION, Salop—Medical Officer for the St. Mary's District.
ASYLUM FOR FEMALE ORPHANS—Physician.

BALLINASLOE UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Lawrencetown Dispensary District.

BALTINGLAW UNION, co. Wicklow—Medical Officer for the Kiltegan Dispensary District.
BRISTOL, City of—Medical Officer for District No. 2.
CAHERCIVEEN UNION, co. Kerry—Medical Officer for the Emlagh Dispensary District.
CHARING CROSS HOSPITAL—Assistant Physician.
CLAPTON—Divisional Surgeon to the Police.
CORNWALL LUNATIC ASYLUM, Bodmin—Assistant Medical Officer.
DORCHESTER UNION—Medical Officer for the Dorchester District and the Workhouse.
GUEST HOSPITAL, Dudley—Resident Medical Officer.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
LIVERPOOL NORTHERN HOSPITAL—House-Surgeon.
MARLBOROUGH UNION, Wilts—Medical Officer for District No. 2.
MAYO INFIRMARY, Castlebar—Surgeon.
OMAGH UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Eastern Division of the Omagh Dispensary District.
PEMBROKE UNION—Medical Officer for District No. 5.
POCKLINGTON UNION, Yorkshire—Medical Officer and Public Vaccinator for the Pocklington No. 2 District and the Workhouse.
RATHDOWN UNION, co. Dublin—Medical Officer for the Killiney Dispensary District.
ROMFORD UNION, Essex—Medical Officer for District No. 7.
ROYAL COLLEGE OF SURGEONS, England—Member of Council.
ROYAL INFIRMARY, Edinburgh—Resident Physician, Clinical Wards.
ST. LEONARD'S SCHOOL, Brentwood—Surgeon.
TIVERTON UNION, Devon—Medical Officer for the Silvertown District.
WARMINSTER UNION, Wilts—Medical Officers and Public Vaccinators for the Corsley and Warminster Districts and the Workhouse.
WARRINGTON, Lancashire—Medical Officer of Health.
WESTHAMPTON UNION, Sussex—Medical Officer for the Rumboldswyke District.
YORK COUNTY HOSPITAL—House-Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ANDREW, R. W., L.K.Q.C.P.Irel., appointed Medical Officer for the Palmerstown Dispensary District of the South Dublin Union.
CULLEN, Owen, L.K.Q.C.P.Irel., appointed Medical Officer for the Kilmeaden Dispensary District of the Waterford Union.
*Low, Robert Bruce, M.D., appointed Medical Officer and Public Vaccinator for the Messingham District of the Glanford Brigg Union, Lincolnshire, *vice* W. Terwest, M.D., resigned.
STRAFFORD, Thomas, Esq., appointed Resident Surgeon to the Worksop Dispensary, *vice* Edward J. Cooke, M.B., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

SCOWCROFT.—On October 3rd, at Bolton-le-Moors, the wife of *J. Edwin Scowcroft, L.R.C.P.Ed., of a son.
SIBBALD.—On September 29th, at 16, Dalrymple Crescent, Edinburgh, the wife of *John Sibbald, M.D., of a son.

DEATHS.

BAIN, John, Esq., Surgeon, at Johnstone, N.B., aged 27, on September 22nd.
MORGAN, John Flower, Esq., Surgeon (formerly Assistant-Surgeon 2nd Royal Lancashire Militia), at Bath, aged 86, on September 23rd.
PANTON, George, Esq., Surgeon, at Dorchester, aged 55, on September 26th.

THE EAST RIDING OF YORKSHIRE LUNATIC ASYLUM at Beverley, which has been erected at a cost, including land, and fitting and furnishing, of nearly £40,000, will be opened in a few days.

MR. EDWARD SMILES, M.R.C.S.ENG., of Alnwick, is a candidate for the Coronership of Northumberland, vacant by the death of Mr. Hardy.

VACCINATION PROSECUTIONS.—At the Orsett petty session, John Whitmore, a labourer, was summoned for having neglected to have his two children vaccinated, and he was ordered to have it done forthwith.

RELEASE OF MR. WILSON FROM CRICHTON ASYLUM, DUMFRIES.—The *Liverpool Mercury* states that Mr. Thomas Wilson, of Harold Tower, Isle of Man, whose recent confinement in the Crichton Asylum, Dumfries, has caused so much comment, has been released, and arrived at his home in Douglas on Friday night, last week.

BEQUESTS, ETC.—Mr. William Welch of Great Brook Street, Birmingham, has bequeathed £300 to the General Hospital, £300 to the Queen's Hospital, £200 to the Children's Hospital, and £200 to the Homoeopathic Hospital.—Miss Carter of Lynn has bequeathed £300 to the West Norfolk and Lynn Hospital.—Mr. John Palmer has bequeathed £100 each to the General Hospital, Queen's Hospital, and General Dispensary, Birmingham.—Mr. J. Nutter of Halifax has given £500 to the Bradford Infirmary.—Miss Rosa Ann Long of Dawlish has bequeathed £100 each to the Devon and Exeter Hospital, the Dawlish Dispensary, and the Brompton Hospital for Consumption.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Hunterian Society. 7.30 P.M., Council Meeting. 8 P.M., Introductory Address by the President; and a paper by Dr. Daldy.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Christian Bäumler, "On Cases of Partial and General Idiopathic Pericarditis"; Dr. Anstie, "Conclusion of a Case of Syphilitic Neuralgia, which was reported last Session," and "On a Case of Anæsthetic Leprosy"; Mr. Nunn, "On a Case of Scrofuloderma treated by Woodhall Water"; Mr. George Lawson, "On the Treatment of a Case of large Melanotic Tumour of the Eye extending into the Orbit."

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE can only advise Mr. Rae to communicate privately with the gentlemen whom we have mentioned; and if he finds encouragement enough, we shall be happy to see him personally to give him further counsel how to proceed satisfactorily in the matter. It is a matter not less delicate than important.

MR. ERNEST TRESTRAIL.—The drawing up of the lists for publication in the JOURNAL is in the department of the General Secretary; and Mr. Trestrail should address Mr. T. Watkin Williams, 13, New Hall Street, Birmingham, on the subject of his missing qualification.

WASP-STINGS.

SIR,—Mr. Drury's remarks on the treatment of wasp-stings are very opportune at this season, as wasps are unusually numerous this year, and the present cold weather will reduce them from their flying to their crawling, and therefore more dangerous and vicious state, at an earlier period than usual.

Mr. Drury referred incidentally to the old woman's remedy of the "blue bag", but did not express an opinion on its use. I have myself so frequently witnessed its beneficial action, that I am anxious to say a few words in its favour. As a speedy application of a local remedy is of the utmost importance to prevent or modify the constitutional disturbance, and, as the surgeon can scarcely be in immediate attendance, it is desirable not to throw discredit on a popular remedy unless we are prepared to substitute an equally convenient and more efficient one in its place.

I was induced some time ago to make a rough analysis of some specimens of the "powder blue" of the shops, and I found some of them to consist of more than half their weight of carbonate of soda. This alkali is no doubt the active constituent of this old woman's remedy, and is, I believe, the one most commonly used by surgeons. The damp blue bag has the advantage of being always at hand, is easily applied, and is used with confidence by the public; while other remedies are probably not available, may require skill in their application, and are employed with doubt by the old women.

For surgical purposes, I have found the strong solution of ammonia, strong acetic acid, or strong solution of carbolic acid, the most useful; and I should expect little benefit from the application of laudanum in the first instance, though in a later stage it would allay general irritability of the skin. For this purpose, the anæsthetic action of the solution of carbolic acid is beneficial. For urgent constitutional symptoms, a much larger dose of sal volatile than that recommended by Mr. Drury may be given—a teaspoonful every fifteen or twenty minutes; but the treatment would necessarily depend on the constitution and temperament of the patient.

I am, etc., CHARLES ROBERTS, F.R.C.S.

Bolton Row, Mayfair, September 25th, 1871.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

"THE BUBBLE REPUTATION."

SIR,—“There is a pleasure in the pathless woods”; but commend me to the London streets for cheap amusement and mental relaxation. You may go further and fare worse, as the spirited proprietor of purgatory remarked to the discontented druggist. One of those vexatious elbow-joint injuries—a case of separation of the lower epiphysis of the humerus, the three points posteriorly all right, yet flexion restricted—necessitated a visit to the modern Babylon, and a consultation in Wim-pole Street. In a shop window, the photographs of certain medical celebrities attracted attention. Miller, Tanner, Hyde Salter, are at rest: all fought a good fight and died in harness.

Contemplating in rapt admiration the visages of my “distinguished” contemporaries, I seem presently to become the confidant of what is going on in the frame before me. Dr. Guy here calculates the income of Sir H. Thompson, Bowman, and Spencer Wells. Henry Lee considers syphilis a joke. Farr arranges a difference between the Major and the terrific Letheby. Wilks, Pavy, and Chambers consult on a case of Ship-and-turtle-itis. Arthur Farre remarks that really he and Sir William Jenner only care to attend princesses; but Braxton Hicks, Barnes, Playfair, and Priestley are available. Dr. Druitt reads a proof of an ever welcome edition of “Surgery.” Partridge tells the gigantic sphenoid story. Henry Smith “at last” (Kingsley) has caught a fish in the Serpentine, and invites John Wood to dine, to meet Sir William Fergusson. Erasmus Wilson sneers at the new skin-baths. Forbes Winslow invites every one permanently to Hammersmith. Tilt congratulates Paget on the change of life. Ernest Hart is shocked to read that in Terra del Fuego the natives believe in devils, and that they are the departed spirits of members of the British Medical Association who have not paid up their subscriptions; and Garrod tells a gouty bishop “that the gods are just, and of our pleasant vices make instruments to scourge us.”

I am, etc.,

Cheltenham, October 1871.

CHUTNIE CURRIE, M.D.

DR. PIRRIE ON ACUPRESSURE.

SIR,—I observed recently some remarks of Dr. Pirrie's on his favourite subject acupressure, wherein he says:—“The circumstance that obsolete modes are alone described in the last editions of otherwise excellent works on surgery, have all tended to retard the more general adoption of this new means of arresting surgical hæmorrhage.” Without more than alluding to the paradox of “obsolete modes” of a “new means” of arresting surgical hæmorrhage, it would be well that Dr. Pirrie, who has the interest of students at heart, should name those editions of “otherwise excellent works on surgery” that have described only obsolete modes of acupressure. Dr. Pirrie, otherwise generally accurate in his language, uses the term *inelastic* as applied to iron wire. Such a term is used in contradistinction to *elastic*. The latter attribute is not generally given to the adamantine mineral, but Dr. Pirrie may know a kind of iron wire that is not inelastic. In case the same mistake should happen with the Aberdeen method of acupressure, as happened with Sir J. Y. Simpson and chloroform, I think it right here to mention—especially as future glory is prophesied for one now dead on account of acupressure—that although Dr. Pirrie described the method in his conjoint book, the late Dr. Benjamin Knowles was the originator of the method, and demonstrated and described it to many of his friends and classfellows, and afterwards to Dr. Pirrie and the hospital staff. As surgical appliances and methods are not commonly called after the towns in which they first saw light, I propose that the name of the method of occluding an artery in a surgical wound by a needle twisted through the surrounding tissues and over the artery, be named the “Knowles's method,” the same as we have “Syme's abscess-knife” and “Pirrie's modification of Pirogoff's operation.” This is a small recognition to give one now passed away, but it may prevent future confusion. I am sure Dr. Pirrie himself would regret any misapprehension of the kind. Trusting you will find space for these remarks,

I am, etc.,

Fettercairn, August 1871.

A CHARITABLE PROPOSITION.

SIR,—The public will learn with unmixed satisfaction that it is in contemplation to present a testimonial to Sir James Paget on his elevation to the baronetcy. It is very honourable to St. Bartholomew's Hospital that this proposal should have emanated from thence; but, sir, the scientific world, both here and abroad, recognise Sir James Paget as belonging to it, and to the profession at large; and I am well persuaded that the profession at large will endorse this recognition, if opportunity be conceded them to participate in the movement. The main question which naturally presents itself is—What form should such a testimonial most appropriately take? Passing over the familiar and well-worn expedients of a piece of plate or a portrait as less worthy emblems of a feeling like this, would it not be more in unison with the character of the recipient, as well as more distinctly expressive of their appreciation of it by the givers, if a “Paget Fund” were established in connection with the British Medical Benevolent Fund, of which Sir James Paget is already a trustee, and with the purposes of which his sympathy has been unmistakably evidenced, in order to found for ever one or more annuities for the support of aged and destitute members of the profession or their widows, to be chosen from the most deserving and necessitous in the same careful manner in which the other annuitants, supported by that institution, are at present selected, or in any other way Sir James might himself suggest?

Will you permit me, through your valuable aid, to submit this for general consideration? and whether it would not for all time enhance the honour we desire “to render to whom honour is so justly due”—to identify with it a help in need to the less successful of our brethren in the race of life?

October 2nd, 1871.

I am, etc.,

H. F. S.

AMERICAN DEGREES.

SIR,—Would you inform an associate through the BRITISH MEDICAL JOURNAL, if a Degree of Medicine and Surgery from the Medical College, New York, entitles the party possessing it to style himself M.D. and Surgeon; and if he can legally practise medicine and surgery without fear of prosecution under the Medical Act; and if a Philadelphia Degree is of an equal status? An answer in your next issue, or at your earliest convenience, will very much oblige.

Newcastle-on-Tyne, Sept. 27th, 1871.

I am, etc.,

MEDICUS.

* * * On inquiry, we expect both would be found to be bogus Colleges, and worthless degrees. Neither degree is registerable. Our correspondent should address his query, with full particulars, to the Registrar of the General Medical Council, Soho Square, W.C.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

NITRITE OF AMYL AS A REMEDY FOR CHOLERA.

SIR,—In your JOURNAL of the 30th ultimo, Dr. Talfourd Jones suggested the use of nitrite of amyl "in the collapse and cramps of cholera." As he appears to think the suggestion has not been made before, he will be interested in learning that I published a like suggestion in 1866. At page 208 of the second edition of my work on *Diarrhœa and Cholera*, published in that year, is a paragraph headed "Nitrite of Amyl." In that paragraph will be found the following words: "This substance possesses a very remarkable quality, which has led me to hope that it may prove of great value as a remedy for cholera." And, again, after stating that "the circulation of the blood is rapidly increased to an astonishing extent" by holding to the nostrils the tip of a feather dipped in the nitrite of amyl, I add: "Its remarkable property of increasing the circulation in the rapid and astonishing manner described, causes me to think that it gives greater promise of acting as an antidote to cholera than any other medical substance yet known. I much regret that, as yet, I have had no opportunity of trying its efficacy; and I hope that those physicians who have charge of cholera patients will carefully test its value." London, October 3rd, 1871. I am, etc., JOHN CHAPMAN, M.D., M.R.C.P.

OVARIOTOMY.

SIR,—This operation is now becoming so common that I should not attempt to occupy either your time or space with its consideration had I not seen Mr. Russell's case reported in your impression of September 23rd. The report states that "the woman was dressed with lint soaked in *equal parts* of carbolic acid and glycerine... during the after part of the day of operation, the patient complained of very acute abdominal pain, for which opium was administered freely by the rectum in the form of tincture, and suppository combined with belladonna, but without alleviation. Hypodermic injections of morphia quickly gave relief, and they were repeated twice or thrice daily for ten days."

I have myself used carbolic acid as a dressing for some time. At first, my anxiety prompted me to use what I now call a strong preparation—carbolic acid one part, glycerine two parts, and water five parts; and the result was such as Mr. Russell has recorded—"acute abdominal pain," though in a less degree, not calling for the hypodermic injections of morphia two or three times daily for ten days. I have found a suppository of 15 grains of compound soap pill, two or three times repeated, sufficient to control the pain. I am therefore disposed to think that the dressing in Mr. Russell's case had *something* to do with the production of the "acute abdominal pain." In my last case, operated on July 19th, assisted by Drs. Barnes and Aveling, and Mr. M. W. Chambers, I used as a dressing carbolic acid one part, glycerine two parts, tincture of opium four parts, water to forty parts. Lint soaked in this compound was placed over the wound as soon as closed, and kept on by adhesive plaster, over which was placed a *thick* layer of cotton wool, and secured by a flannel bandage and carpet pins. A suppository was passed into the bowel, and the patient put to bed. She was much exhausted; pulse 150; no pain beyond the smarting in the wound, which passed off in a few hours. The dressing was repeated every morning; perfect union by the first intention by the fifth day; no smell or discharge from the first. This form of dressing is simple, clean, sedative, antiseptic, light, and sufficient under ordinary circumstances. I regard opium as a valuable adjunct to carbolic acid as a dressing for such wounds. Should Professor Lister's views be correct as set forth in his address at Plymouth, cotton-wool will ere long hold an important place in the "bag" of every ovariotomist. In my case, the whole abdomen, from the upper part of the thighs to the breast, was thickly covered with it, and the result was most satisfactory. The wound was perfectly united on the fifth day, several days before Mr. Lister's address was delivered. Perhaps I may state that in this case the disease had been slowly progressive for upwards of four years; that the weight of the tumour when removed was thirty-two pounds; that the powers of life, from the combined influence of pressure, sleeplessness, and constant vomiting, had been reduced to a very low ebb. In order to show that it was not a specially favourable case selected for the illustration of any special form of treatment, the chief articles of diet were milk, eggs, and mutton, with the smallest possible quantity of stimulants; one grain of quinine, three times daily, from the first, with twenty grains of chloral hydrate at bedtime every night, were all the medicines necessary throughout. I am very strongly inclined to the opinion that the less we dress and physic ovarian cases, the better the results. Apologising for troubling you at so great length, I am, etc., THOMAS CHAMBERS, F.R.C.S. Ed. 2A, Sutherland Street, S.W., September 1871.

EFFECTS OF BROMIDE OF POTASSIUM.

DR. JULIUS LEVY, of Berlin, writes:—"In private and public practice I have frequently and for a long time ordered bromide of potassium in drachm-doses or more thrice daily. If continued for months, it is apt to produce (as I believe) a series of boils. If, however, a fair dose of some preparation of cinchona be given with the bromide, I have then never seen any boils or other evil sequelæ arise."

GRATUITIES TO VACCINATORS.

SIR,—I see in the JOURNAL of to-day, at page 359, mention of Government Gratuities to Public Vaccinators. Would you kindly let me know how such gratuities are to be got, as I have been lately appointed Public Vaccinator to this district? September 23rd, 1871. I am, etc., VACCINATOR.

* By strict attention to the Rules for Vaccinators of the Medical Department of the Local Government Board, and by careful vaccination, so as to show good "results".

THE TANNER SCHOLARSHIP.—This proposed memorial was referred to in our issue of August 19th. We are requested to state that the Scholarship will be open to all the Medical Schools in London; and that a Committee is being formed to lay the matter further before the public and the profession. In the mean time, we are asked to mention that Dr. Percy Boulton, in answer to a circular issued amongst some of the patients of the late Dr. Tanner, has received sums amounting to £130:13:0.

THE SOAP AND IODINE LINIMENT OF THE PHARMACOPŒIA.

SIR,—Can any one of your readers inform me whether he ever compounded or purchased the linimentum saponis cum potassii iodido of the *British Pharmacopœia* (1867)? If so, whether he weighed it, or measured it, or succeeded in putting it into a bottle or a pot, or mixed it with anything solid or liquid? If he repeated his experiment either of compounding or purchasing, did he get the same thing, or anything like it? I am, etc., A. SLOWMAN.

DR. EDMUNDS' letter shall appear next week. It is somewhat lengthy, and he will observe that our space is this week subject to great pressure.

UMBILICAL EXCRESCENCE IN AN INFANT.

SIR,—A case similar to the one related in the JOURNAL of September 23rd, occurred in my practice a few months ago. The child, a healthy one, three years of age, had suffered from its malady since it was fifteen months old, and the mother assured me there had been more or less bleeding every day. It was bleeding freely the first time it was brought to me.

Having applied such remedies as I thought suitable for the case—viz., nitrate of silver, perchloride of iron, etc.—but without avail, I resolved to tie a ligature round it. The growth came off on the fourth day. It required no further interference; and there has not been the slightest inconvenience since that time.

I am, etc.,

J. EDWIN SCOWCROFT, L.R.C.P. Ed., etc.

Bolton, September 26th, 1871.

THE O. W. FUND.

SIR,—Having only just seen, since my return from France, your kind corroboration of a letter addressed by my friend Dr. Lavies to the *Medical Times and Gazette*, on my behalf, I beg you will allow me, through your JOURNAL, to express my gratitude to all those contributors whom, through ignorance of their names and addresses, I have not been able to thank either personally or by letter. September 26th, 1871. I am, etc., O. W.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Gateshead Observer, Sept. 30th; The Bath Chronicle, Sept. 28th; The Birmingham Morning News, Oct. 2nd; The Liverpool Albion, Oct. 2nd; The Weston Mercury and Somersetshire Herald, Sept. 30th; The Bradford Observer, Sept. 30th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. F. Le Gros Clark, London; Dr. H. Charlton Bastian, London; Dr. William Carter, Liverpool; Mr. A. Allen, Sheffield; Dr. Markham, London; Dr. Orton, Beeston; Dr. G. H. Philipson, Newcastle-upon-Tyne; Dr. Basham, London; A Member; Mr. H. E. Armstrong, Newcastle-upon-Tyne; Mr. R. S. Fowler, Bath; Dr. J. H. Aveling, London; Dr. Edmunds, London; Dr. G. M. Brumwell, Mossley, Manchester; The Secretary of the Royal Medical and Chirurgical Society; Dr. Percy Boulton, London; Mr. Arthur Andrews, New Southgate; Mr. John Morgan, Waters Upton, near Wellington; Mr. Rushton Parker, Liverpool; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. G. F. Hodgson, Brighton; Dr. B. W. Foster, Birmingham; Mr. Henry Lock, Dorchester; Dr. John Chapman, London; The Secretary of the Medical Council; Dr. Rutherford, London; Dr. A. Meadows, London; Dr. Little, London; Dr. F. J. Brown, Rochester; Mr. Jabez Hogg, London; Dr. Brown, Coventry; Dr. Thos. Chambers, London; Mr. Christopher Heath, London; H. F. S.; Dr. Green, London; Surgeon-Major Atchison, Tenby; Dr. Taylor, Cardiff; Mr. H. H. Spencer, Clifton; Dr. Julius Levy, Berlin; A Vaccinator; Dr. W. Erskine, Kincardine; Dr. Hogg, Royal Artillery Institution; Dr. Chadwick, Leeds; Mr. Wheelhouse, Leeds; Mr. Knipe, Melbourne, Derbyshire; Mr. Dawson Turner, D.C.L., Liverpool; Mr. Jessop, Leeds; Mr. Charles Roberts, London; Dr. Daniel Moore, Upper Norwood; The Secretary of the Clinical Society; Dr. Barkas, Newcastle-upon-Tyne; Mr. C. S. Webber, London; Dr. Russell, Birmingham; Dr. Siordet, Mentone; Dr. Styrup, Shrewsbury; Dr. Nankivell, Torquay; Mr. A. W. Tomkins, Leamington; Mr. Ernest Trestail, Harston; Mr. A. W. Nankivell, Rochester; Dr. A. Wynn Williams, London; Dr. A. E. M' Rae, Fettercairn; Dr. T. H. Green, London; Our Manchester Correspondent; etc.

BOOKS, ETC., RECEIVED.

Mysteries of the Vital Element in connection with Dreams, Somnambulism, Trance, Vital Photography, Faith and Will, Anæsthesia, Nervous Congestion and Creative Function. Modern Spiritualism explained. Second Edition. By Robert H. Collyer, M.D. London: 1871.
The Fourth Report of the East London Hospital for Children and Dispensary for Women, Ratcliff Cross. London: 1871.
The Twenty-Second, Third, and Fourth Reports of St. Mark's Ophthalmic Hospital and Dispensary for Diseases of the Eye and Ear. London: 1871.
Epidemic Cholera. By E. A. Fitzgerald. London: 1871.
On an Aspirator for Use in Thoracentesis, invented by Dr. Vald. Rasmussen, of Copenhagen. By John William Moore, M.D., Ch.M.Dub. Dublin: 1871.
A System of Medicine. Edited by J. Russell Reynolds, M.D., F.R.S. Vol. III. London and New York: 1871.
Organic Philosophy. Vol. III.—Outlines of Biology: Body, Soul, Mind, Spirit. By Hugh Doherty, M.D. London: 1871.
A Digest of Facts relating to the Treatment and Utilisation of Sewage. By W. H. Corfield, M.A., M.B.(Oxon.) Second Edition, corrected and enlarged. London and New York: 1871.
On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys; also in certain other Disorders. By Thomas Clifford Allbutt, M.A., M.D.Cantab. London and New York: 1871.
Pulmonary Consumption: its Nature, Varieties, and Treatment. By C. J. B. Williams, M.D., F.R.S., and Charles Theodore Williams, M.A., M.D.Oxon. London: Longmans. 1871.
Report of the Building Committee of the Prudhoe Memorial Convalescent Home, Whitby, North Shields; with a Statement of the Accounts and List of Subscriptions. Newcastle-upon-Tyne: 1871.
The Co-Relations of the Kingdoms of Nature, Providence, and Grace. A Lecture, by John Morgan. Cardiff: 1871.

CLINICAL LECTURE

ON THE

PROPER CHOICE AND ADJUSTMENT OF TRUSSES.

Delivered at King's College Hospital, May 25th, 1871.

By JOHN WOOD, F.R.S.,

Surgeon to the Hospital, and Professor of Surgery at the College.

GENTLEMEN,—In the practice of your profession you will find that the sort of practical knowledge which I propose this day to inculcate is that of the most useful, and even necessary, kind. Not only will it be useful to those whose comfort and lives will be in a considerable measure dependent upon your knowledge and care, but it is also necessary, in the present day, to insure your passing your examinations for legal qualification; for it will not only be incumbent upon you, as medical practitioners, to diagnose that your patient has a rupture, and that his ailment is not really one of the many which may resemble closely, and be mistaken for, that disease, and which would be made worse by wearing a truss. It will not be sufficient for you to say to your patient, "You must go to so and so, an instrument-maker, and get a truss." To do your duty by him you must know what kind of truss he should wear, and ascertain whether it is properly fitted, thoroughly effective, and suitable for the kind of rupture with which you have to deal. Too commonly all this kind of care is committed, without check, to the instrument-maker, who may be guided entirely by a mechanical rule of thumb, or may be interested in getting sold a particular kind of truss, in which he has an interest as a matter of business, and which gives him the least trouble in fitting, as expeditiously as if it were a pair of ready-made shoes. If your fortunes place you in a part of the country where trusses are not easily obtained, and your patient cannot leave his home, you may be required to decide not only upon the shape and strength, but to take the proper measurement of the truss which he is to wear. Like every other sort of professional knowledge, this must be obtained beforehand, perfected and put by for use, while your anatomical skill is still fresh and ready to hand. Now in a truss there are two principal parts which require separate consideration; viz., (1) *the pad* which communicates the pressure directly upon the hernial opening and restrains the protruding tumour; and (2) *the retaining apparatus* which holds the pad in place, and applies and distributes the pressure and counterpressure. In the great majority of instances the varieties of each of these may be combined, in various ways, with those of the other; and you are not obliged to employ a particular kind of compressing apparatus with a particular kind of pad. In my opinion, the choice of the shape and material of the pad, and its adaptation to the kind of rupture, is of more importance than the kind of apparatus which is contrived to keep it in its place. This arises from its more intimate relation to the constituent parts of the rupture. I have elsewhere explained to you that in reference to the means of relief—i.e., in their practical aspect—ruptures may be divided (1) into those in which the opening in the abdominal walls is oblique or valvular, and more or less tubular, and (2) those in which it is direct and short. Again, an important consideration is whether the hernial opening normally transmits, or is in close relation to, important structures, which must be protected from any injurious pressure or other damage. Now the *oblique or external* inguinal hernia is usually valvular; and it is also, in the male, in close relation with the delicate structures composing the spermatic cord. The *femoral or crural* hernia is less effectively valvular in its formation, and it is also in close relation to the large and important femoral vessels and lymphatics. In these kinds of rupture, especially, the size and outline of the pad should correspond pretty nearly to that of the valvular hernial canal when at its greatest point of distension. In large inguinal ruptures which descend into the scrotum, and in those of the crural variety, which finally pass upwards and outward over Poupart's ligament, this shape will correspond to that of the neck of the sac when fully distended. The form of such outline, with all the angles rounded off, will be usually an oval, elliptical, or egg-shape—sometimes wider above at the deeper hernial opening, and sometimes wider below at the more superficial of the hernial apertures; but most frequently, in oblique inguinal ruptures, widest in the middle opposite the dilated canal.

In ruptures of the direct non-valvular kind, such as the direct inguinal, umbilical, ventral, and some others, of which, being uncom-

mon, I have scarcely opportunity on this occasion to treat, the opening is usually either round or oval; in the latter case, the long diameter is more or less vertical, usually, in the direct inguinal and ventral varieties, and more or less horizontal in the umbilical variety.

Next, the shape of the surface of the pad which is placed on the skin is important. To understand properly the force of my remarks upon this point, it will be necessary to recall to your minds the shape and other peculiarities of the different hernial openings. In oblique inguinal hernia we have the deeper opening, oval or round in shape, placed external to, and somewhat above, the superficial one; or, to be more precise, a little above, and internal to, the centre of Poupart's ligament. The superficial opening is bounded laterally by two strong bands of aponeurosis, the inner and outer pillars of the ring; and these are held together, more or less strongly, at the upper part of the intercolumar or arciform bands, which convert its otherwise triangular shape into a more or less elongated ovoid. Placed behind this opening is the conjoined tendon of the internal oblique and transversalis muscles, blended with the fascia transversalis and the triangular aponeurosis; forming internally the sheath or covering of the rectus abdominis muscle, the outermost part of the lower tendon of which is placed opposite to, and covers behind, the lower end of the superficial abdominal ring. Now, these united fasciæ form the deeper side of the valvular arrangement of the inguinal canal, by the forward pressure against which, exercised by the abdominal contents when compressed by the diaphragm, transversalis, and rectus muscles, the canal is shut up by contact with the external oblique tendon, and closed against the protrusion of the viscera in the normal condition.

In the truss treatment of oblique inguinal rupture, we meet with an instrument such as the one I show you, which presses, by means of an elevated and highly convex pad, the superficial wall or coverings of the rupture deeply into the abdomen, carrying the hinder wall before it, and depressing all these tissues into a cup-shape, with its highly convex exterior outline turned towards the abdominal cavity. The inevitable effect of this is to open up the superficial aperture, to stretch, spread out, and weaken, the fascial textures, and to destroy the valvular action of the deeper or hinder wall of the canal by inverting its normal curve. A rupture which has been subjected long to such a pressure inevitably becomes larger in process of time, although it may never be suffered to descend. Its hernial openings have, in fact, been enlarged by the plugging action of the truss-pad constantly exerted upon it, in the same way, though inverted, as the pressure made from within by an unreduced rupture.

In the region of crural hernia, the deeper opening or crural ring is placed almost horizontally, while the superficial one—the saphenous opening—looks forward, and a little inwards and downwards, both being in shape more or less round or oval.

The anterior wall of the crural canal is very short, and is formed by the union of the femoral sheath with the band of fascia lata, constituting the so-called Hey's or femoral ligament, continuous with the upper horn of the saphenous opening. The hinder wall is longer, and is formed by the femoral sheath, supported by the pectineus muscle and pubic portion of the fascia lata. Here there is no true valve-action resisting protrusion of the abdominal viscera; but, in hernial conditions, the front wall may be pressed against the hinder wall by a well-fitting truss, so as to afford a sort of substitute for such an action. Here, again, if the truss-pad be highly convex, and press into the saphenous and crural openings with anything like the force sufficient to keep up a rupture, it gradually forces more and more open the hernial apertures, and causes the rupture to become larger and larger, even when it does come down.

In direct inguinal, and also in umbilical and ventral ruptures, the hernial opening is a direct and immediate communication with the abdominal cavity, and is covered only by skin and some layers of yielding fascia, which constantly give way before the pressure of the bowels.

By the use of truss-pads, which press into this opening as a cork does into the neck of a bottle, the aperture, being elastic and yielding, is of necessity made larger and larger by the constant inward pressure of the pad. Hence arises the common complaint of patients that, in spite of the constant use and careful adjustment of the truss, the rupture, instead of becoming cured by the closure of the opening, becomes larger, and requires a larger truss-pad each time a new one is required.

Outline and Surface of the Pad.—The best kind of surface to prevent this inward plugging of the cutaneous tissues into the hernial opening is one of which the general surface is flat. Of course I do not mean that the edges are not to be well rounded off, but only that the bearing should be level at the sides, and rather more resisting there than in the central axis.

In oblique inguinal hernia, the shape of the neck of the rupture, where the tumour is lost in the abdominal wall, is more or less moulded by

the form of the inguinal canal, and assumes a somewhat cylindrical shape, sometimes increasing in diameter towards the upper or lower opening, so as to be of a funnel-shape, and not unfrequently becoming dilated in the middle of the canal, in cases which have remained in the condition of a bubonocoele for some considerable time.

The best general outline of pad to meet and retain this is an oblique oval, which should be large enough to overlap the limits of the dilated canal for at least half an inch each way. In this kind of hernia, in the male subject, I prefer a pad of a horseshoe-shape, in which a cleft or opening is made at the lower end of the oval large enough to allow the spermatic cord and pubic spine to lie in it, and thus escape compression. From the loose nature of the attachments of the cord at this point it readily adjusts itself to the chink in the truss, and the ends of the horseshoe lie on each side of the pubic spine, and embrace the hernial opening like the fingers of a hand. For direct inguinal hernia I prefer an ovoid or rounded pad, which has a depression or hole in the centre, to insure against any plug-like action. The bearing of this pad, therefore, is like that of a ring placed upon the body and overlapping the hernial aperture half an inch each way. The same ovoid shape, modified by placing its long axis in the same direction as that of the hernial opening, I use also in umbilical hernia. But, it may be objected, this opening in the pad will permit the rupture to pass into it, and so fail partially to retain it. Experiment shows, however, that with a hole so small, and with margins so broad pressed upon the skin and covering the tissues, the latter are kept stretched across the aperture in the muscles and tendons beneath them so firmly that no escape or protrusion whatever can take place through it.

For femoral hernia, I use a pad which is shaped to the anatomical peculiarities of the saphenous opening and crural ring. It is of an egg-shape, with the long diameter vertical and the broader end uppermost. The lower end is sloped off on its bearing surface more than the upper, which latter is intended to bear upon the crural ring, through which the rupture first descends.

Material of the Pad.—This is a matter of much importance, and must vary according to the sensitiveness of the patient or the object sought after. Most patients, after trial, prefer a smooth and even pressure from a hard yet somewhat elastic substance like ivory or vulcanite. If the object be a radical cure, which is sometimes to be obtained by truss-pressure, a hard firm pressure is essential. For the cheaper kinds of truss, boxwood is a good material. Like ivory and vulcanite, it can be washed and rubbed daily, and kept free from the dirt and irritating matters accumulated by perspiration. Ivory, vulcanite, or metal silvered over, is usually the most cleanly and comfortable substance to wear constantly next the skin. But some patients cannot bear this hard pressure. For such cases a soft pad must be used, such as the substance called "moc-main", enclosed in soft wash-leather; or, better still, a water- or air-pad made of India-rubber, and covered with silk or wash-leather. These substances have the merit of ready and even adjustment to the shape of the resisting tissues, and a more effective adaptation. They should, however, be prevented from assuming the shape of a cone or plug, by being fastened down or depressed in the centre, or near the lower end of the oval, so as to give them a ring or horseshoe bearing.

For umbilical and some forms of ventral rupture, a cylindrical piece of vulcanised India-rubber, bent round into an ovoid ring, and the aperture covered on the side next the skin by a thin membranous piece, answers very well. The pressure is thus made upon the margins of the hernial aperture, fulfilling the double purpose of preventing the escape of the bowel through the opening, and of tending to close the aperture through which the rupture escapes. They thus become a more efficient means of curing the rupture, as well as a means of restraining protrusion.

The Retaining Apparatus.—To keep the pad in its place and to maintain a proper amount of pressure, two chief means are used; viz., the side-spring and circular straps or elastic bandages. Of these it may be said that some modification of the former has been found most useful or essential in inguinal and femoral ruptures, while the latter are most used, and are certainly most generally applicable, in umbilical and ventral ruptures.

Again, there are two kinds of side-springs in use. The more common one passes round the body for four-fifths of its circumference, one end pressing upon the centre of the pad, and the other being continued by a strap which is fixed to a stud placed at the middle, upper, or lower, end of the pad. In the other kind, the spring (used by Salmon and Ody) passes rather more than half round the body, bearing behind upon the spine by means of an oval or circular padded disk which carries the counterpressure. In the first kind, the counterpressure is borne by the whole of the back portion of the spring girdle. In Salmon and Ody's application the side-spring is placed on the side opposite to the rupture,

and passes across the median line in front of the abdomen to reach the hernial protrusion, to which it is supposed to give an upward and outward, as well as a backward, push. This sort of direction of the pressure may, however, be given equally by the all-round spring, and depends upon the modification of the adaptation of the curve of the spring to that of the body. Many patients find the crossing of the body by the spring in front to be an objection; this, however, is in some cases the best kind of spring to wear.

The all-round spring, in a single rupture, should reach for three-fourths of the way round the pelvis, the remaining fourth being occupied by the strap which connects the free end of the spring with the pad. It should have a level and even bearing round the hips, on a level behind with the anterior superior iliac spines, which corresponds roughly with the upper border of the gluteus maximus muscle. In the median line behind it should rest evenly upon the muscles, covering the upper part of the sacrum above the level of the posterior superior spinous processes of the ilia. It will then fall into the deep groove which is formed between the trunk and spine when the patient sits down, and will not be pushed up or depressed by the more frequent and usual changes of position between sitting and standing. Its end should neither stick into the patient's body nor project too much outwards.

A double truss, with a pad at both ends, is more likely to retain its position equably than a single one, by reason of its double bearing and increased hold upon the body. It is, for this reason, usually more comfortable also to wear. In all cases, therefore, in which a suspicion of, or tendency to, rupture exists on both sides, a double truss should be worn; and it would be well, on account of the frequency with which a rupture on one side is followed by one on the other side also, if a double truss were worn more frequently than is usually the case.

Now there are two practical difficulties in the proper fitting of a truss, which are very much increased when the patient is at a distance from the instrument-maker, and cannot be seen and fitted a few times in the process of manufacture. One is, to adjust the degree of force in the spring to that exerted by the abdominal muscles in forcing out the rupture: this varies in each individual, according to his muscular development and the resistance still offered by the hernial apertures; and varies even in the same individual under ordinary and extraordinary necessity for muscular exertion. The other is, the difficulty of getting the exact measurement and conformation of the patient's body.

The first difficulty is usually grappled with by the maker on the old principle of the "rule of thumb", from data imperfectly ascertained by

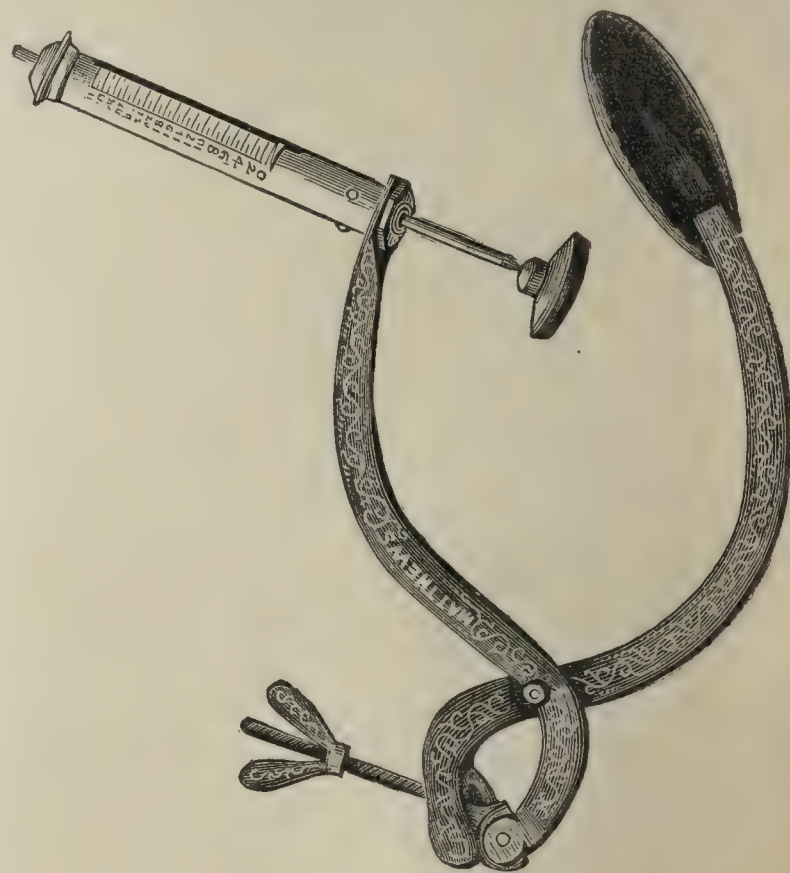


Fig.—Pressure-gauge for Hernia.

the degree of resistance to his muscular sense. This cannot, however, be communicated by the patient or his medical attendant from a distance. Attempts to do so usually terminate in lamentable failure. I have been enabled, by means of a pressure-gauge made for me by Matthews Brothers (Fig.), to ascertain to a nicety the force exerted by the rupture

both on ordinary and extraordinary occasions, and to measure in pounds weight the force of the rupture.

The instrument consists of a clamp on the principle of the Signoroni's compress, with two arms turning on a hinge, and moved by a screw. The gauge is placed horizontally like a truss upon the patient, on the side of the rupture. The hinder arm terminates in a pad which fits upon the sacrum; and the front one carries a cylinder, in which a piston is acted upon by a spiral spring, and carries, upon a ball-and-socket joint, a pad to rest upon and cover the hernial aperture. A vernier marks upon the outside of the cylinder the force in pounds and ounces required to hold in the rupture. An exact measure of strength can thus be sent for the guidance of the instrument-maker.

If the ordinary avocations of the patient do not call for occasional great exertions of muscular power, one truss, the strength of which is enough to retain the rupture under the greatest likely pressure, is sufficient; but if, as often occurs in the labouring and more active classes of society, the work of the patient be apt to call frequently for great efforts, the best way is to have a working truss of greater power, and also an ordinary truss, of less but just sufficient power, to wear when at home and in comparative rest. Attempts to combine the two by means of an additional or *rider* spring or a thicker pad, and thus to increase the pressure of the front end of the side-spring upon the rupture, are apt to fail, if the force of the intermitting exertion be very much greater than the ordinary power exerted by the patient. If it be not so, a truss can be made and worn comfortably, to meet successfully the occasional as well as the usual force. In all such cases, previous preparation must be made to meet a force which frequently comes unexpectedly and without warning.

To meet the last mentioned difficulty in fitting a truss, the measurements must be made with great accuracy and completeness, and upon a well conceived and simple plan. According to the variations in the conformation of the pelvis and hips, the position of the hernial aperture in inguinal and femoral rupture varies in relation to the sacrum and wings of the innominate bone. This is especially the case in femoral hernia, which is notoriously more difficult to fit and retain than the inguinal variety. First of all the girth of the hips, beginning and ending at the rupture, and carrying the measuring tape round the pelvis just below the level of the superior iliac spines, should be carefully made, and repeated once or twice for the sake of accuracy. (See Fig. 1, along the line *a, c, d*). Thirty-six inches is the medium girth, thus taken, in the adult male; and thirty-seven inches in the female. The limits of variation in either direction are usually about two inches. Then the distance of the middle of the hernial aperture (at *c*) from the most prominent part of the lateral aspect of the hips (at *a*) should be taken along the line *a, c*. This will differ with the stoutness and muscularity of the patient, and especially with the development of the

of the twist necessary to be impressed upon the spring in order to give the pad a flat bearing and the disposition best adapted to resist the downward pressure of the rupture, a piece of string, with a plummet or bit of lead attached to it, should be held by the patient, suspended from the level of the line connecting the spinous processes of the ilium, directly above the point of rupture (at *a*, Fig. 2). The distance at which the plumb-line hangs from the surface of the body at the point of rupture (at the line *b, c*), measured by the surgeon, will give the amount of projection of the abdomen and the slope of the surface upon which the pad must rest.

In difficult cases of double rupture, where there is a tendency for the hernia to escape on the inner side of the pads, I have found the best results from the use of a cross-strap made of an arch of steel, and fastening upon the stud of each pad, instead of a leathern strap. This brings the power of both ends of the spring to bear upon each pad, and combines the forces into a complete and powerfully resisting circle of steel.

In some difficult single cases of large direct hernia, a similar arrangement may be brought to bear upon the single pad on the ruptured side, or, in other very large cases, upon a twin pad, both halves of which bear upon the hernial opening.

Some cases will do better with a spring the curve and play of which is so constructed that it does not press inward upon the abdomen beyond its normal surface, while it effectually resists any outward impulse or elevation of that surface.

In large cases of umbilical or ventral rupture in corpulent adults, three girth-measurements should be taken—viz., one opposite the centre of the hernial opening, another at the upper part of the projecting abdomen, and a third round the loins at the same point where the all-round measurement for inguinal rupture is taken. This will enable the maker to estimate the vertical curve of the abdomen, which is usually marked in these cases. In children, the middle of these measurements is usually sufficient.

CLINICAL MEMORANDA.

TWO CASES OF SEVERE CHOREA RAPIDLY CURED BY ARSENIC.

A GIRL and a boy, afflicted with chorea to a severe degree, have been lately under my care at the Eastern Dispensary, Bath.

The girl is thirteen years old, and lives at Colerne, a village eight miles distant. She came to me first on April 19th, 1871. The action of the bowels was very sluggish, and menstruation had not appeared. I ordered a supply of medicine for ten days, consisting of some calomel and scammony powders, and three drops of the liquor arsenicalis in orange-flower water four times a day, after food. On April 29th, although the bowels had been freely moved, there was scarcely any improvement in the convulsive symptoms; and I lay emphasis on this fact, because it might otherwise be thought that the mere evacuation of the bowels was the cause of the ultimately favourable result. She was told to continue the medicines. On May 13th, the improvement was so considerable that she could walk and talk without difficulty; and on the 27th she could work well with her needle. On June 10th, she seemed quite well; but I recommended her to take two doses of the mixture daily for another month. When I last saw the girl, which was about a week ago (August 18th), the recovery was complete.

The boy is eight years old, and lives in Bath. The symptoms were not nearly so grave, but they had defied various kinds of treatment. The bowels acted in the same imperfect way; and so, when he came under my care on June 14th, I began with the same medicines, except that three drops of liquor arsenicalis were administered only three times a day. The favourable progress of the case was equally uninterrupted, and the child seemed perfectly well by the beginning of August.

In neither instance was there any history of rheumatism. In the case of the girl, there was an obscure legend that she had been "frightened" once.

It is rather remarkable that systematic writers do not lay more stress on the treatment of chorea by arsenic. My therapeutic habit in cases of chorea is always to try arsenic first. The eminent authorities of Pereira, Chambers, and Begbie, can be quoted as strongly in its favour. It is a remedy which, within specified limits, can do no possible harm; and the exceeding tolerance of children for this medicine is particularly worthy of recollection.

JOHN K. SPENDER, M.D.Lond., Bath.

FIG. I.

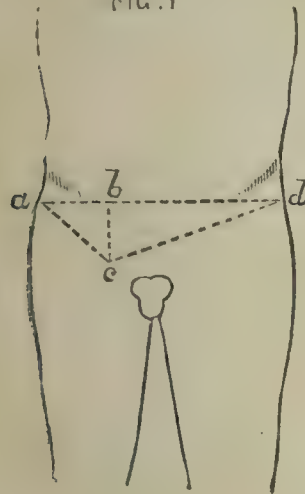
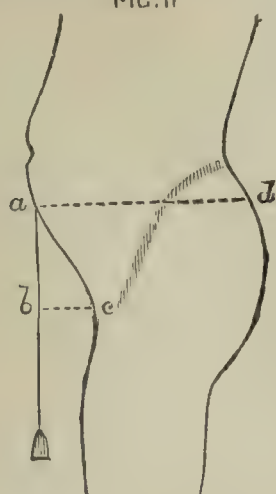


FIG. II.



tensor vaginae femoris and glutei muscles, which, during walking, are very apt to alter the bearing of the truss by swelling out. It does not depend upon the form of the bones or the position of the anterior superior iliac spine, so much as upon these more superficial parts. Finally, the vertical distance between the centre of the hernial aperture at *c* and a horizontal line connecting the anterior superior iliac spines should be taken at the point *b*, and carefully measured from ink-marks previously made.

There is yet another point which must be attended to if complete success is looked for. According to the degree of stoutness of the individual will be the projection of the abdomen at the hernial region, and the degree of inclination of the surface upon which the truss-pad must rest. To measure this inclination, and to guide the maker to an idea

EXCISION OF THE SCAPULA.*

BY CHARLES STEELE, F.R.C.S.,

Surgeon to the Royal Infirmary, Bristol.

CHARLES BEES was brought to the Bristol Royal Infirmary in April last on account of a large swelling on the right scapula. The history which his mother gave was that there had been slight swelling for six weeks, but it had attracted little attention until three weeks previously, when it began to enlarge rapidly, and for a fortnight past had been accompanied by shooting pains in the part and neighbourhood. The child had also lost flesh during the last two weeks, and presented a rather delicate appearance.

The tumour occupied the whole surface of the scapula with the exception of the inferior angle, and encroached slightly over the upper border towards the clavicle, being most elevated in the situation of the spine of the scapula. In appearance it was very like a large cold abscess; and the sensation conveyed to the fingers was highly elastic in part, but in most of its surface indistinguishable from the fluctuation of pus when bound under tense tissues. He was able to move his arm freely, being embarrassed in action only in raising the limb from the side by the projection of the tumour towards the clavicle and shoulder-joint. He took food well. I watched the case for three days, and perceived very rapid increase, especially upwards towards the clavicle. I then made an exploratory opening in the centre. No pus escaped, and a probe introduced passed easily in various directions through the tumour. A particle removed and placed under the microscope showed large, almost square cells, filled with a number of smaller ones.

The next day I held a consultation with my colleagues, and we decided on excising the scapula with the tumour, leaving the question of the removal or not of the whole superior extremity until we could ascertain at the time of the operation the extent of the tumour, and what parts it involved or infiltrated. We all felt that the tumour was encephaloid; but a suggestion having been offered that deep-seated strumous abscess of bone sometimes presents a similar appearance, I commenced the operation by making a free incision in the centre of the tumour down to the bone, when the characteristic appearance of encephaloid disease presented itself, encysted in the muscles. I then made two free elliptical incisions from the upper border to the inferior angle of the scapula through the skin, embracing the previously made exploratory incision in order to avoid the possibility of infiltration. I then carefully dissected the skin off the supraspinatus and infraspinatus muscles, divided the muscles attached to the posterior border, and, having introduced my left fingers beneath the bone, slipped it from under the latissimus dorsi muscle, and, dividing the muscles attached to the anterior border, carefully released the subscapularis muscle from its cellular connection to subjacent parts, leaving it attached to the bone. We now saw that this muscle was spread over a large mass of encephaloid disease, forming a capsule to it, as did the supraspinatus and infraspinatus muscles on the dorsum. Great care was needed in the separation of the tumour along the upper border; for, though encased, it had encroached on the posterior border of the clavicle, and sent a projection under it. Evidently, in a few days more, the clavicle and its surroundings would have been involved. I disarticulated the bone from the clavicle and also from the humerus, taking care to cut the ligaments and tendons close to the latter bone, and removed the tumour entire in its muscular capsule. The suprascapular, posterior scapular, and subscapular arteries and one muscular branch were secured; the edges of the wound were brought together with horse-hair sutures and strapping; a large compress of cotton-wool was bound on, while the arm was bandaged down with the elbow separated from the side by a pad of wool, and the forearm and hand laid across the chest. Considering the amount of surface exposed, and the nature of the tumour, little blood was lost.

On examining the tumour after removal, we found it entirely encased in the supraspinatus and infraspinatus muscles posteriorly, and the subscapularis anteriorly, occupying the supraspinous and infraspinous fossæ on the dorsum, rising higher over the spine. It was firm in a small portion, but softened in greater part; and at one prominent point had burst through its envelope. The disease formed on the venter of the scapula a large flat mass, of firm consistence, and projected in smaller masses above the superior border.

The patient had a dose of opium soon after the operation, and went well through the remainder of the day. Next day, his pulse was 150; temperature 101.2 in the morning, rising to 102.4 at night, at which point it remained for two days and a half; it then became variable till

the ninth day, from which day until the twentieth there was a marked evening increase, which increase diminished steadily from four degrees to one. From this date the temperature became and remained almost normal. During this time the pulse varied from 108 to 144, being greatly affected by excitement and external influences. His appetite soon returned after the operation; he did not complain of any pain, expressed himself feeling well, and improved in appearance steadily. Two days after the operation, there was promise of union in the centre of the wound, and thin pus escaped from the lower part. Next day, the pus was healthy and abundant. On the fourth day, the wound was gaping, and showed pink granulations over the surface. The head of the humerus was visible. The ligature that had been placed on the muscular branch was removed.

In the course of the next week, the other ligatures came away. The granulations became healthy, and discharged pus copiously; therefore, on the twelfth day, I had the surface dressed with chalk ointment, and ordered small doses of perchloride of iron mixture. The cavity filled up by granulation steadily; the head of the humerus, from which the cartilage gradually disappeared, was covered over; and cicatrisation proceeded steadily from the edges. Action, after a short time, becoming rather languid, was restored by a more stimulating dressing of diluted red oxide of mercury ointment. Three weeks after the operation, a small abscess formed near the upper extremity of the wound, but, on being opened, gave no further trouble. The boy was soon afterwards able to sit up; then to keep up all day, move about the ward, and go into the garden daily. He gained flesh and lost his delicate appearance, his appetite meanwhile never flagging. There was every prospect of the wound being soon entirely healed, and his returning home restored to health; when, just seven clear weeks after the operation, his appetite flagged a little; his face lost its healthy look; and, two days afterwards, two small firm nodules were perceptible—one near the centre of the remaining wound, the other towards the axilla. I gave him chloroform, and excised these: the former was of the size of a marble; the latter was flattened and burrowing, of the size of a five-shilling piece. In removing this, the intercostal muscles were cleaned. These were distinct masses of encephaloid; but, though all present felt that I had removed each mass entire, and the surface left gave a natural sense to the touch, we could but anticipate, from their infiltrated character and the fact of their recurrence, that disease would again show itself. After slight feverish excitement, the patient improved again, and the wound took on healthy action; but, a fortnight afterwards, a distinct small rounded mass sprang up under the skin, a clear inch from any of the wounded part, between it and the spine. I again prepared to remove this; but, when he was brought under the influence of chloroform, on careful examination we felt the whole of the central and lower portion of the wound to be so infiltrated, giving a springy elastic feeling to the touch, and having suddenly taken on a greyish appearance, that I was compelled to retire defeated, and leave disease to carry out its ravages till its victim should be released by death.

Though this case has terminated unsuccessfully in the end, I have ventured to bring it before your notice, partly from a conviction that, in serious operations and cases, unsuccessful as well as successful cases ought to be recorded, and moreover, because this case confirms the fact that extirpation of the scapula can be in itself a safe operation; but principally to point out what this case clearly showed, even though thorough healing had not occurred, that, after removal of the entire scapula, leaving the humerus no glenoid cavity for articulation, a remarkable degree of use may be preserved in the upper extremity. From the first I supported the forearm by strips of plaster extending from the chest to the abdomen, leaving his hand free for movement, in which he indulged without pain throughout—in fact, often needing to be restrained from using it too much. I introduced a pad of cotton-wool between the elbow and side, so that, if the upper arm had become fixed, the elbow might be about three inches from the side, to allow clothes to be put on, and the forearm to enjoy free play; though at the same time I fully anticipated that tolerably free motion, certainly forwards, of the upper arm, would be preserved; for, as I said in answer to frequent inquiries on the point, I expected the head of the humerus to make a surface to work upon, and become attached to surrounding parts, as bones do in unreduced dislocations; whilst forward movement would be fully preserved, and backward could be compensated for by a figure-of-eight support from shoulder to shoulder. I encouraged gentle movements from the time when the head of the humerus was covered, and found that in about a month the forearm could be well prevented from falling; and, just before disease returned, Bees could use his forearm pretty easily, draw his arm well forwards by the pectoral muscles, keep it a little distance from his side by the anterior portion of the deltoid, and draw it backwards, not by simple gravitation after being drawn for-

* Read in the Surgical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

wards, but by the action of the latissimus dorsi, which, being free from disease, had slipped off the inferior angle of the scapula at the time of the operation.

It having been decided to save the upper extremity, upon finding all its muscles free from disease, it was a satisfaction to see ultimately that all the disease which recurred was in parts which would have been left even had the whole limb been sacrificed.

Observation has convinced me that encephaloid is the form of cancer most to be dreaded for returning after removal; yet, from this case in my own experience giving such great promise till, almost two months after operation, disease again showed itself, and from other recorded cases, I should not hesitate to urge, in a similar case, the same operative procedure, and to entertain hope, not only of removing disease, but of preserving a remarkable amount of use in the injured member.

[P.S. The patient died in the middle of September.]

ON THE TREATMENT OF STONE IN THE FEMALE BLADDER.*

By CHRISTOPHER HEATH, F.R.C.S.,

Surgeon to University College Hospital and to the Hospital for Women.

THE occurrence of stone in the female bladder is not very common, the proportion between the two sexes being, according to Mr. Poland (Holmes' *System of Surgery*, vol. iv), one in the female to twenty or twenty-three in the male. The same author remarks that "statistics respecting stone in the female, the operation and its consequences, and the mortality after operation, are incomplete and unsatisfactory." As a small contribution towards their better elucidation, I wish to record three cases of stone in the female which have been under my care, upon each of which I operated by a different method—viz., lithotripsy, vaginal lithotomy, and rapid dilatation of the urethra—all making good recoveries.

The first case occurred in 1865, and has already been published (*Lancet*, Feb. 10th, 1866). The patient was a lady aged 32, who had undergone insufficient lithotripsy two years before. The stone proved too large to extract safely through the urethra when dilated with the finger, and I therefore had recourse to lithotripsy, breaking up in five sittings a stone measuring an inch and a quarter, and consisting of phosphates with a large nucleus of oxalate of lime, which required considerable force to break it into the fragments I now show. The weight of the *débris* was 245 grains=4 drs. 5 grs. The patient made a perfect recovery, and has remained well ever since.

The second case occurred this summer, the patient being admitted into the Hospital for Women, Soho. She was a widow, aged 49, who had long suffered from incontinence of urine. On examining her, I found a large calculus immediately within the urethra, and to be readily felt through the vaginal wall. Its size was evidently too great for it to be safely extracted *per urethram*; and the bladder was too irritable to admit of lithotripsy. I determined, therefore, to perform vaginal lithotomy, closing the opening immediately with wire sutures. This was done under chloroform on May 27th, when, the patient being in the lithotomy position, and the vagina rendered patent by means of a large Sims' speculum, I cut at once upon the stone through the anterior wall of the vagina from behind forwards, making an incision an inch and a half long, terminating behind the urethra. The stone was then readily grasped with a small pair of lithotomy-forceps, and extracted. It weighed 710 grains, or ten grains less than an ounce and a half; and measured 2 inches in length by $1\frac{1}{2}$, and 1 inch in thickness; and on section will be seen to consist of three angular calculi (each of which has a nucleus of urate of lime), fitted to one another in a mass of carbonate and phosphate of lime, with slender layers of uric acid. This formation is accounted for by the fact which I ascertained on passing my finger into the bladder; for there was a distinct pouch of capacity sufficient to hold the calculus, in which it had doubtless been lodged until quite recently, since the sound introduced a few days before the patient came under my care had failed to detect the stone. There was no hæmorrhage of any consequence; and I at once closed the opening with six wire sutures, passing them through the entire thickness of both vagina and bladder, and twisting them in the ordinary way. The urine was drawn off with the catheter for the first few days, and the stitches were removed at the end of a fortnight. The wound was perfectly healed at this time; but the patient had not recovered complete control over her bladder at night. This she entirely regained after using a belladonna pessary for a few nights; and, as it

was found that the uterus prolapsed on her straining, an elastic pessary was introduced into the vagina, and she was discharged on July 23rd perfectly well.

The third case was in a girl aged 11, who appears to have suffered from bladder-symptoms all her life, but who had not been sounded until she was sent to me by an old pupil in June last. I readily detected a stone, and the patient was admitted under my care into University College Hospital. On examining the stone prior to the operation, it appeared to me of a size which could be removed *per urethram* without difficulty; and this operation I proceeded to perform on June 21st. Having introduced a two-bladed dilator into the urethra, I enlarged the passage sufficiently to insinuate the little finger along a director into the bladder, and then with a pair of polypus-forceps readily grasped and removed a flat nearly circular calculus of three-quarters of an inch diameter, weighing 68 grains, and consisting of oxalate of lime, coated with phosphates. On again introducing the finger, however, I discovered that there was another larger mass of stone adherent to the upper part of the bladder, and too large to be extracted whole. Vaginal lithotomy was out of the question, on account of the small size of the parts; and I did not feel disposed to resort to the high operation, which was suggested by one of my colleagues. I therefore proceeded to break the stone down with forceps, having failed to apply a lithotrite, on account of the attachment of the stone to the mucous membrane of the bladder. By repeated efforts, and after a prolonged operation, I broke off several pieces of the stone, and at last succeeded in detaching the mass, which weighs 408 grains; this was slowly and steadily withdrawn through the urethra with a pair of small lithotomy-forceps. The nucleus of the large mass was exposed, as can be seen, and was found by Mr. Carter of University College, who kindly examined it, to be composed of oxalate of lime, the rest of the stone being carbonate and phosphate of lime. A careful washing out of the bladder brought away a quantity of *débris*, which have adhered together in drying, and weigh 80 grains, thus making the entire weight of stone removed at the operation 556 grains, or 9 drachms and 16 grains. The little patient was a good deal exhausted by the protracted operation under chloroform, and required stimulation. A linseed-meal poultice with half a drachm of laudanum on it was applied over the bladder and abdomen, and changed every four hours; and an opiate was given by the mouth. On the following day, notwithstanding assiduous poulticing, a sharp attack of peritonitis came on; but this subsided again in forty-eight hours, and from that time the patient made a good recovery. As was to be anticipated from the dilatation and laceration the urethra had undergone, the urine passed involuntarily after the operation; and, being anxious to see to what extent the laceration had gone, I put the patient under chloroform again on the tenth day after the operation. I found that the lower wall of the urethra had been torn, but was healing well; and I took the opportunity of removing from the vulva a quantity of thick vesical mucus holding calcareous matter in its meshes, which had collected about the parts; and extracted some of the same material from the bladder with forceps and a large syringe. The bladder was then washed out daily, and the patient took nitric acid with buchu. She did not recover any power over the neck of the bladder for a month after the operation, but on July 22nd was able to be up and about the ward holding the urine for an hour or more. On July 27th, she went down to Eastbourne, where she now is.

The cases narrated illustrate three different modes of treatment, respecting which I will make a few remarks. I think I may say that the old practice of slowly dilating the female urethra with sponge-tents, etc., is now entirely abandoned, since all surgeons who have had any experience on the subject agree in believing that rapid dilatation under chloroform has very great advantages over the other method. By the old method, subsequent incontinence of urine was frequently induced; whilst after the rapid dilatation such an occurrence is, I believe, unknown. I am in the habit of rapidly dilating the urethra, and of using the finger to explore the bladder, in all cases of obscure vesical disease in the female; and I have never seen any bad result follow the practice. On the contrary, I have found the method of the greatest service both in diagnosis and treatment, particularly in the case of foreign bodies. In the child whose case I have narrated, some laceration ensued, and gave rise to temporary incontinence; but this is not the case in the adult, if the dilatation be kept within proper limits. It would have, no doubt, been better, had I been able to reduce the size of the stone in the case of the girl before extracting; but in the early stage of the proceeding it was impossible to apply a lithotrite, owing to the attachment of the stone to the bladder, to say nothing of the difficulty of manipulating that instrument in the small and contracted bladder of a child. Lithotripsy in the adult female, as in my first case, is comparatively easy of performance; and the size and shortness of the urethra admit of the ready extraction of fragments which it would be very unsafe or nearly

* Read before the Surgical Section at the Annual Meeting of the British Medical Association in Plymouth, August, 1871.

impossible to withdraw along the male urethra. With respect to vaginal lithotomy, it is, I believe, the best operation in adults with large stones. Mr. Poland (*op. cit.*) speaks of it as "a very easy and expeditious operation, but one which is followed almost necessarily by vesico-vaginal fistula and incontinence." This is not the experience of Mr. J. Lane, Mr. B. Brown, Dr. Aveling, and others who have recorded cases; and in my own case a perfect result was obtained. It is, I think, important to introduce the sutures through the entire thickness of both bladder and vagina; and, if care has been taken to make a sufficiently large opening into the bladder, so that the edges of the wound may not be bruised in extracting the stone, complete union readily takes place. I have known an unsuccessful result caused by the operator occluding the urethra with one of the sutures; and I have also known death follow a very prolonged operation for the removal of a very large calculus through an utterly inadequate opening; but these results do not detract from the merit of the operation when properly and carefully performed.

Postscript.—On the return of the last patient from Eastbourne, it was found that she still had incontinence, and, on examination, the anterior part of the urethra was seen to be torn. To remedy this, the galvanic cautery was applied on three occasions with benefit, and without any interference with the patient's health. During the last week of September, however, she began to complain of great pain about the left kidney, and gradually sank, dying on October 1st.

At the *post mortem* examination, an abscess was found in the upper part of the left kidney, which had burst. The pelvis of the kidney contained a quantity of grumous pus and particles of phosphatic matter, and the lining membrane of the pelvis and ureter was thickened and injected. On cutting into the right kidney, its pelvis was dilated and filled with pus around a large branched phosphatic calculus fitting into the infundibula; its ureter was also much thickened; the bladder was healthy and contracted. The urethra was of little more than ordinary size, and showed a slight rent in the floor at the orifice. The other organs were healthy.

NOTES OF SEVEN CASES OF POISONING BY SEWAGE-WATER.

By CHARLES J. GIBB, M.D.,

Consulting Surgeon to the Newcastle-upon-Tyne Infirmary.

ON the 8th of August, the weather having been exceedingly hot for some days, I was requested to visit an establishment where several of the servants had been taken suddenly ill. I found that four female servants had become ill during the night, and were in bed; two more became affected on the following day, and a male servant had been compelled to go to bed ill of the same complaint. Six out of the eight female servants of the house were affected, and one of the four male servants.

The symptoms in all were very much alike, but a young female servant presented the worst features. She had felt some slight weariness and nausea the day before, but did not consider herself ill until during the night, when she was seized with severe vomiting, profuse dark bilious diarrhoea, and severe colic-like pains in the abdomen, followed, after a few hours, by intense tenderness at the epigastrium on pressure, and great flatulent distension of the whole abdomen. She had a red, dry, and very hot skin; rapid and bounding, but soft pulse; and a large moist tongue, coated with a fur as if yellow clay had been thickly painted over it. She had, also, some slight cramps in her legs, and that headache, back-ache, limb-ache, and general weakness, weariness, and incessant tossing about, which accompany acute feverish attacks of stomach and intestinal disorder. She constantly exclaimed she was going to die, so sinking and ill were the feelings she experienced.

These violent symptoms continued for thirty-six hours. Slight delirium set in during the second night. All the symptoms abated considerably during the morning of the second day, more as if nature had become exhausted, than as if the disease were in process of resolution; for on the third day, a fresh accession of violent vomiting and purging, with pain and distension of abdomen, and high fever recurred, lasting, however, only about twelve hours. After this relapse, all the symptoms gradually lessened in severity, slight vomiting and purging continuing for two more days. By the end of the week, she was able to digest broths and farinaceous liquids, and, although unable to sit out of bed, was carried to her own home, where she quickly recovered her strength. There appeared to be a feeling of such intense nausea all through the attack, that, even when her skin was burning hot, she did not manifest that eager desire to drink cold or iced liquid, which is so marked a symptom of regular fevers.

The symptoms of two of the other female servants nearly approached this one in severity; a fourth one had the vomiting, diarrhoea, colicky pain, and nausea in a minor degree, with only very slight fever and constitutional depression, whilst the sixth continued at work, and only felt slight weariness, nausea, diarrhoea, and loss of appetite for a few days.

On my first visit, I was convinced that all of them were suffering from one common cause of disease, most probably from some irritant food, or the effluvia of some deranged drain; but although I traversed the house, questioned the cook, and examined all the drains and water-closets, I failed to discover any cause to account for the outbreak. They all complained of having been completely worn out by very hard work during the preceding week of intensely hot weather, and of being dripping with perspiration all day long; and to this they attributed their illness. Two days afterwards, however, I discovered they had been compelled to send to a neighbouring pump for drinking-water during the hot weather, the ordinary drinking-water from the cistern of the house having become so foul, even to the smell, that they were compelled to cease using it. They had, however, according to their own account, drank it very largely even in that condition. I at once concluded that the source of the disease lay in the cistern; and on questioning the heads of the house, found that they did not know where the cistern was placed, and that it had certainly not been cleaned out for a long time. I at once sent a note to the Secretary of the Water Company, and he kindly investigated the water-supply of the house.

The cistern supplying the drinking-water was found under the floor of an upper water-closet, with overflow-pipes so placed that, when a negligent servant threw the contents of her slop-pail into the water-closet, and made it to overflow, the overflow found its way into the cistern of drinking-water. The following is an extract from the letter I received from Mr. Secretary Main, after he had completed his survey.

"It was difficult to say how much dirt was in this cistern when I examined it this morning, as the man no sooner got into it than the whole became black and greasy-looking. The water standing in a cistern only ten inches deep, and in a filthy condition, must soon putrefy. The arrangement of passing the water through such a cistern before being used, is bad; it is so small that it is of no use as a store, and it must at all times, I should think, exposed as it is to the dust and atmosphere of the water-closet, have a tendency to render the water impure. I should recommend that a cistern much deeper should be put up in a better position, or that the taps for cooking and drinking-water be entirely disconnected from the present cistern, and the supply taken direct from the main-pipes."

There can, I think, be no doubt that putrid water was the immediate cause of the illness, and that the symptoms arose from sewage-poisoning, intensified by the exhaustion of hard work, and the predisposition to such complaints which existed during the exceptionally hot weather prevailing at the time. The symptoms approached in severity those of an irritant poison. The septic influence of the putrefying agent was apparent in the intense nausea and depression. The symptoms resembled in some points a very acute or explosive attack of enteric or typhoid fever; yet the absence of all eruption, and the comparatively short duration of the attacks, made it impossible to classify it as a specific or sporadic fever.

EXFOLIATION OF THE BLADDER.

By WALTER WHITEHEAD, F.R.C.S. EDIN.,

Surgeon to St. Mary's Hospital for Diseases of Women and Children, Manchester.

THE exfoliation of casts and shreds of membrane from the bladder, though rare, is still of more frequent occurrence than some of those who have recently recorded instances in the JOURNAL would appear to admit. Mr. Clement Godson, for instance, read at the Medical Society of London, on January 3rd, 1870, the case of a patient who had been under his care when resident obstetric assistant at St. Bartholomew's Hospital. Mr. Godson was good enough at the time to supply me with further details, in consequence of his knowing that I was interested in the subject; and I am sure he will pardon my publishing the following abstract from his notes, as every ray of light must tend to explain the cause of this singular phenomenon.

"M. D., aged 26, had been married six years, and had had four children. She was admitted into St. Bartholomew's Hospital on November 27th, 1869, under the care of Dr. Greenhalgh. She was pale and poorly nourished. She stated that she had lost much flesh lately; that she was advanced three and a half months in pregnancy, her last period having terminated early in August; and that on November 16th, in the morning, on getting out of bed, she found herself unable to

pass her urine. Her medical attendant passed a catheter, and relieved her of a pint, and told her that her womb was misplaced. Since this time, her urine had been dribbling away, and she had been suffering great pain in the lower part of the abdomen, so much so, that the surgeon in attendance had made three ineffectual attempts to replace the womb. On admission, the patient was very pallid; the lips were covered with sordes; the pulse was small, quick, and compressible. The abdomen up to the umbilicus was very tender on pressure. The vagina was very short, hot, and tender. The cervix uteri was close against the pubes; and posteriorly there was a soft well defined elastic swelling reaching below the level of the cervix, and with a distinct sulcus between them. The rectum was almost occluded by the swelling. A catheter having been passed, ninety-six ounces of urine, containing some blood, were withdrawn; and again at night forty-eight ounces. On November 28th, at 8 A.M., seventy-two ounces of urine were drawn off, containing less blood; and at 9 P.M. forty-three ounces were withdrawn. The urine was drawn off for several days. On December 10th, she passed it herself; it was thick, ropy, and offensive. On the 21st, the urine was very dark, more ropy, but not so offensive. On the 23rd, the body of the uterus had risen almost completely from its previous position. On the 24th, the urine was alkaline, scarcely at all offensive. On the 26th, urine dribbled away; it could not be retained. On the 27th, at 1 A.M., the patient felt a desire to pass urine, but failed. Mr. Godson, the resident obstetric assistant, found a white substance protruding from the urethra, and removed it by gentle traction. It presented the appearance of a large bag, exactly resembling mucous membrane, and was followed by a small quantity of highly offensive urine. At 11 A.M., the patient had slept fairly, but had been continually grinding her teeth. Pulse 112, small, regular; temperature 98 deg.; skin moist. She had passed some urine, less alkaline, and with less pain. The bladder was ordered to be washed out with tepid water. On January 3rd, 1871, the patient slept well, and suffered no pain. The urine was faintly alkaline, clear, containing very little mucus. On the 6th, the patient said that for the last two days she had been unable to retain her urine for more than ten minutes. The urine was clear, but slightly alkaline. The bladder had not been washed out since the 4th: the washing was ordered to be repeated. On the 10th, she could retain her urine for fifteen minutes. The bladder was ordered to be washed out every other day. On January 19th, the urine was slightly alkaline. The patient could not retain it more than fifteen minutes. She suffered no pain, and was very well, with the exception of this inconvenience."

This pathological specimen, Mr. Godson informed me, was a perfect bag, and sufficiently large to contain within it a closed fist. This is much smaller than those usually voided when in a complete state. This specimen is, I believe, now in the museum of St. Bartholomew's Hospital.

In January 1866, I attended the wife of a shopkeeper in her first confinement. For some months previously, she had suffered from repeated attacks of retention of urine; and during the last week or ten days the retention was prolonged until catheterism was necessary for her relief. Some hours before delivery, and just as the head was passing the brim, I became aware that something unusual was present at the vulva; and, prompted by curiosity, I witnessed a perfect cast of the bladder pass *per urethram*.

I have also known of several cases where the mucous membrane has sloughed away from the bladder, and where there has been a previous history of attacks of retention of urine in the first instance, followed by an abnormal urine, the result of such retention; and, finally, exfoliation and expulsion *en masse*, or in shreds, of the mucous lining of the bladder. In some instances, pyæmic symptoms and death have been reported to have rapidly ensued.

The constitutional disturbance noted throughout the progress of these cases, except during the periods of retention, is singularly out of proportion to the seriousness of the lesion and the delicacy of the viscus implicated. It would appear to occur most frequently to women, and, in every instance with which I am acquainted, after some interference with the emptying of the bladder—to be, in fact, one of the usual causes of retention of urine.

In Mr. Godson's case, a retroflected pregnant uterus was apparently the impediment; in the case which I have just mentioned, an unusually large gravid uterus. Consequently, the suggestion of Dr. J. J. Phillips, in the BRITISH MEDICAL JOURNAL for June 24th, 1871, page 662, that retroversion of the gravid uterus may be one of the causes of exfoliation of the lining of the bladder, receives confirmation and support.

The casts cannot strictly be looked upon as simply an exfoliation of the mucous membrane of the bladder, as they do not consist entirely of mucous membrane. Muscular fibre, and even serous tissue, are often,

if not generally, attached to and incorporated with the mucous lining; and, further, we have the distinct fibrinous casts.

It is very much to be desired that, whilst this subject is being made prominent, those who have met with such specimens should add their quota to the common stock of experience, in order that some more definite conclusions may be arrived at concerning the cause, course, and treatment of such remarkable cases.

ON THE CLIMATE OF SYDNEY AND NEW SOUTH WALES.

By JOHN C. THOROWGOOD, M.D.

At the present time, when opinions seem to vary as to the beneficial effects of the Australian climate in cases of pulmonary disease, the following observations and personal experience, furnished to me in a letter from my friend and former patient, Dr. Lightbody, may interest some of the readers of the BRITISH MEDICAL JOURNAL.

The writer tried a winter in Madeira and lost ground there, neither did he find any improvement on his return to England for the summer. Pains, dyspnoea, and moist sounds in one lung, still remained as the troublesome symptoms, and in 1870 he arrived in Sydney. There, by a judicious use of the advantages of elevation offered by the surrounding district, he appears completely to have regained health and vigour, and all the worst symptoms have passed quite away.

The summer at Sydney is relaxing, and a change inland to the region beyond the Blue Mountains at an elevation of 2150 feet may be made with speedy advantage to the patient. A glance at the following statement will give an idea of the range of temperature in Sydney, and of the death-rate there.

Mean temperature of Sydney for 10 years, 62 deg. 6 sec.; January (hottest month), 70 deg. 9 sec.; July (coldest month), 52 deg. 2 sec. The total deaths in New South Wales, out of a population of 475,574, were, for the year 1869, 6691; being a ratio of 14.06 per 1000. Taking the city, suburbs and country separately, the ratio per 1000 for 1869 was: city of Sydney, 20.33; suburbs of Sydney, 18.11; country, 12.14. Of the 6691 deaths, miasmatic disease caused 1366, or 20.41 per cent.; nervous diseases, 943, or 14.09 per cent.; tubercular diseases, including scrofula, phthisis, hydrocephalus, 504, or 7.53 per cent.; accidents, 513, or 7.67 per cent.; diseases of nutrition, 477, or 7.13 per cent.; diseases of digestive organs, 457, or 6.83 per cent.; diseases of circulatory organs, 345, or 5.16 per cent.

The extreme range of temperature at Sydney is from 32 deg. to 105 deg., and both these extremes occur with the dry west wind; but, as bananas and some kinds of apples and pears ripen their fruit well, the extremes of temperature do not seem to have the same effect as they would have in England.

Among the lower class of the population phthisis appears less common than it is in the corresponding class in Scotland, and that too in spite of a greater amount of intemperance and syphilis. Among the better classes phthisis is often met with, chiefly, however, in the persons of those who have come out to Sydney for their health; many of these completely recover, marry and have families, and it is singular how healthy these families are in many instances. Two families Dr. Lightbody selects as examples in illustration. In both of these the fathers came out for their health thirty years ago, one being slightly diseased in the lungs, the other seriously so. In the one family there are now seven children, in the other five; the eldest of the children is 28 years of age, the youngest 14. In neither family has there been a death from phthisis; and only the eldest child in each family has shown any sign of the disease, and these are now in fair health.

The climatic advantages of Sydney seem great. If in the summer it be too hot and relaxing, six hours by rail will carry a patient to an elevation of 3500 feet, where he will find a dry bracing air and cool nights, while a further journey of three or four days will land one on the great plains where a climate not unlike that of Egypt, only drier, is to be found.

Of the climates of which Dr. Lightbody has made personal experience, he describes that of Mentone as being most like the Sydney climate; but at times during the summer at Sydney, when the moist relaxing north-east wind blows, which it does but for a few days only at a time, then the climate seems to have been suggestive of Madeira.

The winters at Sydney are bright and sunny, the wind generally westerly and the nights cold. Epidemic disease seems rare, though measles at times proves very fatal among children. During the last six years the average death-rate has been 17.22 per 1000.

The voyage out to Australia seems, in the words of Dr. Lightbody,

to have been a "powerful agent for good" to three invalids who were in rather advanced stages of phthisis. One lady with a cavity in the lung did not improve at all till the ship entered the tropics; she then steadily mended, and when last heard of was living on the borders of Queensland in excellent health.

I am here reminded of the case of a young chemist seen by me and also by Dr. Walshe in the spring of 1869. Unmistakeable phthisis was established and making progress in the left lung; he went to Brisbane, and then further up the country, and the last account that he sent home was, that he was so stout and robust that we should hardly recognise him again.

It seems as if, while emigration is the remedy for a surplus population, it will also powerfully act if judiciously used as a means of correcting hereditary tendency to disease, and so improving the breed of mankind.

CASE OF HYDROPHOBIA FOLLOWING THE BITE OF A CAT.

By G. M. BRUMWELL, M.D., Mossley, Manchester.

THE following are the particulars of a case of hydrophobia which has occurred in my practice.

Rev. D. Berry, aged 32, Unitarian minister, Mossley, was bitten by his cat on May 14th, 1871. The cat, which was a great pet, had been observed to be "ill" for a week or so. Its habits were not so clean as usual; it seemed to wish to keep out of the way of the children, retiring under the sofa, etc.; and was irritated when accidentally touched on passing. There were some loss of power in the hinder extremities, and frequent micturition.

On May 14th, the little boy, aged two years and a half, crept under the sofa to play with the cat, when it either scratched or bit him in the hand. Mr. Berry, on seeing the boy's hand bleeding, laid hold of the cat to beat it, when it bit him rather severely in the left thumb, and more slightly on the back of the right hand. The thumb bled profusely. Mr. Berry sucked the wounds, put both hands into salt and water, and then immediately came to my surgery, which is only a few yards distant; and my assistant freely cauterised the wounds with nitrate of silver, and ordered him to poultice them for a week. The wounds healed quickly. I was from home at the time, and my assistant did not report the case to me. The cat was shot the day following by a man who has had great experience in the training of sporting dogs; and he affirms that the animal was foaming at the mouth, and had all the appearance of being mad.

On August 10th, Mr. Berry was from home, and felt pain and numbness in the left hand and arm, and was sick and faint. On the 12th, he returned home to attend a funeral. I saw him at 1 P.M. He complained of being "very ill." He was sick, he said, which he attributed to having eaten pork two days before. I then, for the first time, heard of his having been bitten by his cat. He said he had lately felt pain in the left arm, and tingling in the fingers of both hands. He told me he awoke the night before he came home with a sense of suffocation. In the morning, on dipping his face into the water, his usual custom when washing, it made him "gasp for breath." At breakfast, he had great difficulty in swallowing a cup of tea. When I saw him, his countenance was expressive of great anxiety; and, on his attempting to drink a glass of water, he had immediate spasm, which produced a choking sensation not soon overcome. I advised him to go to bed, telling him his nervous system was thoroughly out of order, and that he needed rest and quiet. His tongue was very foul, and the bowels costive. I gave him an emetic of ipecacuanha, and afterwards a purge. Dr. Shepherd Fletcher, of Manchester, saw him with me the same evening, and concurred in my suspicion that the case was one of hydrophobia. We agreed that the first indication was to tranquillise the patient's mind, and to procure sleep. The patient, in describing the sense of suffocation, referred to the margin of the ribs, and said "it came like a wave through the bowels up into the lung." He also constantly referred to a sensation in the throat which affected his breathing; this latter symptom was persistent throughout, always greatly aggravated on attempting to swallow fluids, which were gulped down with a very great effort, the patient being a man of strong and determined will.

A subcutaneous injection of morphia procured for him a little sleep; and, on the following morning (13th), he felt better, but the aversion to fluids was the same. During the day, he took ten-grain doses of bromide of potassium every three hours. He also took beef-tea twice, and a little bread and jam with a cup of tea. Warm fluids did not produce the same effects as cold water. He complained that his throat was "inflamed", and of his own accord applied a "wet pack." In

the evening, he slept an hour, and awoke at 9.30 much excited, and drenched in perspiration, saturating the bed on which he lay. I was hastily summoned. He was constantly wiping the saliva from his mouth; he talked incessantly; said he was dying; gave the most minute orders as to his funeral, etc. He asked for a sponge soaked in water, to apply to his mouth; he said, "I cannot bear the thought or sight of water, it must be banished from my table for ever; I cannot bear to hear the water running from the tap." I tried to quiet his mind. I gave him half a grain of morphia in pill, and, in about an hour, injected hypodermically another grain. At the same time, I also gave him a drachm of chloral hydrate in treacle, on the suggestion of my neighbour, Dr. J. L. Andrew, who saw the patient with me. These remedies failed to procure sleep; he talked the whole night, and told me, early the following morning, he wished what he had said could have been written down, as he was sure he had been inspired. I gave him, at 6 A.M., another drachm of chloral. He complained of pain in the left arm, just above the elbow, and said he felt weak; there was the same restless anxiety, the constant apprehension of impending death, and the sense of suffocation in the throat. At 3 P.M., Dr. Fletcher again saw him, and suggested extract of Calabar bean, in grain doses, every hour, and as much nutriment as possible. The patient continued to take beef-tea, and, in the evening, ate a mutton chop with a cup of tea, and thought himself much better. Frequent spasms of the muscles of respiration occurred. At 9 P.M., I gave him another drachm of chloral. No relief being obtained, at 11 P.M., I repeated the dose of chloral. After 12 P.M., he slumbered for about two hours, and then the same restlessness returned. I saw him a little after six in the morning; his manner was sullen and irritable; there was also some incoherence; any movement of the bedclothes produced a painful sense of choking and suffocation; he was much weaker, and appeared to be rapidly sinking. At 11 A.M., I again saw him; his condition was most distressing; his appearance was wild, tossing about from side to side almost exhausted; he was spitting his saliva all over the carpet, and seemed to have the greatest difficulty in getting it out of his mouth. He seemed to realise the nature of his malady for the first time, and said to me, "this is the end of the cat; I know that I shall have to be smothered." I assured him that such was never the case. He soon afterwards became utterly exhausted, and died at 3.50 P.M., on the fourth day of the attack, and three months from the date of the bite. The pulse was never very quick, excepting during the periods of excitement and spasm.

I may add that a dog in a rabid state passed through the neighbourhood two or three weeks before the cat bit Mr. Berry.

HECTIC FEVER IN PHTHISIS PULMONALIS.*

By ROBERT W. FOSS, M.D.

HECTIC fever, or, as some prefer to call it, the hectic state (or condition), is so called on account of its chronicity and intractableness. The word is derived from the Greek adjective *ἐκτικός*, signifying habitual. It is a state common to many diseases of long duration, attended with suppuration, although not necessarily so. It is a fever of a remittent type, in which the bodily functions suffer most; the mental powers being little or not at all affected till the approach of death. It is defined by Christison thus: "A form of remittent fever of long and indefinite duration, consisting of an exacerbation once or sometimes twice a day, attended with extreme attenuation of the body, and depending either on suppuration or upon important organic derangements of structure." In phthisis there are generally indications of its approach before it completely sets in, such as slight rigors, followed by profuse perspirations; but the real symptoms, when they make their appearance, are easily distinguishable from any other similar affection by their almost regular periodicity and succession. What I wish to show is, that it is by this regularity and periodicity that the symptoms are so strikingly characteristic; and, as an example, I will give some short notes of a case.

C. D., aged 20, female. Her father and mother died of phthisis. She herself was healthy till two years ago, when she had "inflammation of the lungs". After this she had a constant cough. She often had slight attacks of hæmoptysis. About five months before the date of this report, she expectorated a teacupful of blood. She had had night-sweats from the beginning of her illness. The ends of her fingers were clubbed. The catamenia had been absent six months. The cough was accompanied with yellow nummular expectoration. There was dyspnoea. The tongue was red and irritable-looking. The appetite was bad. The bowels were regular. The pulse was 108. The decubitus was on the right or least affected side. On the right side, percussion was dull.

* Read at the annual meeting of the Northern Branch.

The breathing at the apex was bronchial, and lower down harsh. On the left side, at the apex, there was bronchial breathing, which below the third rib became amphoric. There was cavernous percussion. Posteriorly, she had bronchial amphoric respiration.

About an hour after waking she had rigors, which recurred all the morning, causing aching pains in her limbs, with headache. Each rigor lasted about half-an-hour; then there was an intermission of two or three minutes, immediately followed by another rigor. About 1 P.M. she had a feeling of burning heat in her forehead, hands, and feet, and her face was flushed, more especially the left side, proving in this case, as some consider it to be, that in hectic the greatest flush on the cheek corresponds to the most affected side of the chest. During the rigors the finger-nails turned quite blue. About 4 P.M. she began to return to her natural condition, and remained so till next morning. She had suffered thus for three months. This patient died shortly after these notes were taken.

After the hectic is fairly established, it shows itself at variable times, from a few minutes to an hour after waking. The patient feels cold and has a rigor; his hands and feet become of a livid colour—more especially the finger-ends—also the nose and more prominent parts of the face; he feels very cold and gets close to the fire, with very little relief to his sufferings. He remains thus, having rigors at variable intervals, till noon, when he begins to feel warm again, until this state gives place to a feeling of intense heat; the hands and feet burn; the face is flushed as often generally as in circumscribed patches; often one side is more flushed than the other, and that corresponds to the side of the chest which is most affected. During this period there is complete prostration of strength, accompanied with burning headache, and very often the patient perspires much. This period usually continues till about 5 P.M., when the patient gradually returns to his normal state of health, and remains so till next morning. There may subsequently be an attack of rigors of short duration, followed by the usual phenomena of the hot stage; but this second attack rarely lasts more than half-an-hour altogether. The morning stage of cold lasts, on an average, three hours, and the hot stage about the same time—a little less, perhaps—the patient being at other times as in health.

The temperature in the axilla during the cold stage is about 98 deg. Fahr.; and when the hot stage sets in it rapidly rises, until it often reaches 103 deg. at its height. In Wunderlich's work on *Medical Thermometry*, recently published by the New Sydenham Society, the following occurs. "Their course is sometimes very irregular, yet they generally approach some definite type, which, although perhaps exchanged for another in the course of the disease, is still marked for a considerable space of time with considerable regularity. Their type is usually remittent, with one or two exacerbations in the course of every day. These exacerbations are sometimes slight, but sometimes severe, or extremely so, so that the temperatures daily or twice daily reach a similar elevation, and in the remission fall again to normal or even below it; sometimes there is what I may call a tertian rhythm, or, in other words, there may be intervals of a day between the exacerbations, or the rhythm may be still more extended. When death approaches, or when complications occur, the remitting type often changes into a continuous one." The pulse itself undergoes as great variations, being generally under 90 during the cold stage, and often rising to 120 during the hot stage. In character it is small, irritable, and compressible. The hectic paroxysm terminates by perspiration in about one-tenth of the cases, according to Louis; and I think that profuse perspiration is now more regarded as one of the earlier signs of phthisis rather than a late one, which opinion I find to be stated in a translation of Paulus Ægineta, somewhat obscurely, perhaps, thus: "While, therefore, any of the natural moisture remains, the fever is only hectic; but where the humidity runs the risk of being altogether consumed, a true marasmus is formed," which also includes the fact that often shortly before death, in phthisical patients, the hectic disappears. From the frequent mention of the word hectic in old authors, this condition seems to have been closely studied in ancient times. The pathology of this state must be looked for in the sympathetic system. There is no doubt now as to the regulative power exercised over the capillary vessels by this system; and as we have, at one period of the day, in this condition a deficiency of blood in the superficial capillaries—as indicated by the symptoms—and at another an excess of blood, the regulative power must be at fault somewhere, whatever the great sympathetic centres in the chest may have to do with it.

Most authors in describing this fever forget to mention the cold stage; only describing a hot stage, beginning in the evening, attaining its maximum intensity at midnight, and then undergoing a gradual lysis, chiefly by profuse perspiration; this perspiration being sometimes replaced by diarrhoea, which is then said to be colliquative. Colliquative diarrhoea is denied by most authorities now; and, so far

as I have been able to observe, it does not exist, in the sense that, if the hectic paroxysm do not terminate by perspiration, it certainly will by diarrhoea. If such ever were the case, it must be accounted for by reason of ulceration of the bowels being usually present when hectic has made its appearance. Treatment is of little avail in this condition; the disease goes on from bad to worse, the patient usually succumbing from its effects; the preparations of cinchona and dilute sulphuric acid being most frequently prescribed for it—the former from their well known anti-periodic effects, the latter chiefly from its refrigerant qualities; but neither of them ever appeared to me to relieve the patient's sufferings, so that when the disease has reached this stage all that can be done is to treat the various symptoms as they arise, and in that way endeavour to obtain for the patient an euthanasia.

SOME OF THE ILL EFFECTS OF BROMIDE OF POTASSIUM.

By T. O. WOOD, L.R.C.P.,

Medical Superintendent of Dunston Lodge Asylum, and Lecturer on Psychological Medicine in the University of Durham.

HAVING been in the habit of using this drug somewhat extensively in my treatment of the insane, I venture to add my testimony to that of other correspondents of the JOURNAL as to its probable ill effects.

When given continuously and in large doses, it produces a great variety of results, depending generally upon the constitution and bodily condition of the patient at the time of its administration. Its most dangerous effect is when, after a course of comparatively small doses which do not seem to be taking any great hold upon the system generally, or upon the mental symptoms to control which it is given, it *suddenly*, and without apparent cause or warning, displays its cumulative effect, and rapidly reduces the patient to a condition of great bodily prostration, and completely alters the character of the mental symptoms. This physical prostration is at once evident. There are great muscular debility; dimness of sight, with dilated pupils; irregular gait, the patient reeling as though intoxicated; whilst nausea, vomiting, or purgation, with abdominal pain of a dull aching character, may also be present; the breath having a disagreeable odour, which seems peculiar to those who have been for any length of time under the influence of the bromide. Its effect upon the mental symptoms is no less marked. The patient who has been violently excited, glorying in his imaginary power of body and mind, becomes desponding, sullen, melancholic, and frequently lachrymose, often even despairing. One patient, who was discharged from this asylum "recovered", has since told me that he knew and felt for some time afterwards the effect of the medicine upon his mind. It produced a feeling of despondency which at times quite overcame him. These ill effects the two following cases may somewhat illustrate.

CASE I.—M. T., a strongly built man, aged 35, the subject of acute mania, in good bodily condition, dangerously excitable, and violent, was given bromide of potassium in increasing doses up to a drachm three times a day. This was continued for about a week, producing no apparent effect either upon body or mind, when one morning his symptoms presented a most marked and alarming change. He was unusually quiet, sitting languidly on his chair. He could not collect his thoughts to answer a single question properly. The extremities were cold; the heart's action was very feeble. He was given at once a glass of spirit and hot water, put to bed, and kept as warm as possible. The spirit was repeated every four hours, and he had half a drachm of aromatic spirit of ammonia an hour after each dose of the brandy. The brandy and ammonia soon had the effect of restoring the circulation and warding off the threatened syncope, though several days elapsed before he was himself again.

CASE II.—A. B., a tall well built man, aged 55, suffering from "general paralysis of the insane", was given the bromide in doses of half a drachm three times a day to allay great excitement. This, in a fortnight producing little effect, was gradually increased to a drachm thrice daily. After taking these doses for a few days without much apparent effect, he seemed all at once to give way. In the morning, he was dull, depressed, irregular in his gait; in the afternoon, he seemed to be completely helpless. The heart's action was feeble and intermitting; the extremities were cold. He was sick and giddy; could scarcely stand, and that only with support. At times he cried most bitterly; yet twelve hours previously he was singing and dancing, saying he was "the happiest man alive". Such is a brief outline of the cumulative effects of the bromide when given alone. *Experientia docet.*

Having read Dr. Clouston's admirable paper on the combination of

tincture of cannabis Indica with the bromide, I resolved to give it a trial; for, as he says, "cannabis Indica being a diuretic, and the bromide of potassium being carried off by the kidneys, it is probable that the former in that way helps to prevent the cumulative action of the latter when given alone."

CASE III.—M. T. (the subject of Case I) was readmitted eighteen months after his discharge, presenting all the symptoms of excitement and violence as on his previous admission. I immediately gave him half-drachm doses of the tincture of cannabis Indica and the bromide, increasing this in a week up to a drachm of each three times a day. This treatment was continued for a month, and produced considerable calmate action; though, on account of the severe dyspeptic symptoms which it produced, I deemed it advisable to discontinue it. Thus the combination in this instance had the effect of preventing any cumulative effect; and no doubt, had the continuance of the medicine not been contraindicated by the gastric disturbance, the result as to the mental symptoms would have proved even more satisfactory.

CASE IV.—B. W. W., admitted at the same time as Case III, a tall, well made, strong, and physically healthy young man, aged 27, was placed under the same treatment at the same time as Case III. He, however, not displaying the dyspeptic symptoms that Case III exhibited, the bromide was pushed to a drachm and a half with the same quantity of tincture of cannabis Indica, and eventually up to two drachms of each drug thrice daily, with the effect of producing "a state of drowsy calmness of the nervous system", and without in this instance producing any symptoms of dyspepsia, of physical exhaustion, or of threatened syncope; and thus, as far as these cases go, proving the utility of the combination.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

MIDDLESEX HOSPITAL.

CASE OF KIDNEY-DISEASE: SYPHILIS: GONORRHOEAL BUBO OR PYÆMIA.

(Under the care of Dr. HENRY THOMPSON.)

JOSEPH POTTER, a cabinet-maker, aged 26, was admitted on July 4th, 1871. There is no history of phthisis in the family, and his brothers and sisters are in good health. The patient himself led a very intemperate life two years ago; but, according to his own account, never suffered a single day's illness until eighteen months ago, when he had chancres, without, however, any secondary symptoms ensuing. About six months ago, he again contracted a chancre, which healed without medicine, but left him liable to sore throat ever afterwards. Six weeks ago, he had gonorrhœa, followed by suppurating bubo in the left groin.

On July 1st he was seized with repeated rigors, succeeded by great heat and vomiting, but no sweating and no pain in the back or limbs. The next day he had rigors in the afternoon, and vomiting, with severe diarrhœa and acute pain in the abdomen. On July 3rd, there were no rigors, but the pain in the belly, the vomiting, and the diarrhœa continued.

On admission, July 4th, the pulse was 116, respiration 28, temperature 100 deg. The face was pale and of a dirty yellow tint. The whole mucous membrane of the mouth and fauces was injected; that covering the hard and soft palate was dry and of vivid red colour. The velum was thin and wasted; there was an ulcer on the right tonsil, and considerable tenderness was present over the whole abdomen. He had no cough, but frequent hawking of a viscid phlegm. Respiration was purely thoracic; the abdomen was absolutely still during the process. —9 P.M. His urine was of specific gravity 1.014; it contained a fifth part of its volume of albumen; pulse 114, respiration 32, temperature 102 deg. He had constant vomiting and profuse perspiration.

July 5th.—He had no vomiting since 5 A.M. The bowels were twice open; the motions were of natural consistence, but light-coloured and very offensive. There was great distension of the abdominal walls, which were rigid, but moved slightly with respiration. There were a few spots of psoriasis on the outer aspect of the elbows; and traces of a rash in front of the right elbow-joint, and a few papules on the palmar surface of the hands. Under the microscope, the urine presented a multitude of casts, chiefly epithelial, some coarsely granular, others massive and hyaline; along with scattered blood-corpuscles and free renal epithelium, containing many fat-globules and much granular material. The amount passed in twenty-four hours was about ten

ounces.—9 P.M. Pulse 142, soft and weak. Respiration 36, short and gasping. He complained of want of air. The hands were clammy. The pain had abated.

July 6th.—Pulse 138; respiration 36; temperature 100. He had an attack of epistaxis this morning. His throat was very painful; he could scarcely swallow at all. There were two or three small ulcers above the uvula. The mucous membrane of the palate was deeply injected, and the pharynx was covered with clots of blood. He had no sleep during the night beyond a few minutes at a time. The urine was of specific gravity 1.020; it contained one-third of albumen. Six ounces were removed by catheter, and two ounces passed naturally afterwards. —9 P.M. Pulse 150, respiration 32, temperature 101 deg. The skin was moist and clammy. He had slight delirium and bewilderment.

July 7th.—He died at 5 A.M.

Necropsy, July 8th.—The body was somewhat emaciated. There was a large scar in the left groin, partially healed. The larynx was intensely injected, but not ulcerated. Both lungs were congested; the bronchial membrane was deeply engorged. The right lung was adherent at the apex, where there was an old cicatrix, with increased fibrous tissue, surrounding a cheesy deposit of the size of a small hazel-nut. All the cavities of the heart were full of decolorised clot. The pericardium contained an ounce and a half of turbid serum. The intestines were all matted together with recent lymph and pus; and the peritoneal sac contained a large quantity of purulent fluid. The sigmoid flexure immediately beneath the scar in the groin was firmly adherent to the psoas muscle, but there were no infiltrations of pus either within the substance or upon the surface of that muscle, or the iliacus. The liver was large, fatty, and smeared with recent lymph. The kidneys were deeply congested, enlarged, and fatty. Many of the inguinal glands were still suppurating. There was a considerable quantity of pus in the right knee-joint.

REMARKS.—The above case presented a good problem in diagnosis. Clearly, at a glance, it was a case of peritonitis, but the nature and origin of the peritonitis were not so clear. The history and symptoms strongly betokened pyæmia; accordingly, at the first visit, the peritonitis was set down as probably pyæmic, and the pyæmia itself ascribed to the suppurating bubo. Subsequently, an examination of the urine gave indisputable evidence of advanced kidney-disease. Here, then, were two possible origins for the peritonitis. On the principle of economy in causation, it was thought proper to discard the one and to accept the other; and the choice naturally fell on the kidney-disease, which was known to exist, although some misgivings were felt about the diagnosis until the very last. The necropsy placed beyond question the existence of pyæmia, plainly due to the bubo, in the absence of all other direct sources of blood-contamination; thus proving the first hypothesis to have been right, and the second to have been wrong; not that the one was entirely wrong, or the other entirely right, inasmuch as there are strong grounds for believing that, without the co-operation of the kidney, the bubo alone would have failed to produce pyæmia. Syphilis can hardly be supposed to have influenced the result either directly or indirectly; the bubo originated in gonorrhœa, and the kidney-disease was not of the lardaceous kind; indeed, no sufficient time had elapsed for the development of that peculiar change, whether referred to the infecting chancre or to the abscess in the groin.

It is interesting to know that a suppurating bubo of less than six weeks' standing, when aided and abetted by organic disease, may give rise to pyæmia.

NORTH LONDON CONSUMPTION HOSPITAL.

EMPYEMA WITH FÆTID SPUTUM.

(Under the care of Dr. CHARLES R. DRYSDALE.)

RICHARD DOYLE, aged 27, a pianoforte-maker, entered the hospital at Hampstead on December 1st, 1870. He was single, and had been ill for six months. He had served as a soldier in India for eleven years, and was discharged the service in April 1870. His father died of an accident. His mother was alive and well; but, of a family of eleven children, there were but three now alive. He had a cough, but never any hæmoptysis. He used to weigh nine stone, but, on entering the hospital, only eight. This patient was in the Metropolitan Free Hospital for six months, under the care of Dr. Lomas, who transferred him to Hampstead for change of air, and to be under Dr. Drysdale's care. His illness commenced with shivering fits and fever; and, after the patient had been a month in hospital, an abscess pointed below the fifth rib on the right side; and shortly afterwards there were three fistulous openings into the cavity of the pleura, which subsequently discharged pus very freely. The sputum was very foetid, and was puru-

lent in aspect; and, when the patient coughed, pus exuded in streams from the openings in the right side. The pulse on December 21st was 154. There was complete dulness over the whole of the right back up to the upper borders of the scapula, and in front as far as the clavicle. The breathing at the left apex was harsh, but not in any respect abnormal. At the right apex, a little breathing was heard.

The diagnosis was that of non-tuberculous empyema, with the dangerous complication of the constant access of air into a purulent cavity. The factor of the apartment in which the patient lived was so great, that the other consumptive patients in the hospital complained that, as they passed the door, it made them vomit. Burnett's solution, and also Condyl's fluid, did a little good as disinfectants; but neither these nor carbolic acid lotions were powerful enough to prevent the fœtor. On January 3rd, the respirations were 48; pulse 160. The girth of the affected side was 16½ inches; that of the healthy side, 15½ inches at the level of the nipple. The bowels were regular; the tongue clean. On January 10th, after dressing with Condyl's fluid (at the suggestion of Dr. Prosser James, who was consulted by Dr. Drysdale), the pulse fell to 120, and the respirations to 40. The appetite was better. The patient took half a grain of morphia at bedtime, and had a liberal diet. On January 27th, he was again ill and feverish, and the fœtor was as bad as ever. A small quantity of a solution of nitrate of silver (gr. v to 3i) was injected into the chest, and was followed by relief for two days, the fœtor and suppuration being lessened. Dr. Drysdale, being anxious that the system of thorough drainage of the cavity should be tried, asked Mr. Berkeley Hill to treat the case in that way. The patient was taken by Mr. B. Hill into his surgical ward; and a drainage-tube was inserted into the chest, whilst carbolic acid dressing was employed. Shortly after this treatment was adopted, the patient was seen by Dr. Drysdale (in March 1871), when a marked improvement was observable. Unfortunately, whether from inhabiting an ordinary surgical ward, or from the results of his own disease, pyæmic symptoms arose, and the patient succumbed. Surgical wards are scarcely suitable for such cases. Another patient, a little girl about eight years old, was sent by Dr. Drysdale to Mr. Hill, but went into the Children's Hospital, from the Farringdon Dispensary, in the early part of 1871, to have a quantity of serous fluid in the right pleural cavity withdrawn by means of the aspirator—an operation not unfrequently, it appears, performed in that hospital. The chest was quite full of fluid; and the operation, which was most skilfully carried out by the present house-surgeon of that hospital, has been most successful.

These cases have been mentioned in order to add to the list of those reported in the BRITISH MEDICAL JOURNAL on July 1st, 1871, by Dr. Thorowgood. Dr. Drysdale thinks that such operations are too little performed, and has seen many cases where a fatal issue has taken place, that might, he believes, have lived, if withdrawal of the fluid from the chest had been performed at an early period in pleuritic effusion.

ST. BARTHOLOMEW'S HOSPITAL, ROCHESTER.

ERYSIPELAS OF THE HEAD AND NECK, WITH VIOLENT DELIRIUM,
TREATED WITH CHLORAL.*

By A. W. NANKIVELL, F.R.C.S.

J. M., aged 30, was admitted October 28th, 1870, suffering from erysipelas of the head and face, resulting from a wound. The right side of his head and neck was much swollen, and his right eye entirely closed. He was at this time perfectly rational. Next day, the erysipelas had extended all over the head, and down the chest as far as the mammary region. He had a quiet night. In the afternoon, he became delirious, and had 30 grains of chloral at 5.35 P.M.; 40 grains at 6.10 P.M.; 20 grains at 7 P.M.; 30 grains at 7.40; 20 grains at 8.15; 20 grains at 8.30 (he spat it nearly all out, swallowing about 5 grains); 20 grains at 8.45 (of which he only swallowed about 5 grains); 20 grains at 9 P.M. (of which he swallowed about 10 grains). At 9.45 P.M., he was quieter; 30 grains of chloral were put into his mouth, and he swallowed about 15 grains. At 10.45 P.M., he refused all medicine, and 40 grains of chloral mixed with milk were injected into the rectum. At 11.40 P.M., after much persuasion, the patient was induced to take some beef-tea containing 40 grains of chloral. A few minutes after taking the last dose, the man fell asleep till 2 A.M. When seen next morning, he was found to be rather noisy, but quite ready to take food. He was given 30 grains of chloral in the course of the day, after which he slept for three hours. After this date, the man progressed favourably, with the exception that a large part of the skin of the right side of the neck sloughed, and, in consequence, the resulting ulcer took

a long time to heal. We, however, managed to accelerate the healing materially by skin-grafting.

My object in bringing this case before you is to show the large amount of chloral that was taken in a short time without any bad results. The chloral was first administered on October 29th, at 5.35 P.M. The last dose before sleep was induced at 11.40 P.M. During the interval of six hours and five minutes, the patient took as much as 255 grains. As far as I have been able to discover, this is the largest amount of chloral given in so short a time.

INJURY OF THE CERVICAL VERTEBRÆ: ANKYLOSIS OF THE ATLAS
TO THE OCCIPITAL BONE: DISLOCATION OF THE AXIS: DEATH.

By A. W. NANKIVELL, F.R.C.S.

A. U., aged 37, a labourer on the Government telegraphs, on the evening of December 24th, 1870, had a row with some people in a public house. He was ejected therefrom, and fell headlong down a flight of stairs. He went home to his lodgings, and complained of stiffness in the neck. He resumed his work in the course of a few days, and continued it till February 23rd, 1871. During this time, his fellow-labourers noticed that he was scarcely able to rotate his head. On February 24th, he stated that he did not feel quite well, and would take a few days' rest. This he did. Next morning, not feeling better, he walked to a surgeon, who gave him some medicine. On February 26th, he was found by his fellow-labourers to be much worse, being quite unable to walk. He was carried by them to a surgeon, who sent him here. On admission, his arms and legs were found to be completely paralysed. The muscles did not respond to galvanism. He could swallow with difficulty, and could not speak above a whisper. He died in three-quarters of an hour.

A *post mortem* examination was made twenty-four hours after death. Rigor mortis was well marked. The patient was a well-nourished, strong, healthy working-man. The pleura, lungs, pericardium, heart, liver, and spleen were slightly congested. The left kidney contained numerous cysts, communicating freely with each other, the gland being atrophied. The right kidney was hypertrophied. The brain was healthy. On dividing the medulla oblongata, a bony prominence was felt, partially filling up the foramen magnum. The medulla was slightly softened at the seat of pressure. On removing the portion of skull and part of the cervical vertebræ (which I have here before me), we found that the projection was the odontoid process of the axis. The atlas was partially luxated from the occipital condyles, and rotated about twelve degrees, the left articular process of the atlas being thrown forward and crushed against the skull, yet without fracture. The right upper articulating process of the axis was covered with cartilage, and healthy; the left was bare of cartilage, and the corresponding surfaces of the atlas were in the same state. The ligaments were unfortunately destroyed in removing the specimen.

The interest of this case is due to the length of time that elapsed from the receipt of the injury to the occurrence of any grave symptoms, and to the rapidity with which death came on after the commencement of the fatal symptoms. So rapid a death appears, in all probability, to have been caused by some sudden giving way of some of the ligaments, thus allowing the odontoid process to slip up into the foramen magnum, and so cause the paralysis.

BRADFORD INFIRMARY.

CASE OF CONGESTION OF SPINAL PIA MATER: COLD: COUNTER-IRRITATION: ARSENIC: CURE.

(Under the care of Dr. NICOL.)

THE notes have been taken by Mr. Roberts.

J. M., a "striker" (using a heavy hammer), aged 23, married, was admitted on June 29th, 1871. He had suffered for some time from various dyspeptic symptoms, but these disappeared under treatment. A few days ago, he was seized with pains along his back, a feeling of girding about the loins, and sweating over the spine. His gait became excessively irregular, so that he could hardly walk; and control of the sphincters became deficient. He had been indulging in venereal excesses. He was in the same state on admission, and was very unsteady when his eyes were shut. A spot, tender both to pressure and to the cold sponge, could be detected at the top of the sacrum. There was some fibrillation of the glutæi muscles. The irregular gait appeared to be from spasmodic action of some muscles, especially the abductors of the hip. His legs appeared perfectly strong as regarded individual motions. He was tolerably well in other respects. He was ordered to have a series of small blisters applied to the sacral and lumbar regions; to have a cold hip-bath night and morning, and two minims of liquor arsenicalis three times a day.

July 14th. The treatment had been steadily continued. Control of

* This case, and the following one, were read before the West Kent District Meeting of the South Eastern Branch.

the sphincters had been regained, and there was rather want of confidence than unsteadiness in his gait.

July 31st. He had had slight dyspepsia, but was now able to be discharged, cured.

September 12th. He is at his work, and can walk well.

THE NOSOLOGY AND TREATMENT OF DIARRHŒA, CHOLERINE, AND ASIATIC CHOLERA. (*Concluded.*)

NORWICH AND NORFOLK HOSPITAL.

SPEAKING generally, Dr. EADE says that he has always been in the habit of treating epidemic autumnal diarrhœa by astringents; and that he has little experience of aperients in this disease, with the exception of rhubarb; but, as this has never been given uncombined with ammonia or aromatics, it is doubtful if the latter have not often been the really efficient agents—especially as, in many of the milder cases, the force of the disease has spent itself before the slowly acting rhubarb has begun to have any decided effect. In certain special cases, where offending food or drinks, or a loaded stomach or bowels, appear to be connected with the attack, he has first tried to remove these causes; but, as nature seems generally to have most thoroughly carried off all possible causes of offence by the time medical assistance is obtained, and as it seems impossible that an epidemic cause, which may affect simultaneously some hundreds of individuals, should be of a dyspeptic character, he has generally been satisfied to treat the diarrhœa and the other symptoms directly. Some years ago, in cases of severe autumnal diarrhœa, he always commenced the treatment with three to six grains of calomel; but of late years he has much less frequently administered such a dose. The medicine on which recently he has mainly relied is the dilute sulphuric acid, given alone in water, or combined with laudanum, according as much pain has or has not been present. In the majority of cases, its action has been speedy and effective, and such as to leave little to be desired. In other cases, the compound kino powder, or tinctures of catechu and opium, with or without chalk or soda or sal volatile, have answered completely. He has also found the very best results from the administration of pills containing a quarter-grain each of nitrate of silver and of opium. When bile or colouring matter has ceased to be discharged, then direct astringents have seemed to be less useful; but the dilute sulphuric acid in full doses has still often appeared to act well, and the case has speedily come to an end. So also, at this stage, aromatics, when the stomach will retain them, have been grateful and helpful—such as ammonia, ginger camphor, compound tincture of rhubarb, or brandy and water. In the stage of exhaustion, he has given brandy, with laudanum if cramps continue; but at this period remedies taken into the stomach have seemed to be of less avail, to be often immediately vomited, and, even if retained, scarcely absorbed. Ice sucked, and hot turpentine stupes, or hot applications externally, with frictions, have then appeared to be of most service. In fairly healthy adults, autumnal diarrhœa or English cholera, even when very severe, rarely (in his experience) kills; and as the attack is sudden, so generally the illness is not very long, and relief is usually obtained by either of the above remedies. It is in the unhealthy, or those with some constitutional or visceral fault, that failure occurs; and in these cases it is necessary to employ treatment with special reference to the peculiarities of the case. In old people with feeble digestive systems, and in whom absence of colour in the stools is an early symptom, astringents have often failed; and he has found an artificial gastric juice, such as dilute nitro-muriatic acid and liquor of pepsine, with a little strychnine added, to be sometimes extremely useful. In infants, in whom the great mortality of an autumn epidemic occurs, the cachectic or scrofulous habit quickly shows itself. Amongst the numerous patients at the Child's Hospital in Norwich, he constantly finds a vitiated bowel-secretion to be the real cause of the intractableness of the diarrhœa; and in these cases, along with the usual alteratives, acids, as the sulphuric, and especially the nitro-muriatic, do more good than direct astringents; the diet being at the same time improved and carefully regulated, and extract of meat or Liebig's food being given as they can be borne. During an epidemic, great care is needed in the diagnosis of infantile diarrhœa; for, though the immediate exciting cause is probably the same in all, yet many other disturbing agents may be in operation. Moreover, so many cases occur where, from day to day, the digestive and bowel function is just, and only just, carried on sufficiently well for nutrition, that the instant the secretory processes are deranged by shock of any illness, the nutritive equilibrium is at once overthrown, and the frequent serous discharges, void of healthy colours and solids, at once appear.

As to the nosology of the disease, Dr. Eade thinks we may trace an

analogy with the ordinary periodical "bilious attacks" or sick headaches commonly seen in women and in men too—*i. e.*, attacks of sudden headache and vomiting of "bile", which are plainly not due to biliousness at all (indeed, often occurring in the anæmic and non-bilious), but which are really nervous paroxysms or explosions—veritable *fits* on a small scale—in which there is not an excess of nerve-force, but its irregular action, and probably absence of supply to the gastro-hepatic system; and hence a *de facto* diarrhœa of bile and mucus, ejected upwards instead of downwards. Those who are victims of these attacks know well that rest in bed for twenty-four hours and abstinence are the main remedies for these seizures; that neither purgatives nor astringents help them; but that tea (a nervous stimulant) gives them some relief; and that effervescing soda-draughts, and ice sucked gradually, are often very grateful. Summer choleraic attacks, when the purging has not been so profuse as to render an attempt at checking this symptom at once imperative, have sometimes seemed to have subsided as well and quickly with this kind of treatment as with any other.

Dr. Eade's experience of true cholera is neither large nor recent; but the symptoms of cholera, cholerine, and epidemic diarrhœa, have always seemed to him to differ more in degree than in kind—all appearing to be due to some sudden alteration of the innervation (of the nature of a paralysis) of the gastro-hepatic and intestinal mucous surfaces, whether produced by the reception into the body of some specific poison, or by some special influence exerted upon the visceral nerveplexuses and ganglion by the rays of the autumnal sun.

MANCHESTER CLINICAL HOSPITAL.

ANKYLOSIS OF THE HIP-JOINT, WITH MALPOSITION OF THE LIMB: SUBCUTANEOUS SECTION OF THE NECK OF THE FEMUR.

By JAMES HARDIE, M.D., Surgeon to the Hospital.

MARTHA NEWHAM, aged 22, had rheumatic fever in the beginning of 1868. For about a fortnight, the affection involved nearly all the larger joints, and after this it continued in a subacute form in the right hip and knee. She was unable to leave her bed for four months, and for two months after that could only take exercise in a Bath-chair. At the end of May, she came under the care of Mr. Greenwood, of Newark, who has obligingly furnished me with a few notes of the condition and progress of the case while under his care. At that time there was no malposition of the limb, but the hip- and knee-joints were almost immovable. All the acute symptoms had disappeared, and Mr. Greenwood succeeded in restoring perfect motion to the knee, by the forcible rupture of false bands under chloroform. A month afterwards, he tried a similar operation on the hip, "but not with the same result, although motion was most certainly improved." Shortly after this, the patient left Newark. It would appear that she could not continue to exercise the joint so as to maintain the improvement which had been effected; but that from this time the thigh became flexed on the pelvis, and was habitually kept in that position. It had remained in the same condition ever since, and the patient had not suffered in any way except from the inconvenience of the deformity.

When the patient came under my notice, the thigh was flexed on the pelvis to an angle of 100 deg. with the spine, and was neither adducted nor abducted. When she stood erect, so as to straighten the spine, the foot was raised fully twelve inches from the floor. She rested and walked on the anterior part of the right foot. This occasioned great arching of the spine, and her gait was awkward in the extreme. She could walk without support, but not for more than about a quarter of a mile at a time, without great fatigue and pain in the back. The thigh could not be moved without moving the pelvis also.

June 10th, 1871.—Under chloroform, forcible efforts were made to straighten the limb by breaking up the adhesions. These being perfectly unavailing, I performed Mr. Adams' operation of subcutaneous section of the neck of the femur. The puncture was made at the spot recommended by Mr. Jessop of Leeds, about an inch behind the great trochanter on a level with its tip. I experienced considerable difficulty in completing the division of the bone, as the saw very frequently became locked. This I attribute in great part to the puncture being placed so far back. There is thus some difficulty in getting the blade placed comfortably in front of the neck of the bone. I would, therefore, advise that the knife be entered half an inch above the tip of the trochanter, and carried directly down to the bone, making a straight track from this aperture to the front of the neck. I had previously found, in experimenting on the dead subject, that the saw worked better from the point, and regretted that I had mistrusted my experience when I came to operate on my patient.

When the bone was divided, the limb at once became free, but was

kept from becoming quite straight by the rigidity of the tendons of the adductor longus and long head of the rectus muscles. These were divided with a tenotome, and the limb then assumed a perfectly straight position. A weight was attached and hung over a pulley.

There was rather free hæmorrhage from the puncture, but not enough to cause any trouble. A piece of lint dipped in carbolated oil was applied and bandaged on.

For the first few days there was a little oozing of blood from the wound, but the latter was not much disturbed. On the 19th, it had not healed, and a morsel of dry lint was placed on it. On the 28th, it was found closed. The weight was removed on the 19th. No complaint whatever was made by the patient so long as she was left undisturbed, but the least attempt at moving the limb gave great pain. This was tried on several occasions after the weight was removed; but it was borne so badly that the hope of succeeding in forming a joint was abandoned. The patient was therefore simply kept at rest in bed till it was supposed that union of the osseous surfaces had taken place. She was allowed to walk about after seven weeks, and in a short time could do so with great ease, with the help of a crutch and stick. The patient has now gained greatly in the use of the limb. She has discarded the crutch, and can rest nearly her whole weight on the one leg. Both legs are of exactly the same length, and the right is firmly united in a straight line with the trunk. The patient expresses much satisfaction with the result of the operation.

LEEDS GENERAL INFIRMARY.

ADAMS'S SUBCUTANEOUS OPERATION FOR DIVISION OF THE NECK OF THE FEMUR.

Mr. JESSOP has favoured us with the following notes.

A fortnight ago I readmitted my second case of subcutaneous division of the neck of the femur, for the purpose of carrying out more effectually the movements required for the due establishment of a false joint. On admission, when standing upright, the patient could plant the ball of the great toe upon the floor, and could bear fully one half the weight of her body upon the limb, which on measurement was two and a half inches shorter than the sound one. She usually walked with one crutch, but occasionally required two. She could flex the thigh so as to form a right angle with the body without pain; any attempt to force the knee nearer the body produced resistance and pain. On September 20th I placed her under chloroform, and moved the limb very freely in all directions. During the movements, several audible snaps took place, as fibrous bands gave way. She is much benefited already by this, and can move the limb more freely.

The first of my two cases (Margaret Rudderam), published in the JOURNAL for January 14th, 1871, walks well (but with a limp) without any assistance, and has very free mobility of the limb.

CASES OF SLOUGHING OF THE SCROTUM AFTER TAPPING FOR HYDROCELE.

(Under the care of Mr. JESSOP.)

CASE I.—J. H., aged 25, came to the Infirmary for the first time on April 14th, 1871. It was seen, on examination, that he was suffering from a hydrocele on the right side. This, which was not of large size, was tapped with a small (No. 2) trocar, and he went home. He came again three days afterwards (April 17th). He stated that he had suffered much since the tapping, that he had felt cold and shivered slightly, that he had lost his appetite, and that he was very thirsty. He was then admitted as an in-patient. On looking at the scrotum, a gangrenous patch, the size of half-a-crown, was seen at the site of the puncture, and it was evident that there was suppuration in the tunica vaginalis. He was put to bed, and wine, beef-tea, and milk were administered freely. He also had a grain of opium twice daily, and poultices to the scrotum. The sloughing, however, spread, till at the end of a week the whole scrotum was destroyed, and both the testicles with the cords as high as the external ring were exposed. At first sight, it looked as if some plastic operation would have to be performed to cover the exposed testicles, but it was determined, in the first place, to give him time. He remained as an in-patient till June 24th, when the testicles were almost covered by skin, which was drawn down by the contraction of the granulation from the abdomen and groins. He was then made an out-patient. He has lately presented himself with the wound entirely healed, and the testicles not at all exposed.

CASE II.—J. B., aged 71, was admitted as an out-patient on July 7th. He was suffering from a large hydrocele on the right side. This was tapped with a trocar the same size as that used in the previous case, and the patient went home. At the end of a week (July 14th) he

again presented himself. All the anterior part of the scrotum was then gangrenous, and he was in a very feeble and feverish condition. He was admitted as an in-patient and treated like the previous case. The gangrene spread so as to destroy the entire scrotum, extended to the groins, and implicated some patches of skin on the upper part of the thighs. Notwithstanding the administration of good food and plenty of wine, no efforts towards repair took place, and he died, exhausted by the suppuration, on August 12th.

SWANSEA INFIRMARY.

POPLITEAL ANEURISM TREATED BY COMPRESSION.

Under the care of Mr. J. G. HALL.

JOHN JONES, aged 29, a striker in a blacksmith's shop, was admitted into the Swansea Infirmary, May 3rd, 1871, with popliteal aneurism. He first complained of pain in the leg, and observed a small tumour in the popliteal space about five months before his admission. It gradually increased in size until his admission, when the tumour appeared as large as a small orange. On May 5th, Signoroni's tourniquet was applied to the femoral artery in the groin, about two inches beneath Poupart's ligament; but, as the pressure of the tourniquet gave much pain, he took four grains of compound soap pill every three hours. Continual pressure was kept up for the first three or four days by changing the position of the tourniquet; after which he could not bear the pressure so continuously, but kept it on during the day and left it off at night. The pulsation did not fairly cease until ten days or a fortnight after the first application.

REVIEWS AND NOTICES.

LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC. By Sir THOMAS WATSON, Bart., M.D., F.R.S., etc. Fifth Edition. London: Longmans, Green, and Co. 1871.

AT length, after many months of expectation, we have the satisfaction of finding ourselves this week in possession of a revised and enlarged edition of SIR THOMAS WATSON'S celebrated Lectures. It is a subject for congratulation and for thankfulness that Sir Thomas Watson, during a period of comparative leisure, after a long, laborious, and most honourable professional career, while retaining full possession of his high mental faculties, should have employed the opportunity to submit his Lectures to a more thorough revision than was possible during the earlier and busier period of his life. Carefully passing in review some of the most intricate and important pathological and practical questions, the results of his clear insight and his calm judgment are now recorded, for the benefit of mankind, in language which, for precision, vigour, and classical elegance, has rarely been equalled, and never surpassed. With the age of Nestor, Sir Thomas Watson has retained and even improved upon the silver-tongued eloquence in which he was alike wont to clothe his wise and careful judgments. In an epilogue at the end of the second volume, the author expresses his obligations to Dr. George Johnson "for his friendly assistance in re-editing the Lectures". The revision has evidently been most carefully done, and the results appear in almost every page. Here and there a large portion of a lecture has been rewritten, and considerable additions have been made to others. The additions amount, in the whole, to upwards of one hundred pages; and this notwithstanding the omission of the lectures on Diseases of the Eye—a subject which the author probably considers too extensive and too special to admit of satisfactory discussion during a course of lectures on medicine. The only disease of the eye to which reference is made in the present edition is iritis, and this mainly to illustrate the influence of mercury upon the syphilitic form of the disease.

The two large and handsome volumes are so rich in new and interesting materials as to embarrass us in our attempt to make selections for quotation and comment. On the present occasion, we shall restrict ourselves to the first volume, reserving for a further notice the contents of the second.

The profession will be interested to learn that the important subject of treatment has throughout the whole series of lectures been revised with scrupulous care, the directions now given being in strict accordance with what may fairly be considered the teachings of modern scientific medicine. The subject of Blood-letting, general and local, is discussed at considerable length, and the rules for its employment appear to us singularly lucid. The subject is introduced thus: "In times past, no doubt, bleeding was apt to be employed inopportunely, to be misdirected, or to be pushed beyond its proper and safe limits; but of late medical practice has rushed to the very opposite extreme—

which of the two mistakes is calculated to be most injurious to the human family it would not be easy to estimate. I remember the time when a surgeon who found a man lying in the street in a fit was blamed and abused by the bystanders if he did not at once open a vein in his arm. To do this now-a-days would be to incur the charge of murdering the man." After discussing the subject of local bleeding, the influence of which is rendered clear by several happily chosen illustrations, Sir Thomas goes on to say: "I hold it then to be certain that, in many cases of inflammation, *local bleeding* is a powerful, a safe, and therefore a proper and eligible remedy; and that its beneficial operation consists in diminishing, by direct withdrawal or by diversion, the quantity of blood distributed to the part or organ inflamed. But what of *general bleeding*—what of venesection in particular—as a remedy for inflammation? It is in this matter I am bound to admit, that great mistakes have formerly been made; that a potent agency has been misdirected."

After a full and very interesting discussion of the subject, the conclusion arrived at is thus expressed. "I hold it then to be certain that, for some special morbid constitutions, which inflammation may or may not accompany, venesection is a potent and life-preserving remedy; that there are many exigencies for which it is not only safe to employ, but unsafe and unpardonable to withhold it. I shall have to return to this subject hereafter, but I may repeat now in brief terms that the condition which cries out for and obtains relief so signal and immediate from phlebotomy, may be described as that of great and often sudden engorgement and distension of the vessels that carry black blood, of the systemic veins, of the pulmonary artery, and especially of the right chambers of the heart. In this embarrassed condition of the circulation, with so unequal a distribution of blood in the two different systems of vessels, it is the veins that require emptying, not the arteries. As the tension of the stretched and almost paralysed right ventricle is lessened, the hollow muscle again becomes capable of contracting upon and propelling its contents, the clogged lung is set free, the functions of the oppressed brain are eased and retrieved, and the balanced play of the heart and lungs is restored. This, as it seems to me, is the true philosophy of blood-letting in disease, approved by reason and fortified by experience. The credit of having been among the first to rectify the vaguer notions that formerly prevailed on the subject is fairly due to Dr. Markham."

The well-known lecture on the Different Modes of Dying has always appeared to us to be one of unusual interest. In the present edition, we recognise two additions which render the lecture still more interesting and complete. The arrest of the circulation through the lungs in cases of death by apnoea is thus explained. "It had been ascertained by various trustworthy observers that, if the thorax of an animal which has been suddenly strangled by a tight ligature placed upon its windpipe, be examined immediately after death, the lungs are always found empty of blood, while there is a vast engorgement of the right heart, of the great veins, and of the pulmonary artery up to its minutest ramifications. These are the plain and unquestionable facts of the case. They show that some opposing power must have been called into play, more than equal to the propelling power of the right ventricle of the heart. Now, such a power—and it is the only conceivable one—actually exists at the very place where the venous current meets with its curb; and it consists in the firm contraction of those muscular fibres of the minute arteries, the function of which it is to regulate the blood-supply in accordance with the varying requirements of the part. This function, again, is determined by those unsleeping sentinels the vaso-motor nerves. Were it allowable, for the sake of illustration, to impersonate the vital forces concerned in this marvellous adaptation, we might liken the process to the intelligent stopping of the traffic on an obstructed line of railway by a backward telegram. Or take another illustration. The blood passes into the pulmonary capillaries in order that it may be aerated. Whenever this process of aeration is suspended, a nervous signal is sent from the capillaries to the minute pulmonary arteries, enjoins their contraction, and thus stops the blood-stream. The purpose of the arterial spasm is to prevent the flow of blood into the pulmonary capillaries upon the cessation of the function of respiration. If the stop-cock of a gas-burner could be made self-acting, so as to maintain at all times a constant and exact relation between the supply of fuel and the rate of combustion, and so as further to turn off the gas and prevent its escape when by any accident the flame is extinguished, that would represent, with sufficient accuracy, the working of the living arterial stop-cocks in the lungs."

The other addition to this lecture, to which we just now referred, consists in the account given of embolism and thrombosis in the pulmonary artery, as a means whereby the circulation may be brought permanently to a stand. "If the obstruction be complete, death may be instantaneous. If the vessel be not perfectly sealed, extreme dyspnoea, with pallor and faintness, comes on at once, and the patient dies within a period varying from a few minutes to several hours. It is remark-

able that an impediment to the supply of blood to the lungs through the pulmonary artery, causes dyspnoea as urgent as an impediment to the supply of air to the lungs through the air-passages. Physiologically, this is explicable by the want, common to both cases, of aerated blood by the system, expressing itself in the chemical cry from the famishing tissues for the indispensable oxygen. What is peculiar to this mode of dying is, that the circulation is stopped, yet not by asthenia; and the function of respiration is suspended, yet not by apnoea. Death does really, in this case, begin in the lungs; and the mode of dying may, with literal accuracy, be called death by *pulmonary asphyxia*, or pulselessness in the pulmonary artery."

In an earlier part of the lecture attention is drawn to the fact that the literal meaning of the word asphyxia is pulselessness, and that this term is inaccurately, though not uncommonly, employed to designate death by suffocation, of which mode of death the term *apnoea* (privation of breath) is justly expressive. It is very important to get rid of unsuitable terms which are apt to warp our notions concerning the real nature of the things which they are intended to express. The terms asphyxia and apnoea are both needed to express different pathological states; they must not be confounded or used indiscriminately, the one for the other.

Passing on to Diseases of the Nervous System, the subject of *aphasia* is discussed at some length; and the various speculations and opinions to which this intricate problem has given rise are set forth with characteristic clearness, reference being made to the writings of Drs. Bastian, Bateman, Hughlings Jackson, Maudsley, Moxon, William Ogle, Sanders, etc.

The relation between cerebral hæmorrhage and hypertrophy of the left ventricle is explained more completely and satisfactorily than in any previous systematic treatise with which we are acquainted. It is an acknowledged fact that cerebral hæmorrhage and hypertrophy of the left ventricle are often found associated; but it does not necessarily follow that the relation between them is always that of *cause and effect*. In only one class of cases, to be presently referred to, is this the actual relationship. Hypertrophy of the left ventricle is most frequently associated with other structural changes in the heart, with valvular defect, which involves an impediment to the circulation, acting backwards through the right heart and the veins upon the cerebral vessels. Many cases of apoplexy occurring in persons who have previously had cardiac hypertrophy are cases of this kind. The brain-affection is dependent in part upon disease of the heart, but not upon preternatural strength of its left ventricle. The heart acts injuriously upon the brain backwards through the veins, and not through the arteries.

But there is another reason for the coincidence between cerebral hæmorrhage and hypertrophy of the left ventricle; and here the arteries are concerned. When the arteries of the brain are rendered frangible by fatty degeneration or ossific change, the commencement of the aorta is usually found to be the seat of similar alterations. This condition of the arteries impedes the onward movement of the blood, and hypertrophy of the ventricle is a natural compensation for the morbid state of the aorta. The strength of the left ventricle, therefore, in such cases, is not a true measure of the force with which the blood is driven into the distant arteries; on the contrary, it is a measure of the difficulty with which the blood is circulated through the primary branches, and, therefore, through the whole system of the arteries. So that in these cases, instead of regarding the cerebral hæmorrhage as the effect of the hypertrophy, the apoplexy and the hypertrophy should rather be looked upon as concomitant effects of the same cause; viz., of the disease pervading the arterial tree. "The hypertrophy of the left ventricle is a consequence of the diseased condition of the aorta at its mouth; the cerebral hæmorrhage is a consequence of a like diseased condition of the arteries of the brain." Sir Thomas goes on to say: "Yet there is a form of hypertrophy which is very likely to prove a direct cause of cerebral hæmorrhage. Of Bright's disease, when chronic, hypertrophy of the left ventricle, without valvular or other disease of the heart or great arteries to account for it, is an almost constant accompaniment and consequence. How is this?" Referring to Dr. Johnson's paper on hypertrophy of the muscular walls of the minute arteries, Sir Thomas explains that "in Bright's disease the blood is unpurified; and while the minute arteries in various tissues—the skin, the muscles, the brain, and other parts—oppose its passage, the left ventricle beats with increased force to drive it onwards. The result is hypertrophy of the muscular fibres of the arteries and of the left ventricle of the heart. Apply this doctrine to the brain. The arterial stop-cocks resist the passage of the unpurified blood into the capillaries; the strong left ventricle strives to force on the blood; the resulting distension of the systemic arteries is indicated by the full and hard radial pulse, and by the evidence of increased arterial pressure afforded by the sphygmograph. There is thus excessive pressure on the whole of

the arterial pipes between the stop-cocks and the forcing pump, and in the struggle between the two contending forces a minute artery in the brain may be broken, and so cerebral hæmorrhage may occur.

The lecture on Chorea has been considerably enlarged; and the interesting question of the relationship between cardiac disease and chorea, including the doctrine of embolism in the cerebral capillaries, is fully discussed.

Amongst the novelties in this volume, we find the two diseases Locomotor Ataxy and Wasting Palsy concisely but lucidly described.

Diphtheria receives a full and complete exposition; and then the question is raised, "Is the disease which has for so many years been called in this country *the croup*, and which is attended with a membranous exudation in the larynx, anything else than diphtheria? I believe it is not. I believe that, ever since Dr. Home's pamphlet on *Croup* was published in 1765, our writers on the subject have given us the history, the symptoms, and the treatment of acute catarrhal laryngitis, with the morbid anatomy of diphtheria; thus confounding together two diseases very different in themselves, and requiring very different treatment." Then, after a brief argument, the conclusion is thus stated: "You will understand that I give in my adhesion to the opinion that croup, accompanied by false membranes in the larynx and trachea, is always diphtheria, whether in the child or in the adult; and that simple laryngitis is never associated with the exudation of false membrane."

[To be continued.]

TEXT-BOOK OF SKIN-DISEASES. By Dr. ISIDOR NEUMANN, Lecturer on Dermatology in the University of Vienna. Translated by ALFRED PULLAR, M.D., Physician to the East London Hospital for Children. London: Robert Hardwicke. 1871.

IT is observable amongst recent dermatologists in this country, that their work, admirable in other respects, lacks that scientific basis, that dependence on microscopical research, which the difficulty and obscurity of skin-diseases often demand. Of the Vienna school, rendered famous in the eyes of dermatologists by Hebra, this cannot be said; and the volume now before us is a further proof of the high character of its work. Dr. NEUMANN is at present Lecturer on Dermatology in the Imperial University of Vienna, and was for many years the pupil and fellow-worker of Professor Hebra in the General Hospital of that city. The author, in the first place, very naturally, but also from independent observation, has adopted many of Hebra's views. But the value of the treatise is by no means to be limited to a representation of the views and practice of this distinguished professor; for Dr. Neumann has for many years worked laboriously and with marked success, more especially at the anatomical changes in skin-diseases; and the results of his labours are embodied in the present volume. In publishing the results of his own microscopical work and practical experience, the author gives evidence of an intimate knowledge of the work of others. The pages of the book are richly illustrated with woodcuts, which have been beautifully executed by Dr. C. Heitzmann. He has thus produced a text-book which, beyond all others, places the reader *au courant* with the scientific dermatology of to-day.

Such is the style of book which Dr. PULLAR presents to the profession in an English form. The translator, in fulfilling his task, had the advantage of obtaining from Dr. Neumann for translation the sheets of the second edition as they passed through his hands, and also casts of the original woodcuts. Dr. Pullar has thus been able to publish Dr. Neumann's work shortly after the appearance of the German edition. The volume, although well got up in other respects, in shape will not commend itself to English readers; but this is a small matter, and is, we imagine, due to the size of the woodcuts, which are produced, as we have said, from the originals. Dr. Pullar is to be congratulated on the quality of the translation, which is free from verbiage and is evidently meant to be as literal as possible, without interfering with the phraseology of our own language. He equally deserves the thanks of the profession for producing a work in an English form, which pre-eminently above all others with which we are acquainted comprises a brief and complete account of exact modern research in dermatology.

BEQUESTS, ETC.—The Hon. Caroline Mary Vernon Harcourt, of Newsells Park, Herts, has bequeathed £1000 to the Royal Hospital for Incurables, Putney.—General Thomas M. Taylor, of the Indian Army, has bequeathed £50 to the Middlesex Hospital.—The Manchester Royal Infirmary has received £981, and St. Mary's Hospital £490, under the will of Miss Hannah Ball, of Bowden.—Mr. W. Welch has bequeathed £200 to the Children's Hospital, Birmingham.—The Sheffield Public Hospital and Dispensary has received £100 (less duty) under the will of Mr. Thomas Fisher, of Norwood Grange.—E. N. has given a third £1000 to St. Mark's Hospital for Fistula.

REPORTS AND ANALYSES.

CHAPMAN'S ENTIRE WHEAT-FLOUR.

LAST year, at the Newcastle meeting of the British Medical Association, a preparation was very prominently brought under the notice of our members by a well known hospital physician, which he strongly recommended as a dietetic article. It consisted of a very thoroughly ground and careful preparation of wheaten flour, in which the views of Brinton and others of the best dietetic writers have been followed, by retaining the entire nutritive value of the grain. It is a very thoroughly ground whole meal. Brinton, Lankester, Letheby, Mège-Mouries, and others, agree that in the ordinary grinding of wheat, by throwing away a large proportion of the phosphatic constituents contained in the outer envelope, we do virtually waste a large portion of what is most valuable. Nor, indeed, can there be any question of the dietetic importance of the earthy phosphates, and of the cereal in which is thus wasted. In ordinary whole meals, however, they are present in a form which is mechanically irritating to the alimentary canal; and for this, among other reasons, brown bread, for example, has never come into universal use. This objection is removed by Chapman's process. Analysis has shown that the flesh-forming gluten and the bone-forming phosphates are present in Chapman's Entire Wheat-Flour in unusually large and important proportions; but it is free from any mechanically irritating effect even upon weak digestive organs. The value of such a meal is very obvious; and it would be a national advantage that it should come into universal use.

VACCINATION-SLEEVE.

MR. W. MILLER, of Leicester Square, has devised a sleeve for protecting the arm from friction during the process of vaccination. A perforated zinc shield, formed somewhat in the shape of an arch, passes round two-thirds of the arm, the remaining third being encircled by a band made of waterproof cloth. To the upper part of the shield is attached a series of tapes for fastening to the dress and round the neck respectively.

BUNION-SPRING.

A VERY light, ingenious, and effectual little instrument under this name, for the relief of bunion, has been manufactured by Mr. W. Miller, of 29, Leicester Square. The instrument consists, as will be seen in the diagram, of two pads, one of which presses the great toe



outwards, whilst the second presses against the second toe, which forms a fulcrum for the instrument to work upon. These pads are acted upon by wire-springs passing over the instep. That marked A is the acting spring; the other is merely added for the purpose of fastening and steadying the instrument. To the ends of these springs are affixed ribbons, which, when the instrument is applied, are passed round the foot and fastened like a sandal. The instrument is brought into action by drawing the ribbon attached to the spring A as tight as can conveniently be borne. This instrument is a great improvement on the more cumbrous and costly and less efficient instrument for the purpose, hitherto in general use, and figured in the handbooks of orthopaedics.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 14TH, 1871.

MEDICAL RELIEF OF THE POOR.

THE question of hospital out-patient administration has once more come prominently before the public. In the medical profession itself it has been for some time a subject of continued debate. In one form or another, it has been constantly under discussion for years past; and a reference to the pages of the JOURNAL will show that neither at our Branch meetings, nor at our great central gatherings, has it been passed over in silence. But it is only occasionally that it assumes a shape which attracts public attention, and secures for it a place in the daily newspapers.

On the 30th ult. and 4th inst., the Rev. Mr. Kitto addressed two letters to a public paper, in which he pointed out clearly the abuses of our out-patient system, and suggested various remedies. The cue thus given has been followed by other correspondents, and the subject has been considered from several points of view. All who are interested in the question will follow the discussion with pleasure. But there is one circumstance to which we desire to draw special attention, and it is this. In his second letter, Mr. Kitto announces that the out-patient department of the Poplar Hospital has been closed altogether. This is both a very important and a very significant fact. It is very significant, because it shows the gathering strength of public opinion; and it is very important, because it is the first step in a course which we believe, with some modification, will sooner or later have to be followed by all the hospitals.

The out-patient departments of our hospitals are of comparatively recent development. Before the alteration of the Poor-law in 1834, they existed only on a very limited scale. It was the odium which attached to the new Poor-law which led to their rapid growth, and now they have become so efficient and so popular that they attract a great number of persons who have no claim upon charitable relief of any kind. But such a state of things is unjust towards the medical profession and demoralising to the applicants themselves; and this it is which forms the double aspect of the abuse which is now engaging the attention of the public. The public have an interest in upholding the moral character of the population, and in seeing that their charitable gifts are not misapplied; and the medical profession has to guard itself against giving gratuitous attendance to those who are well able to pay for it.

But the Poor-law of 1834 has now been amended, especially in regard to the treatment of the sick. It bids fair to become more like what it ought to be, a great national charity administered in a spirit of wise and far-seeing economy. It is now no hardship that pauper patients should be expected to apply to their parish doctor; and we are all agreed that those who can afford to pay for medical attendance ought to be encouraged to be self-reliant. But if these two classes were subtracted from the crowds who now throng our out-patient waiting-rooms, only a comparatively small balance would remain.

Now the authorities of the Poplar Hospital seem to have judged that in their own case this balance would be so small that they were justified in shutting up their out-patient department altogether; and no doubt they have judged rightly. As long as our hospitals continue to offer almost indiscriminate relief to all comers, so long will there be among their out-patients many unsuitable applicants. "Whatever you pay a man to do," says Archbishop Whateley, "that he will do; if you pay him to work, he will work; and if you pay him to beg, he

will beg." This is a principle which holds good with regard to other payments besides those which are made in hard cash. If men are bribed to be dependent by the offer of gratuitous relief, they will rapidly become dependent; and this is the evil which our present out-patient departments are in danger of producing, if they have not already brought it about.

It is to meet this evil that the authorities of the Poplar Hospital have adopted the vigorous measure to which we have alluded, and closed the doors of their out-patient rooms altogether. But they could hardly have acted as they have done unless the neighbourhood had offered facilities whereby the poor could receive medical relief on terms suited to their wages. The "Poplar Medical Association" has existed for thirty years, and has taken firm root in the district. It is in effect a provident dispensary; and here those who are above the grade of paupers, but who are yet unable to pay the charges of a local practitioner, can obtain good medical attendance and medicine on payment of a few pence per week.

In both the points put forward by Mr. Kitto, we believe him to be advocating the soundest principles of reform. We want more provident dispensaries to meet the requirements of the industrious poor; and we want to see the out-patient departments of our hospitals reduced to something like the limits which they occupied before the revision of the Poor-law in 1834, and their benefits restricted to those applicants who properly have a claim upon charitable relief.

VACCINO-SYPHILIS.

WE have received from Dr. Cheadle of St. Mary's Hospital, London, the following details bearing upon this highly important subject.

In March last a strong healthy girl, aged 24, was vaccinated with lymph procured from one of the London hospitals. A fortnight afterwards she came to consult Dr. Cheadle about the state of her arm and her general health. He found great redness and tenderness around the seat of vaccination, and the arm was much swollen, even below the elbow. The vesicular marks—four in number—had only partially healed, but there was nothing suggestive of syphilis in the appearance of the sores. The constitutional disturbance was no more than naturally resulted from the inflammatory action going on. The patient went out of town, and he did not see her again for nearly five months, when she again consulted him about her arm, which still troubled her. On examining it, he found the site of each vesicle exactly occupied by a circular tubercular elevation of a dull red colour with a bronzy tint: it presented, in fact, the exact, the perfect, type of a tubercular syphilide. The surrounding parts were tender, somewhat swollen, and hard, the immediate neighbourhood of one tubercle, larger than the rest, especially so; and this elevation was also softer to the touch and more gelatinous in appearance, as if on the point of breaking down into ulceration. The patient told him that she had been strong and well up to the time of vaccination, but that she had been ailing ever since, troubled with headache, and without appetite. Her face was of the muddy complexion suggestive of syphilitic cachexia. Dr. Cheadle learnt that the vaccination "sores" remained open for several weeks after he had seen them; but there had been no sore-throat, nor any eruption on any other portion of the body.

Fifteen grains of iodide of potassium were ordered to be taken in decoction of sarsa three times a day, and when he saw the girl again three weeks afterwards, the improvement which had taken place was most remarkable. The tubercles had nearly disappeared; the large one, which had threatened ulceration, having healed with the rest. The tenderness and hardness of the surrounding parts had gone; appetite and the feeling of health and strength had returned. At this time (three weeks ago) the patient, thinking herself entirely recovered, left off taking the medicine, and the tenderness of the part and the cachexia have in some degree returned. The eruption, which had been disappearing rapidly, remains in *statu quo*—slight, but stationary.

Is the eruption, Dr. Cheadle asks, in this case of syphilitic origin?

Its appearance, its course, the accompanying cachexia, and the rapid recovery under iodide of potassium after it had existed four or five months without change except for the worse, form strong presumptive evidence in favour of such a conclusion. He has had special opportunities at the Hospital for Sick Children for observing a large number of cases of eruptions following vaccination, but has never seen one so typically syphilitic in appearance as this. On the other hand, it must be remembered that there have been as yet no general secondary symptoms, and that the first local sores were not proved to be of a syphilitic character. When first examined, after the vaccine disturbance had passed away, the local eruption was that of secondary tubercular syphilis. The interesting question then arises, whether the external efflorescence of the syphilitic virus introduced into the body in vaccination may not sometimes be limited to the exact area to which the local action of the vaccine matter itself is limited. And is it not possible that, since experiments have shown that secondary syphilis can be transmitted by inoculation without the production of primary phenomena, the primary sores do not necessarily follow the introduction of syphilis by vaccination? It is consistent with what we know of the transmission of the disease, to expect that inoculation from a vaccinifer in the later stages of congenital syphilis—a condition in which the existence of the disease is easily overlooked—would produce different results from those set up by matter taken during the primary efflorescence. In the present instance there could, Dr. Cheadle believes, be no reasonable suspicion of previously existing syphilitic taint. The character and position of the patient, whom he had known for several years, render this in the highest degree improbable. If the eruption were specific, the poison was introduced by vaccination. The vaccinifer cannot be traced. The lymph used had been preserved upon points, and the individual source of supply could not be ascertained. Dr. Cheadle informs us that extreme care had, however, been taken in the selection of lymph-bearers, and all points which showed the slightest blood-stain or opacity in the lymph were rejected and destroyed as unfit for use.

DR. J. CRICHTON BROWNE has issued cards for a medical *conversazione*, to be held in the hall of the West Riding Asylum, Wakefield, on the evening of Friday, Oct. 13th, at eight o'clock.

THE total number of students in the University of Vienna in the winter session of 1870-71 was 4137, of whom 1653 were medical. In the summer session of 1871, there were 1460 medical students in a total of 3664.

A TELEGRAM from Constantinople, dated Saturday, says:—"Three cases of cholera were reported yesterday, but none to-day. The epidemic may be considered at an end. It has only proved fatal in one hundred and fifty cases."

THE mortality in Paris is still diminishing. The return for last week shows 764 deaths, including thirty from typhoid fever, fifty-three from bronchitis, thirty-nine from diarrhoea, being a great diminution; forty-three deaths from pneumonia were registered, thirty-four of dysentery, and four cases of infantile cholera.

CHARING CROSS HOSPITAL.

IN consequence of the promotion of Dr. Silver as Physician to the Hospital, a vacancy is created in the appointment of Assistant-Physician. Dr. Poore, who at present fills the post of Medical Registrar to the Hospital, will most likely be the successful candidate for the vacant appointment.

"THE PSYCHIC FORCE."

MR. CROOKES has continued his experiments on the psychic force; and, by the aid of improved apparatus, he has registered in further detail, and by automatic instruments, the movements of a heavy plank upon which Mr. Home and another person not named operated. Their

hands were placed in a metal cage suspended in bowls of water so fixed in contact with one end of the plank that he believes it clearly and demonstrably impossible that they could have exerted any pressure on the plank. The dynamometer nevertheless registered a pull on the distal end of the plank amounting, in some instances, to some pounds weight. It is to be regretted that Professors Stokes and Sharpey, or some other equally eminent physicists, do not consent to investigate these experiments, which they have been invited to scrutinise. Mr. Crookes complains that his papers describing them have been refused at the Royal Society, of which he is a member.

A NEW THEORY OF DISEASE.

THE Sanitary Committee of Wolverhampton have laid before the Town Council a detailed report on the sanitary state of that important town. It presents a dark picture indeed. There is the old sad story of filth and neglect—excrement-sodden soil, air, and water. There has been a recent considerable rise in the mortality; and one of the Council expressed a strong opinion as to the origin of this mortality, which is interesting to those who are now discussing the origin of specific diseases. Ordinary persons attributed them to the foul cesspools and middens, and the polluted soil and water, which, it had been prophesied, would produce this effect. There has been a local epidemic of small-pox; and its extension was attributed by Mr. Turton and Mr. Collins, two medical members of the Council, to the fact that there are no means of isolating the existing small-pox cases, and no fever or small-pox conveyances. It was the conviction of Councillor Willcock that it was not the nuisances themselves which caused the mortality, but the publication of the reports describing them. The mortality had doubled during the last three months, in which these reports were published, or, as he put it, "since they had stirred up the nuisances," which had "a detrimental effect upon the nervous system of nervous people." This new development of the theory of a variety of "psychic force" did not, however, we are glad to say, find favour with the majority of the Council. We are glad to see that there is reason to hope that the rulers of Wolverhampton will provide themselves with a medical officer of health, and try to save the lives of the people, without fear that their efforts to clean the cesspools and to purify the wells will injure the nerves of the most sensitive of "nervous people" or the blindest devotees of zymotic poison.

ROYAL COLLEGE OF SURGEONS.

THE Hunterian Museum has just received a valuable addition through the liberality of Mr. Francis Kiernan, F.R.S., a late member of the Council of the College, who has presented the whole of his museum of wet and dry preparations. This collection is especially rich in illustrations of the structure, normal and morbid, of the liver; for his discoveries in which important organ, he justly obtained the Fellowship of the Royal Society. We congratulate Mr. Kiernan and the College, the one on his wise liberality, and the other on a valuable addition to the treasures of the Hunterian Collection.

THE HEALTH OF LONDON.

THE deaths in London last week were 83 below the average, the total number having been 1,283. The deaths from diarrhoea have steadily declined from 487 in the week ending August 26, to 80 last week; this, however, was more than double the number referred to the disease in the corresponding week of 1870. Of the 80 cases last week, 72 were of infants under two years of age. The fatal cases of small-pox, which in the three previous weeks had been 57, 89, and 51, were last week 72, or 57 above the corrected average number in the corresponding week of the ten years 1861-70. There were 38 deaths from scarlet fever, 5 from diphtheria, 36 from whooping-cough, and 32 from different forms of fever (of which 4 were certified as typhus, 21 as enteric or typhoid, and 7 as simple continued fever). The mean temperature was 51.9 deg., or 1.4 deg. below the mean temperature of the corresponding week in fifty years.

MEDICAL OFFICER OF HEALTH FOR ISLINGTON.

WE learn with sincere pleasure that Mr. Haviland, author of the lectures on Medical Geography, to which we have more than once called attention, has been elected Medical Officer of Health for Islington, in the room of Dr. Ballard. Mr. Haviland had worthy competitors, and either of the two gentlemen selected with himself for final competition, would have done honour to the office. But they are younger men, and opportunities will not be wanting for their just promotion, for which we sincerely trust they will not have long to wait. Mr. Haviland has not only rendered great services to public medicine, but has made great sacrifices for it. In any other country, he would have had, long before this, assistance and support in his labours from Government funds, and suitable opportunities for continuing his valuable and costly work. We must take the disadvantages of our by no means paternal form of government with its advantages, and look to local self-government to do, as far as it can, the work which a centralised government often finds more easy. It is no great prize which has fallen to Mr. Haviland—a place of much labour and responsibility and modest remuneration. But it suits the bent of his mind and his peculiar capabilities, and we congratulate him and the good people of Islington on his election as their Medical Officer of Health.

VACCINATION PROSECUTIONS.

AT the Southwark Police-court, William Dwyer, Charles Edwards, and Richard Worrell, labourers, were summoned for neglecting to have their children vaccinated. Notices had been served on all the defendants several times, the first two years ago. A short time since, the children had small-pox, and were removed to the Small-pox Infirmary at Stockwell, cured, and restored to their homes. Worrell said he was guilty in not having had his children vaccinated; but the small-pox was brought into the house, and his wife and two other children who had been vaccinated caught it, by which he was put to considerable expense. Edwards said his child was delicate, and he was afraid it would injure her: all his other children had been vaccinated. Dwyer expressed a strong antipathy to vaccination; about nine years ago, he said, his sister had a child vaccinated, from which the arm and side festered so much that it lost the use of its side. Each defendant was fined five shillings and costs; the magistrate remarking that if they had not suffered so much from this dreadful disease, he should have imposed the full penalty.

THE COMING SHOWER OF GOLD.

MR. GODWIN has a benevolent friend who is preparing to descend upon London in the form in which Jupiter made his way to Danaë; and the modern Danaë, we can answer, will be as anxious to embrace him as the ancient. As President of the Health Department at the Social Science Congress, in his address this week, he said: "I have for some time been authorised by an inhabitant of London to state that he is willing and ready to appropriate to the improvement of the health and condition of the poorer classes of the metropolis a sum equal to that given by the late George Peabody for a similar purpose—or, say, half a million of money—when he can see a mode of satisfactorily effecting this without fear of pauperising the classes he seeks to benefit. Means were taken to make this offer known to a limited extent, and a large number of suggestions have been sent to the proposer; but he is not yet satisfied as to the course that can wisely be taken." This opens a wide field for the ingenuity of those who are cognisant of the dreadful waste of health and happiness amongst the poor. Looking to the undoubted fact that the greatest sum of human misery in modern society is due to intemperance, we could wish that some efficient means could be devised for rendering the interest of this sum available for a serviceable and effective crusade against that perennial source of degradation, disease, death, and moral ruin, among the poorer classes. We should be a happy people indeed, if we could master this growing curse, and quell this rising flood which steeps a large proportion of our millions to the neck in crime, in misery, and in the slough of physical and moral death.

He would be a happy and a never-to-be-forgotten benefactor of his race who could help us to make a great beginning in the strife. The metropolis does not suffer alone. It is impossible to read without an almost hopeless sinking of the heart, that calm, clear, pitiful, and sincere report which Drs. Parkes and Sanderson have just presented to the Town Council of Liverpool, in which they describe the irresistible mass of evidence which has led them to the conclusion, that at the bottom of the fearful excess of mortality in that wealthy and intelligent city lies this one wide-spreading curse, intemperance. The people herd together like brutes; they couch at night in flocks in miserably crowded and fetid rooms; they have neither food, furniture, nor clothing; their children are killed off in hecatombs by exposure, slow starvation, and neglect, because husbands and wives, fathers and mothers, earning regularly from twenty to twenty-seven shillings a week, and often much more, waste all their substance in drink—brutify themselves with alcohol; and sink habitually by tens of thousands into the most fatal disregard of the habits of life necessary to health, morality, and public safety.

SALFORD HOSPITAL MEDICAL SOCIETY.

THE inaugural dinner at the close of the first year of this Society's existence took place on Thursday evening, the 28th ultimo, at the Cattle Market Hotel, under the presidency of Mr. Boutflower, the senior member of the hospital staff. About twenty-five practitioners of the borough were present, including Mr. Stocks, the Honorary Secretary of the Society, to whose indefatigable exertions the Society mainly owes its formation. The usual toasts were felicitously proposed and responded to by Mr. Boutflower, the Vice-President, Mr. Somers, Mr. Stocks, Mr. Hall, and others. Some vocal and instrumental music by the more harmoniously gifted members contributed much to the enjoyment of a very pleasant and desirable *réunion*.

THE LEGALITY OF NECROPSIES.

THE authorities of Guy's Hospital have again been summoned before the magistrates, accused of having opened a body without the permission of the friends of the deceased. It may be remembered that, to obviate the constant recurrence of such complaints as that now before the public, a rule was made by the Committee at the Hospital to the effect that they reserved to themselves the right of making *post mortem* examinations when deemed necessary. If the case were not likely to afford any very valuable pathological information, and the friends were much opposed to the examination, it was provided that a necropsy would not be insisted upon. This rule was printed and suspended in the admission-room, for the information of patients and their friends. We repeat that it seems to us an eminently just and judicious rule. Humanity and science are alike interested in the proper scrutiny of the conditions of hidden organs of those who have died of disease. It is a proper rule that patients dying in public institutions should render this last service to the humanity which has succoured them. Nothing but an unworthy and ignorant prejudice opposes it.

ST. GEORGE'S HOSPITAL: TESTIMONIAL TO DR. THOMAS JONES.

DR. THOMAS JONES, who has for several years discharged in a very able and acceptable manner the duties of Resident Medical Officer to St. George's Hospital, has, on commencing private practice in London, received very gratifying testimony to his worth and popularity in the shape of a valuable timepiece from the nurses, and a gold watch from friends and students of the hospital. The latter was accompanied by a note from the Rev. Mr. Rooke, the Chairman of the Committee, on behalf of the subscribers, requesting his acceptance of the gift as a mark of their esteem and regard, and of the appreciation by those of them who had been students in the hospital of Dr. Jones's uniform kindness and the advantages they had derived from his instructions in the wards. A warm expression was also conveyed of their hearty good wishes for his success in the professional career on which he has just entered.

OVARIOTOMY IN MANCHESTER.

OUR Manchester correspondent informs us that in 1870 there were two cases of ovariectomy performed at the Royal Infirmary of the city, both cases proving fatal; and that this year there have also been two cases, each patient making a rapid recovery—Mr. Southam's last case, indeed, leaving the hospital within five weeks of the operation. In this case Macleod's clamp was used, and one catgut-ligature. At St. Mary's Hospital, there was in 1870 not a single case of ovariectomy; this year Dr. Lloyd Roberts has already operated five times with an uniformly successful result. He attributes his success to the fact that he has in every case succeeded in extracting the tumour through a small incision, varying from two to five inches, and to the antiseptic plan of dressing which he has adopted. Though the external wound has been so small, the tumours in some cases have been very large and heavy, varying in weight from 19½ lbs. to 43 lbs.

COTTON-WOOL RESPIRATORS.

ONE or two of the medical men in the neighbourhood of Manchester have adopted the plan of wearing a cotton-wool respirator during their visits in cases of contagious disease—the respirator being applied on entering, and removed on leaving, the house. As, however, the nostrils are still only guarded by the natural filter afforded by the *vibrissæ*, it is doubtful whether this will prove an effectual barrier to the entrance of the poison. It does not seem unlikely, nevertheless, that the practice will become general should cholera assume serious proportions. It must be always remembered that, even though the respirator may afford some protection to its wearer, its use will not obviate the necessity of care on his part against becoming a means of conveying contagious disease.

ASSOCIATION OF GERMAN NATURALISTS AND PHYSICIANS.

THE forty-fourth annual meeting of this Society has lately been held in Rostock. It has entered on the fiftieth year of its existence, having been founded in 1822 by Oken, who brought together twenty-one naturalists in Leipzig. Since that time, a meeting has been held each year, with five exceptions. In 1831 and 1832, the meetings were suspended on account of the prevalence of cholera; in 1848, on account of political disturbances; and in 1867 and 1870, on account of war. The recent meeting was not so numerously attended as usual, many of the members having been probably detained at their homes through a fear of their professional services being required on account of the occurrence of cholera. One of the principal features of the meeting was an eloquent address by Professor Virchow, on the position and prospects of natural science in the new national life of Germany.

THE ITALIAN MEDICAL ASSOCIATION.

THE programme of the meeting of the Italian Medical Association, now being held in Rome, contains notice of discussions on several interesting topics. The first meeting was to be held on the 15th for the transaction of some preliminary business, among which was the nomination of a committee to visit the sanitary institutions of the city. Among the subjects to be discussed on subsequent days, is that of the reorganisation of medical education in Italy. Discussion is to take place on the questions, *inter alia*, whether general (secondary) education should be uniform in all cases, or should be modified for those who are about to enter the medical profession, and if so, how it should be modified; whether professional study should be uniform in all the higher medical schools of the kingdom, or whether any reasons exist for allowing special exceptions; and how far freedom of medical teaching may be useful in Italy. Reports will be presented, and discussions raised, on the following subjects: The surveillance of prostitution, and the means of preventing the spread of syphilis (this discussion will be held *in secret sitting*); on the noxious influence of rice-fields both on the surrounding population and on the inhabitants of places at a distance, exposed to winds blowing in a direction from the fields; on the advisability of adopting a tariff of fees for medical and surgical attend-

ance, consultations, and operations, and of submitting such tariff to the approval of the government. The Executive Committee will take the sense of the meeting on the subject of the publication of an ethical code; and, if the proposal be approved, a professional and moral code will in the course of the next six months be drawn up and presented for the approval of the several committees, as the expression of opinion of the medical profession. The Committee will also, on the suggestion of Dr. Bargiotti, submit the following proposals: 1. That a course of instruction in practical hygiene should be given in every technical school in Italy, with the object of pointing out the means of preserving operatives from the dangers inherent to various branches of industry and manufacture, and of stimulating them to devise means of obviating these dangers; 2. That the masters and mistresses of elementary schools, as being by law pupils of the normal schools, should be required to attend every year, for a period of time to be determined, a course of private hygiene delivered by medical men, so that they may have the necessary knowledge to enable them to impart the instruction to the pupils entrusted to them—for instance, by means of copy-slips containing easy and comprehensive maxims of practical hygiene.

THE CONTAGIOUS DISEASES ACTS.

THE question of the Contagious Diseases Acts was discussed this week at a meeting of members and associates of the Social Science Congress, Mr. H. N. Mosley, Professor Amos, Mr. Littleton of Devonport, the Rev. Dr. Rigg, the Rev. Dr. Hooppell, Mr. Mundella, and Mrs. Butler, spoke in favour of the repeal of the statutes; and Mr. J. Armstrong, Mr. G. W. Hastings, Mr. Alsager Hill, and Dr. Waddilove, advocated their continuance. Finally, a resolution was carried to the effect that the Council be requested to urge upon Government the desirability of repealing the Acts, and of amending the laws relating to offences against women. During the proceedings, a gentleman drew the attention of the chairman to the fact that a number of ladies were present. The chairman said that it was intended that ladies should be there. The gentleman then said that, as the ladies would not go, he should; and, "amidst laughter and shrill hisses," he retired.—The annual meeting for the repeal of the Contagious Disease Acts was held at Leeds on Saturday afternoon. Mr. Mundella, M.P., who was one of the Royal Commissioners on the Acts, contradicted the statement made by the Home Secretary in a late speech in respect to the change brought about by the working of the Acts in Devonport. Mr. Bruce had, he said, evidently confused the information that had been forwarded to him, for he (Mr. Mundella) was sure that Mr. Bruce was the last man who would wilfully make a misstatement. Mr. Mundella expressed a firm conviction that the repeal of the Acts would soon be accomplished. Mrs. Josephine Butler and others addressed the meeting, and resolutions in accordance with the principles of the society were adopted.

THE HAMPSTEAD HOSPITAL.

THE Hampstead Small-pox Hospital inquiry is apparently likely to last for at least another week—perhaps another fortnight. The case for the complaining medical officers is finished, and that for the managers is opened. We abstain from expressing any opinion whatever upon the case as presented. But, whether the charges brought have been justified or not upon the showing of those who brought them, we cannot but regret that the circumstances have involved these three young men in a heavy expenditure. They now declare themselves to have already expended four hundred pounds on the lawyers whom they have employed, and to be unable to bear the expense of further legal advice in cross-examining the witnesses of the managers. It will be very important to the interests of justice, and for the satisfaction of the public mind, that they should have this assistance. We see with pleasure that the managers have petitioned the Poor-law Board to allow their accusers legal assistance; and we think this is a case in which the public will not grudge the expense. If the Poor-law Board feel unable to pay the expenses of those who are attacking the administration of the Hampstead Hospital, we trust that the public will subscribe

enough for the purpose. If the final verdict be adverse to Messrs. Aikman, Greaves, and Kynaston, the moral obloquy which will attach to their conduct will be hard enough to bear; and in any case it would be regrettable that they should have to suffer in pocket.

REGISTRATION OF STUDENTS.

THE result of the registration of students pursuing their professional studies at the metropolitan medical schools will not be brought to a close at the College of Surgeons until Monday next. At the hour of going to press, we have ascertained that the numbers of new entries already registered are as follows:—Guy's, 78; St. Bartholomew's, 77; University College, 59; St. Thomas's, 48; King's College, 35; London, 23; St. Mary's, 20; Middlesex, 10; Westminster, 9; St. George's, 8; and the Charing Cross, 8. The total number registered up to Thursday evening was 1,039. The actual numbers of new entries at the various schools as returned to us by the respective officials of the schools up to Thursday morning are as follows:—St. Bartholomew's, present year's entries, 88. University, new entries, 81. St. Thomas's, first year, 54; total new entries, 78. Guy's, total entries, 77. King's College, first year's students, 40; St. George's, new students, 26, including 5 from Cambridge University. St. Mary's, number of entries, 23. Middlesex, first year, 14; total new entries, 18. Westminster, fresh entries, 13. Charing Cross, first year's men, 11.—The entries at the provincial schools are:—Manchester, new men, 32. Liverpool, first year's men, 23. Bristol, first year's men, 17.

THE THERMOMETER IN GUNSHOT INJURIES.

AT a recent meeting of the Academy of Sciences in Paris, M. Demarquay stated that he had found that wounds from fragments of shells or from bullets, during the last siege of Paris, were attended with the greatest amount of lowering of temperature in persons who were, when wounded, in a state of intoxication, and who had long been of intemperate habits. In all cases where the temperature fell below 95 deg. Fahr., the patients died, whether operated on or not: if an operation were performed, there was no reaction. In six cases of penetrating wound of the abdomen, the temperature fell rapidly to 95 deg. and even to 93.2 Fahr. He also called attention to the fact which had already been pointed out by Billroth, that severe and slightly extensive burns are most frequently attended with a considerable lowering of the temperature of the body. It is M. Demarquay's intention to prosecute further researches on the causes of lowered temperature in certain conditions of disease.

SCOTLAND.

CRAIG *versus* JEX-BLAKE.

MISS JEX-BLAKE was on Monday presented with a cheque for the sum of £1030:12, the amount of the Jex-Blake Fund subscribed to defray the costs of the action brought against her by the student Craig. The presentation took place at a public meeting in the Council Chambers, Edinburgh, the Lord Provost in the chair. The honorary Treasurer, Miss Louisa Stevenson, stated that, after all expenses had been paid off, a surplus of £112:19 remained. As the subscription list had been closed in August, she had been obliged to return a large number of sums sent to her since. In thanking the subscribers, Miss Jex-Blake in the course of her remarks, and after referring in some detail to the action brought against her, said, "I hear that some of our opponents have been boasting that they have heard the last of the lady students; that our cause is now hopelessly lost. I am no prophet; but I think I might venture with some confidence to predict that never has our cause been so nearly won; that almost certainly before twelve months have passed over our heads, we shall, thanks to this same British love of fairplay, this constant sympathy which never fails the weaker side when its cause is a just one, have obtained even in this very university everything that we need and desire." The surplus sum which had been handed to her Miss Jex-Blake proposed to add to the fund for the purpose of founding a future hospital for women in Edinburgh.

THE MEDICAL INSTITUTIONS AND PREVAILING DISEASES OF VICTORIA.

[FROM A SPECIAL CORRESPONDENT.]

AFTER having spent a few months at the Antipodes, I think it may not be uninteresting to many of the readers of this JOURNAL if I describe some of the medical institutions of the colony of Victoria, which in wealth and population is by far the most important appanage of the British crown lying entirely in the southern hemisphere. To many the name Victoria conveys little more than a hazy notion of gold-fields and sheep-runs; and to eight out of ten of the inhabitants of our island the information that Melbourne is quite as large a city as Edinburgh will come as a new and striking fact. With the political, commercial, or social aspects of Victoria I am, however, in no way concerned, except in so far as they bear at the present moment on the condition and status of the medical profession in it, on the extent and efficiency of the public and private institutions for the medical relief of the sick or insane, and on the prevailing diseases.

MELBOURNE HOSPITAL.—Among the various institutions for the alleviation of the sufferings of the sick poor, none occupies a more honourable and important position than the Melbourne Hospital, founded in 1848. The great flood of immigrants in the first days of the gold fever crowded its small wards with hundreds of the worst possible surgical cases: and, as I was informed by some of the oldest surgeons, a very large proportion of those cases did badly, and no one who bears in mind the peculiar circumstances of those days can wonder at it. Men were then living in a constant condition of extreme nerve-tension, fighting and struggling for gold as for their very existence, with bad and deficient food, many of them literally living upon alcohol, or rather upon poison diluted with water, and exposed under canvas to every vicissitude of weather; so careless did they become even of their own lives that they would take no precautions, and the result became inevitably that which the Melbourne surgeons were compelled frequently to witness after even the most trivial operations.

There unfortunately are no accurate statistics of this period of the hospital's existence, and it is only upon the general impressions of the surgeons who had the greatest experience of that strange time that I rely; but how suddenly the resources of the hospital were strained to the utmost extent may be readily recognised by a glance at the total number of in- and out-patients relieved in the year of the foundation—1848—as compared with those of the first years of the gold-rush, 1853 and 1854, when the numbers were 187 in the first, and 1,748 and 3,164 in the two latter respectively. The hospital is now enormously increased in size, as may be easily seen from the records of the year 1870, which show that the number of patients relieved had then reached on an aggregate nearly 25,000. The building is, however, often necessarily overcrowded, over four hundred beds having been occupied at one time, while the cubic capacity is barely sufficient for more than two hundred and fifty.

It is a large red brick edifice, standing very centrally, and at no great distance from Bourke Street, one of the principal thoroughfares of the city; but unfortunately it has not sufficient vacant space about it—space which at the time the hospital was built was scarcely of any value, but now could not be had except for enormous sums. The older part of the hospital, having been built in 1848, is naturally on the corridor system, the central block having a couple of wings at right angles to it. The lower storey of this central part is purely administrative—offices, apartments for resident officers, etc.; but there are a couple of storeys above which are separated into two long and narrow wards by the corridor. The windows are small and open at the top, the frame of this portion being so adjusted as to direct the current of air upwards. On the opposite wall we find a fireplace, two doors, and several small windows, so that there is as good cross-ventilation as can be had on the corridor system. These wards were overcrowded, there being twenty-two beds in each, but they were very clean, the floor being waxed and the walls oil-painted, and rendered cheerful by some lithographs and prints. The present operating theatre is a small room cut out of one of these central wards, and neither spacious nor well lighted; but the plan of a new one has, I understand, been already approved of by the building committee. The west wing, at right angles to this central pile, has lately been greatly improved by the removal of the corridor between the wards, which have thus been thrown into one wide room, and by the closets and baths having been erected exterior to the wards, instead

of in them as previously. The ward is thus free on three sides, and is, in consequence, both more airy and better lighted; but four rows of beds (ten in each row) cannot be considered a desirable arrangement if possible to avoid it; and besides, in the erection of the closets and baths no attempt has been made to introduce a cross-ventilated passage between them and the ward door, so that virtually they may still be said to be in direct connection with the ward. Into the eastern wing the same improvements have not been introduced, and it is cut up into a number of small wards and rooms, one of which is used as a female lock hospital.

The finest and largest wards in the hospital are a couple of handsome two-storeyed pavilions, only recently constructed, to the east of the main building, and only connected with it by a covered passage. These wards face east and west, and the entrance and staircase are at the northern extremity. The wards themselves are very large and capacious, with opposite windows, and a great number of grated wall ventilators. The lavatory, bath-room, and closets opened off one side of the southern extremity of the ward, while at the other there was a small separate room for two patients. Nominally there are only twenty-five beds in this ward, but this number is frequently exceeded. The walls were oil-painted, the floor well waxed, and everything looked clean and neat, as was indeed everywhere the case throughout the whole building; but there was, to my mind, one great fault—the roof was made of wooden beams, varnished, it is true, but none the less capable of rapid saturation with septic germs, and fatal to the perfection of the splendid pavilion. Those four wards have only been a short time in use, and I was assured by one of the surgeons—Dr. Barker—that no cases of pyæmia or erysipelas had as yet occurred in them.

There is another completely isolated block of buildings for out-patients, the lower portions of which, besides being very well laid out for their systematic reception, contains a large dispensary. The upper storey is an ill-contrived and badly ventilated ward, containing female surgical patients and children. There is a small separate dead-house and *post mortem* room, but no special pathologist has been appointed, as each physician or surgeon is supposed to make the necropsies on his own patients; but lately, I believe, an office of Curator of a Pathological Museum has been created in connection with the University. The staff consists of five physicians, one assistant-physician, and eight surgeons.

THE ALFRED HOSPITAL, so named in commemoration of Prince Alfred's visit to Melbourne, is situated on a tract of land granted by government, off the St. Kilda Road, about two miles from the centre of the city, and not very far from the bay. The site, though airy at present, and unenclosed, cannot be called a good one, as it is only very slightly elevated above the sea-level, and, indeed, the greater part of the ground between it and Hobson's Bay is a permanent swamp. This is not of so much consequence as it might be, as the sewage of the hospital is to be received in air-tight iron tanks on Liemur's plan.

Only a small portion of the original design of the hospital has, as yet, been carried out, as the committee have not by any means the necessary funds for completing the remainder; but the part finished, consisting of a central block and one pavilion, is a handsome red brick structure, in the Elizabethan style, so much affected now-a-days in our public buildings.

On entering the central block, one finds on the staircase to the upper storey a large and gaudily stained glass window, execrable in taste, and very badly finished. The lower storey is principally administrative; but the out-patient department, patients' waiting-rooms, accident-room, and dispensary, are also contained in it. Above, besides rooms for the matron, dispenser, etc., there is one fine ward at each end of the corridor, and at right angles to it. These, being partly pavilion wards, are roomy and well-lighted. They measure 60 feet by 18; and all the rooms in the building are 16 feet high, so that those which are only intended for nine patients give nearly two thousand cubic feet to each.

To the right of the central building, and connected with it by an open passage, is one of the most admirable pavilion wards in two storeys I have ever seen. On entering at the northern extremity, there are first a number of small rooms, intended as operating theatre, nurse's-room, etc.; then one large ward, 125 feet long by 24ft. 9in. broad, and 16 feet high, which is beautifully lighted by eleven windows (11 feet by 4 feet) on each side, and well ventilated besides by roof- and wall-ventilators, so numerous as to afford 162 square inches of opening to each bed, even after the deduction of the grated iron work covering them. They are immediately above and below each window, and the air is directed, by a valve in the lower series, obliquely downwards, while, by an equally simple arrangement, the upper set have their valves opening towards the ceiling. Exactly facing the entrance-door, there is, at the other end of the ward, an open verandah, into

which the patients can enter from the ward, while at each side of the verandah-door there is a single window. The bath-room and lavatory open off one side at this extremity of the ward, while the closets (on Liemur's patent) open off the other, and both are separated from the entrance-door into the ward by a small passage, with cross ventilation. As those wards are intended for only twenty-two patients, one bed being between two windows, there are more than 2000 cubic feet of air to each patient, and the constant renewal of the air seems amply provided for. The walls are covered by a kind of cement, and the floor is highly varnished.

This pavilion, which has two storeys, is, as yet, the only one which funds have permitted the committee to erect; but they trust soon to be in a condition to go on with other three exactly similar. Even with only the forty-four beds now ready, and at the disposal of the recently elected medical and surgical staff, such an opportunity is rarely offered for the fair trial, in surgical cases, of pavilion wards, with ample cubic space, excellent ventilation, and a constant supply of air nearly uncontaminated by the impurities of larger home cities;* and the officers will be greatly to blame if they follow the bad example set by the larger Melbourne Hospital, in neglecting to enforce the utmost care in the due registration of all their cases.

THE BENEVOLENT ASYLUM, which takes the place of the London workhouse, is a very large building on an eminently good site; but when I say that it is very dirty, wretchedly arranged, and frightfully overcrowded, I am using but mild expressions for its present condition; and it may perhaps afford some consolation to the guardians of the St. Pancras Workhouse to know that there is a sister institution at the Antipodes which just as often appears as the object of attack and invective on the part of the Melbourne newspapers, and apparently with as much justice, as their own far-famed institution used to do in the columns of the London papers.

THE LYING-IN HOSPITAL, close to the Medical School, is now twelve years old, and the present physicians to it are naturally proud of the very fair statistics they have been able to publish. It must be recollected, however, that with such a new building the statistics are not of so great consequence, as almost every such building is likely to give good results at first; and it is certainly very far from being a model maternity to my mind, being built on the corridor system, with a number of small rooms, to contain four or five patients in each, opening off the passage. This is the main part of the hospital; but from each end of it, and running along two sides of a small garden-plot, there is a block of low wooden buildings, subdivided into small huts, eight of which on one side are used for lying-in rooms. These rooms, which are both low in the ceiling and diminutive in every respect, open off a narrow verandah nearly on a level with the garden-soil. The light is admitted into them through small windows in the wall opening into the verandah; and the cross ventilation is provided for by a tiny aperture—it cannot be called a window—high up on the opposite wall. In each room there are two iron bedsteads, the patient being shifted from the lying-in couch to the other immediately after delivery; while the general puerperal ward is in the lower storey of the central block. The Medical Report for 1870 mentions that the total number of accouchements in the midwifery wards up to the end of that year had been 4,183, and the mortality 52, or 1 in 80.4; while in the year ending December 31st, 1870, there were 401 deliveries, and 5 deaths, being 1 in 80, or as nearly as possible the average mortality.

THE MEDICAL SCHOOL, not far from the Lying-in Hospital, is a separate pile of buildings, in the shape of a quadrangle, lying within the University enclosure. An admirable dissecting-room, both well lighted and well ventilated, is one of its best features; and the lecture-rooms, too, seem perfectly suited for their purposes. Under the same roof there are a chemical laboratory; collections of chemical, botanical, and therapeutical specimens; a students' reading-room, with a fair show of the most recent medical works and the best periodicals; and an anatomical museum. In the latter there is a curious skeleton of a Frenchman who used many years ago to be well known in Paris, where he was in the habit of sitting at the gate of Nôtre-Dame playing on the flute. Besides being a deformed dwarf, this man had the ordinary number of thigh-bones; but the two united to form only one knee-joint, with a single tibia and fibula; and to the latter there was articulated only one foot. When the present Professor of Anatomy—Professor Halford—joined the University, some eight years ago, there were only two medical students, while there are now upwards of thirty. The curriculum for the degree of M.D. entails five years' study, and there are tolerably severe examinations at matriculation and in the dif-

* Wood, it must be recollected, is very much used in Melbourne as fuel. Besides, the site of the hospital may be said to be suburban.

ferent subjects at the end of each year. Nearly all the branches of medical science, in fact, are taught; and there is ample opportunity for the study of natural history under Professor McCoy, and of botany also, the Botanical Gardens under Dr. von Mueller being admirably adapted for the student who desires to know something of the plant-life of the southern hemisphere. It is a remarkable fact, however, and one that does not speak well for the generosity or enterprise of the surgeons and physicians to the Melbourne Hospital, that, although willing to allow the students to accompany them in their visits to the wards, they one and all of them quite recently refused point-blank to give any clinical lectures, so that the students are utterly deprived of what at the present day is considered by far the most important part of a practical medical education.

[To be continued.]

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE PROVINCIAL SCHOOLS,
On OCTOBER 2nd and 3rd, 1871.

MANCHESTER ROYAL SCHOOL OF MEDICINE.

THE Introductory Address was delivered on October 2nd, by Mr. R. T. HUNT, Lecturer on the Physiology and Pathology of the Eye, and consisted of an exposition of the lecturer's views on medical education, which were, he said, in some respects, different from those generally entertained.

Speaking of lectures, he said that their utility had been acknowledged from the earliest times of civilisation; and, as attendance upon them was required by all the examining bodies, it became the duty of every student not merely to be regular in attendance upon them, but also to reap all the benefit which might accrue from this mode of tuition. By directing the mind to a fixed subject at a fixed hour the valuable habit of concentration of thought was much strengthened—a habit which would be found of the highest importance in the future practice of the profession. Attendance upon lectures at a fixed time was a great check, if not a complete remedy, for the disposition to procrastinate. The answer to the question whether it was useful or not to take notes of a lecture would require modification, according to the nature of the lecture. When a lecture consisted in demonstration of the structures of the body, or of models or drawings, taking notes would materially interfere with that attention which ought to be given to the descriptions. The same remark would apply to lectures on chemistry, *materia medica*, and botany, but not to the same extent. In all these instances very short notes were quite sufficient. But a careful taking of notes of lectures on medicine, surgery, pathology, and forensic medicine, provided the notes were not too copious, would much facilitate private study. The limited number of lectures upon each of these subjects required a condensation and arrangement by the lecturer, which would be an excellent guide to the student in directing him in his reading. The student should as much as possible confine his attention to the elementary branches until these were thoroughly mastered; and this would be the only good preparation for afterwards acquiring a knowledge of the more complicated branches of medical study. The student's reading should be confined chiefly to those subjects which have engaged his attention at lectures during the day; but evening studies should be restricted to the revision of notes. After the mind had been engaged all day in acquiring knowledge, it was not in so good a state for steady and serious reading as after the refreshing sleep of the night. The ideas then were clear, the judgment sound, and by an hour or two of real study, not mere reading, the mind was admirably prepared for the labours of the ensuing day. On the contrary, night study could only be carried on by a degree of excitement which, if long continued, impaired the mental powers and was highly prejudicial to the general health. The examples of the advantages of early morning study to men of science were numerous; as examples, the lecturer mentioned John Hunter and Sir Walter Scott. It is probable that the medical students of Manchester would in future possess the advantages of university education by means of Owens College. The lecturer was of opinion that instruction in classics, mathematics, or other departments of science should be given previously to the commencement of medical studies. He feared that the attention of students of the present day was too much devoted to minute or microscopic anatomy, before having thoroughly acquired a know-

ledge of elementary anatomy. He did not at all wish to discountenance minute anatomy, but during the course of medical study it was much more material thoroughly to acquire the elementary knowledge before the student attempted microscopic examinations, except under the direction of his teacher. He can rely upon these until the advance of medical science clears up many difficulties connected with minute anatomy. In physiology much remained still unsatisfactory. There being both true and false theories, it should be the business of every student, before accepting any theory, to see what there was to support it and what was said about it by those better able to judge of its correctness. Sir Isaac Newton no doubt greatly advanced the science of optics; indeed, almost all the rules of what might be called mathematical optics had only been the more distinctly proved correct by the lapse of time. But he supposed light to be a material body that passed through transparent substances; whereas the vibratory or undulatory theory is now proved to be the true one. If, therefore, a man of the transcendent talents of Sir Isaac Newton gave rise to a mistaken theory, scientific students should be very guarded in receiving any theory not yet properly confirmed by experience. Among what he might call modern fanciful theories was that ridiculous one of Darwin in regard to the origin of species and of Huxley regarding vitality. Because these theories might be wrong, that was no reason why we should rashly conclude that other theories were not right; but it should at all events be remembered that the only truly useful theory was that which was not made for facts but was founded on them. While appreciating in their work the value of such mechanical assistances as the microscope, stethoscope, and ophthalmoscope, the students must not place too much reliance upon these aids, to the neglect of their own natural means of acquiring information by observation in the science of anatomy, in *post mortem* examinations, etc. With regard to the moral and general conduct of medical students, he would only offer his assent to the general views, and say that his firm conviction was that no man who was not a good member of society could be an useful and honourable member of our profession.

QUEEN'S HOSPITAL, BIRMINGHAM.

THE following is an abstract of an introductory lecture to the clinical course, delivered by Mr. FURNEAUX JORDAN, Surgeon to the Hospital.

The lecturer congratulated his pupils on entering the medical profession at a time when the vocation stands higher in public esteem than it has ever promised to do. Having insisted on the necessity of a good preliminary training—in which he assigned a high position to the study of metaphysics (*e.g.*, Sir W. Hamilton's *Essays*) in early manhood—he pointed out the special qualifications necessary for the study of disease. A complete knowledge of anatomy, physiology, and human chemistry, was stated to be the true foundation on which to build a knowledge of disease. This basic knowledge having been obtained, the student proceeds to learn his "highest, and best, and life-long lesson, the truths of disease." In a hospital, the lecturer said, the student will find practical illustrations of every mode in which physiology can go wrong; and will see that work done, in the way of the investigation of the causes of disease, their pathology, diagnosis, and treatment, which they will themselves have to do in after-life. And not only this, but, if able and willing to learn, they will be taught to do all that they see others do.

"And now comes the most important question that can be asked to-day. How are you best to be taught, and how are you best to learn all about disease—to learn, in short, the science of medicine? My reply is, in the same way in which you would best be taught and best learn any science, or art, or calling, or trade, or language, or anything which men can be taught, and which they can learn. I shall be glad if I have excited your curiosity to ask what is the best way? I will answer by giving you in three words the opinion of, as I believe, the highest living authority on such a subject; the opinion, namely, of Mr. Stuart Mill. In learning anything, three things, he observes, are necessary—models, rules, and practice. The most difficult callings are best learnt as a child learns its mother tongue. It imitates such models as are near it; then it is taught rules, then it puts them into practice. If it be given the best models, taught the best rules, and afforded sufficient opportunities for practice, it best learns the language. The most successful clinical instruction, then, I venture with confidence to affirm, is that which supplies the best examples of how diseases are investigated, discriminated and treated, which teaches the best and truest rules for the observation, detection, and treatment of disease, and which affords the fullest opportunities of imitating the examples, and applying the rules. It is the appropriate combination of these methods of study which leads to success. Both teachers and learners frequently adopt one method to the exclusion of all others. One teacher, if he can be

called a teacher, for instance, will set an example only of what has to be done, and neglect to instil rules, or give opportunities for practice. Another teacher is indifferent to the importance of models, but will supply rules, perhaps to an indefinite extent, in the shape of formal lectures, in a room in which there is not a single illustration of disease. Another will set examples and teach rules, but will not encourage the pupil to imitate the examples, or apply the rules. I am compelled to say that pupils still more frequently fall into similar errors. A certain number are quite willing to witness the models, medical or surgical, and sometimes even to imitate them, but they shrink from the labour of learning the rules. These are the so-called practical men. Others see only the importance of the rules, and labour under the delusion that copious notes of systematic lectures and industrious reading by their own firesides will take the place of the imitation of models and of the practical examination of cases of disease. These are the so-called book-men. Incredible as it may seem, a few will neither witness the examples, nor learn the rules or principles, but will actually in their own sweet way examine and treat cases. It is difficult to say other of these men than that they are vain and ignorant. It is our duty as teachers to set the example of how facts are ascertained. Every method we adopt is the application of some fact, or rule, or principle; and it is our duty to explain these to you. We have, or ought to have, a reason for everything we do; the reasons are the rules.

"The perfection of clinical teaching is this: that the teacher shall set the best example and the pupil shall follow it; that the teacher shall instil the best rules and suggest the best books, and the pupil shall diligently learn them; that the teacher shall freely furnish, and the pupil freely embrace practical exercises, on the imitation of examples and the applications of rules."

Mr. Jordan then went on to inquire what are the respective peculiarities of a good teacher and of a good pupil. Good pupils, he said, develop good teachers almost as much as good teachers develop good pupils. "A teacher must be full of information; he must be accurate; he must be ready in putting his ideas into words; his mind must be clear and direct; his language must be terse and to the point; he must love his work. . . . He must frequently point to the line which divides the known from the unknown." But here the teacher (and the advanced pupil) is often placed in the difficult position of having to decide what is known and what is unknown; and, in examining new views, it is necessary to be neither too deferential to authority, nor too independent; neither too credulous nor too sceptical. The clinical teacher must make his own model of investigation, and teach the rules which have guided his actions. The teaching of rules may be difficult. "But the rules which enable the beginner to study and treat diseases are nothing more than the facts of those diseases. When the teacher elicits the facts of a disease, he is teaching and applying the rules by which the disease may be recognised. One great art in clinical teaching the rules or facts of disease is to classify them according to their importance." The lecturer pointed out that different modes of clinical teaching might be advantageously combined, and that the teacher should from time to time suit himself to the various mental characters of his pupils. The value of examinations—in which the teacher should sometimes take the place of the pupil—was also referred to.

The clinical learner should be well prepared with preliminary knowledge, and should be capable of investigation and correct inference. "A pupil should not let his teacher look at, or touch, or say, or do anything without asking the reason why, without eliciting the principle which guides the look, or touch, or question; a teacher often fails to do all the good he might by insensibly assuming that that which is extremely familiar to himself is known to others. If the pupil be critical, when his criticism is founded on knowledge, all the better. A body of advanced, informed, critical, students give rise to benefits which are not confined to themselves, they reach teachers, hospital authorities, and the poor. With such a body, there can be no indolence, no slovenliness, no inhumanity."

In the course of some further remarks the lecturer said:—

"To get knowledge, however, is not enough. It is well to cultivate every nerve-function through which knowledge may be obtained. I may say more, by way of parenthesis, that we err in unduly cultivating the ideational aspect of our nervous system. Because in pigs sensations predominate over ideas, we must not, therefore, grow ashamed of our sensations. There is at present a tendency to underrate animals, and to make ourselves as unlike them as possible. Man, however, was not intended to become a helpless bundle of ideas; although the paragon of animals, man is nevertheless an animal. Acuteness of touch, of the muscular sense, of sight and hearing, quick action, endurance, courage, are all necessary to give ideas their fullest value. Trained sight for the use of the microscope, ophthalmoscope, and laryngoscope; trained hearing for the stethoscope; trained touch for the detection of fluctua-

tion, elasticity, doughiness, crepitation and crepitus, are necessary adjuncts to trained observation and trained reasoning power. I have a strong impression that high nerve-functions run together. Often in the same man are combined the most delicate touch, the truest eyesight, the keenest emotions, the clearest ideas, the strongest will, the promptest action."

Mr. Jordan then gave some good advice, as the recording of cases, the advantage of conciseness, and the necessity of work. Speaking of knowledge and experience, the lecturer said:—

"Knowledge must be pertinent to our purpose. In the history of medicine there is no pleasanter fact to contemplate than this. When medical men have specially pursued sciences which only indirectly bear on clinical work, they have shaken off the responsibility of treating the sick. Men have been too magnanimous to grasp in one hand human life and high classics, or human life and botany, or human life and zoology, or human life and theology, or human life and active politics. Recreation and general culture are not unimportant. A rested and a cultivated mind will best pursue any profession. But if recreation and general culture rise to the first place, medical science and human life will go down to the second."

"Experience has constantly been used to imply something more than knowledge. It may be described in a medical sense as something more than a keen personal knowledge. It is not a simple act of intelligence. Experience is knowledge intensified by feeling, emotion, life. An idea will pass away; an idea associated with emotion will remain. Disease which has been personally observed, personally pondered, personally treated, is the most vivid clinical experience. To get this kind of experience should be your constant aim. To be of value, clinical experience must be personal, intense, and thorough. To examine a large number of cases superficially and hurriedly is not experience, but a spurious and dangerous imitation of it. There is unquestionably a difference between bedside experience and book-knowledge, but I think a little too much stress has been laid upon it. To a thinking man book-knowledge is experience. The written statements of competent observers give results similar to those derived from bedside observation. An active imagination is closely allied to observation, and by it the phenomena of disease, even when described by others, may be made to take a living and a breathing form. When a Watson describes the attack and the progress of an apoplexy, is it not experience? When a Paget pictures the growth and features of a cancer, is it not experience? When a Syme tells how he directly cut into an aneurism, filled the wound with his hand, quickly, yet deliberately, put his finger on the rushing orifice, and completed one of the greatest of modern operations, is it not experience? When you are reading or listening to portraits of disease, picture to yourselves the countenance, the figure, the posture, and the movements which are associated with it. Put the facts into a bed, and put yourselves at the bedside."

SPECIAL CORRESPONDENCE.

VIENNA.

OUR Vienna Correspondent writes to us this week as follows.

Very little has been doing at Vienna for some time, but now figures of the various nationalities of the Austrian Empire are crowding round the Krankenhaus, reading the different announcements of courses on the walls. The successor of Oppolzer is not yet appointed; but it seems pretty well decided that Bamberger is not to be the man, in spite of the recommendation of the professorial consistorium. There seems to be some political objection to Bamberger, which has favoured the supporters of another candidate. The death of Oppolzer has removed the great opponent of the therapeutical nihilism which obtains here. An elaborate physical examination, with speculations as to the pathology, histological and otherwise, and then a folding of hands with great complacency until the opportunity for corroboration by *post mortem* examination arrives, is the Austrian ideal of a physician's duty to his patient. As a school for teaching medicine as a science, the most critical could scarcely find fault; but how far medicine as an art is much furthered, may easily be questioned. It is not apparently any particular scepticism as to the efficacy of drugs, but merely a part of the scepticism prevalent here from theology to therapeutics.

In these days of inquiry into hospital accommodation as regards sanitary arrangements, ventilation, and "the hospital question", the Vienna Hospital, which is by no means a new one, holds an important position. The exterior is a hollow square of two stories, and within the enclosed space are blocks of buildings—perfect streets indeed—and in the intermediate spaces gardens, shrubberies, and leafy walks, of no

mean size. Here are to be seen patients innumerable, sitting smoking or strolling about smoking the universal pipe (the question of the effect of tobacco on German intellectual development may seriously be raised); boys engaged in gambling, and 'groups' of women gossiping; while children are pursuing games suitable to their age. The best proof of the local belief in the healthiness of their hospital is, that many authorities and teachers live within its walls—notably old Rokitansky. Within, the wards give the impression of being somewhat crowded, but are very cosy-looking, with their shaggy blankets and big stoves. There are ventilators, with indicators attached; I do not know on what principle the ventilation is conducted, but the wards are very free from hospital smell. If rigors follow us into another world, the shade of Sir James Simpson will feel very uncomfortable at many things in Vienna, and not the least at the cool way in which teachers and students pass from obstetrical operations on human forms to the obstetrical wards, after merely a good wash with soap and water. The opportunities of learning obstetrics are excellent, and to those wishful to study obstetrics and gynaecology a residence here is very desirable. The student is made to examine the patient, and to give his opinion, and his reasons for it, both regarding the nature of the case and the measures to be adopted, to the professor at the bedside. Those who wish it can easily arrange to be present at the different operations at all hours, and have opportunities of personally performing many of them. A new Pathological Institute is an additional inducement to strangers, and was yesterday visited by the ubiquitous Emperor of Brazil. Here every morning, superintending the *post mortem* examinations, is to be seen the hale and active figure of the veteran Rokitansky, whose mind is as active as his body, neither apparently impaired by either years or by honours.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the Session will be held at the York House, Bath, on Thursday evening, October 26th, at seven o'clock: CROSBY LEONARD, Esq., President.

R. S. FOWLER, Bath, } *Honorary Secretaries.*
E. C. BOARD, Clifton, }
6, Belmont, Bath, October 1871.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at the King's Arms Hotel, Wigton, on Wednesday, October 25th, at half-past twelve o'clock. The President, Dr. ELLIOT of Carlisle, will occupy the Chair.

Gentlemen intending to read papers or cases, are requested to communicate with the Secretary at their earliest convenience.

HENRY BARNES, M.D., *Honorary Secretary.*
Carlisle, October 3rd, 1871.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ORDINARY MEETING.

THE next Ordinary Meeting of this Branch will be held on Tuesday, November 7th, at the Town Hall, Cardiff, at 1.30 P.M. The Council will meet at 12.30 P.M.

The Dinner will take place at 5.30 P.M.; and members may introduce professional friends to the meeting and dinner.

Members intending to read papers or notes of cases are requested to communicate the titles thereof as soon as possible to one of the Honorary Secretaries.

All members who purpose joining the dinner, will oblige by communicating their intentions to one of the Honorary Secretaries before the 31st instant.

ANDREW DAVIES, } *Honorary Secretaries.*
ALFRED SHEEN, M.D., }
October 4th, 1871.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting of the members of the above Branch will be held in the Museum, Shrewsbury, on Friday, October 27th, at 2 o'clock: Dr. J. W. MOORHOUSE in the Chair.

Several papers have been promised; and some photographs and interesting preparations will be exhibited.

Gentlemen intending to contribute, are requested to communicate with the Honorary Secretary.

The dinner will take place at the Lion Hotel at 4.30. Members intending to dine or introduce friends, are requested to send in their names not later than the 24th instant.

SAMUEL WOOD, F.R.C.S., *Honorary Secretary.*
Shrewsbury, October 10th, 1871.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first meeting of the fifteenth session was held at Rochester on September 26th; J. J. D. BURNS, M.D., in the Chair.

The next meeting was appointed to be held at the General Hospital, Maidstone, on November 28th; and Dr. Davies was elected Chairman.

Medico-Ethical Committee.—Dr. Frederick J. Brown was unanimously elected a member of the Medico-Ethical Committee of the West Kent District, *vice* Dr. Adam Martin, deceased. The Honorary Secretary announced the withdrawal of Henry W. Joy, Esq., from the Committee. It was resolved by the meeting to fill up the vacancy at the next meeting.

New Member.—Dr. Alfred Wiltshire, already a member of the Association, was elected a member of the South-Eastern Branch.

Communications.—1. Mr. John H. Lyddon related a case of Hepatic Abscess occupying the Right Lobe, following on Dysentery, in a man that had been in hot climates. The large intestine, cæcum, and ascending colon were thickened, but not ulcerated.

2. Mr. A. W. Nankivell related a case of Traumatic Erysipelas in which 255 grains of chloral hydrate were given by mouth and rectum within six hours.—In the discussion on this paper, Mr. Hoare of Dartford related a case in which he gave 60 grains every hour for forty-eight hours.—Dr. White mentioned a case in which five grains nightly acted as an hypnotic.

3. Mr. Nankivell also read a paper on a case of Partial Luxation of the Atlas. [Mr. Nankivell's papers are published at page 437.]

4. Dr. James V. Bell read a paper on Thermometric Observations on Fever, in Relation to Prognosis. The observations were confirmatory of the following propositions. *a.* Morning temperature persistently higher than evening—almost certainly fatal. *b.* Fluctuation of temperature (accompanied by considerable range) from day to day; such as 105 down to 98 deg.; then up to 103 deg., and down again—very grave. *c.* Sudden fall of temperature in the second or third week of enteric fever betokens one of two conditions as imminent; viz., remission or intestinal hæmorrhage.

5. Dr. F. J. Brown related a case of Internal Strangulation in a man aged 66, from effusion of blood between the serous surfaces of two folds of the ileum, occurring under tormina brought on by eating old peas. Death took place in five days, with painless ileus of four days' duration. There was effusion of lymph or of serum; and the obstruction was entirely mechanical.

WEST SOMERSET BRANCH.

THE autumnal meeting of the above Branch was held at the Railway Hotel, Taunton, on Tuesday, October 3rd, at 5 P.M. There were present W. H. AXFORD, M.B., President, and eight other members.

After dinner, the Secretary read the notice convening the meeting, which had been sent to each member of the Branch, on the 3rd of Sept., and published in the JOURNAL weekly since that date. He stated that he had not been deputed to communicate to the meeting any replies from absent members.

Discussion on Carbolic Acid.—The Chairman, having shortly introduced the question as settled by the Council, viz., "Does the application of carbolic acid favour the healing of wounds?" called on each gentleman in succession to speak on it. The general opinion expressed was to the effect that no healing property existed in carbolic acid; but that, on the contrary, if applied in a concentrated form, it was very irritant and destructive. From its remarkable antiseptic properties, however, when used in a diluted form (1 to 4 or 5 or oil, and 1 to 50 or 100 of water), it exercised a very salutary influence, and was a most valuable aid in the treatment of wounds. Mr. Randolph, Mr. Winterbotham, Mr. Garland, and Mr. G. Norris cited cases in support of the opinions which they gave; and Mr. Rigden exhibited the carbolic acid gauze and other of the latest improvements in the dressings employed by Mr. Lister in his plan of antiseptic treatment. Dr. Cordwent read an elaborate reply to the question, in which he stated reasons for not agreeing with the generally received theories on the subject under discussion; and lastly, the President summed up and gave his own opinion in accordance with that expressed above.

Specimens.—Mr. Rigden exhibited an Ovarian Cyst, which, by its

rupture, had caused sudden death. The cyst was shown to be so intimately adherent to the left side of the uterus, that if an operation for removal had been attempted during life, the uterus itself must have been removed with the cyst.

A specimen of Acute Tubercular Disease was also shown by Mr. Rigden.

A paper by the President was postponed to the next meeting.

SOUTH MIDLAND BRANCH: AUTUMNAL MEETING.

THE fifteenth Autumnal Meeting of this Branch was held at the Town Hall, Wellingborough, on Tuesday, October 10th; WM. W. CLARK, M.D., President, in the chair. There were also present nineteen other members, who were handsomely entertained at luncheon at the President's house previously to the meeting.

The PRESIDENT gave an address, referring more particularly to sanitary measures now mooted and being carried out, and more particularly to the utilisation of sewage.

The question was raised, as to having honorary secretaries at Bedford and Buckingham, in addition to the present two (Dr. Bryan and Mr. Moxon of Northampton), but was negatived.

The PRESIDENT remarked that the medical profession ought to join the Association more freely than at present, as it has great influence in Parliament, as shown by the proceedings which have taken place there with regard to medical legislation.

Proposed conjoined Meeting of Branches.—It was proposed that a joint meeting of the Cambridge and Huntingdon Branch with the South Midland be held in 1871; and that the secretaries of this Branch communicate with the secretary of the Cambridge and Huntingdon Branch; and that the meeting should be the annual one of the Branches, at Peterborough, or wherever decided.

New Member.—Mr. George Lawrence of Towcester was proposed, and duly elected.

The question of dispensing with a dinner was raised; and it was decided that one shall take place as usual, but at the annual meeting only.

On the suggestion of Dr. Bryan, it was determined that the meetings should commence earlier than heretofore; viz., twelve to half-past, the dinner being not later than four P.M.

Papers.—The following papers were read.

1. The Antiseptic Treatment of Wounds; with cases. By W. Newman, M.D., Stamford. Dr. Newman, having spent most part of his fortnight's holiday this year in Mr. Lister's wards at Edinburgh, was convinced that the results outweighed all others.

2. On the Topography of Gout. By C. E. Prior, M.D., Bedford.

CORRESPONDENCE.

SMALL-POX AND VACCINATION.

SIR,—I have always maintained that Vaccination is at least as good a preventive of Small-pox as a previous attack of the disease itself. In the following instances neither has acted prophylactically.

This morning a letter-carrier presented himself to me, who has two children, aged respectively nine and five. Not only, he assures me, were they both successfully vaccinated in infancy, but both subsequently took small-pox, and are again attacked with it at the present time.

I am, etc.,
WALLER LEWIS,
Medical Officer in Chief.

Medical Department, General Post Office, October 9th, 1871.

NITRITE OF AMYL AS A REMEDY FOR CHOLERA.

SIR,—It appears to me quite reasonable and right to make a fair trial of nitrite of amyl in the collapse stage of cholera, as suggested by Dr. Talfourd Jones. I must confess, however, that I am not very hopeful as to the results of the experiment, for reasons which I will endeavour to state as briefly as possible.

Experiment proves that this agent has a remarkable power of relaxing the systemic arterioles, and so causing congestion of the subcutaneous capillaries; but I am not aware of any experiments which show that it has a like influence upon the pulmonary arterioles and capillaries. It is well known that an agent which has a powerful influence upon the systemic arteries and capillaries may have no direct effect upon the pulmonary vessels, and *vice versa*.

Then, even assuming that the nitrite of amyl has the power to relax the pulmonary arterioles in the normal state, it does not follow as a matter of course that it could exert this influence when those vessels

were abnormally contracted under the influence of the cholera poison, or that the relaxing effect, if it occurred at all, would be sufficiently durable to assist the patient's recovery. These considerations, while they render it doubtful whether the remedy in question will prove to be a physiological antidote for the cholera poison, yet rather suggest than forbid a careful trial of the drug, if such trial have not already been made.

I am, etc.,
GEORGE JOHNSON.

Savile Row, October 1871.

THE WESTMINSTER HOSPITAL.

SIR,—As I find that an erroneous statement which appeared in your JOURNAL some weeks since, to the effect that the Westminster Hospital is about to be removed, is still being repeated, to the detriment of the hospital and school, you will oblige my colleagues and myself by kindly inserting this contradiction of the report.

I am, etc.,
OCTAVIUS STURGES,
Dean of the Westminster Hospital School.

Westminster Hospital, October 10th, 1871.

** The statement appeared first in the daily papers. We can only regret that Dr. Sturges did not address this letter to us at an earlier date.

"CONTAGION" AT UNIVERSITY COLLEGE.

SIR,—Dr. Charlton Bastian's lecture on the Nature and Mode of Origin of Epidemic and Contagious Diseases marks, as you say, "an era in medical thought." It will doubtless be discussed as fully as the position of the lecturer and the power of the lecture deserve; and it is with the desire of seeking information, not of giving it, that I make these few remarks.

I conceive that Dr. Bastian's argument may be epitomised as an argument *against* the germ-theory of disease, and *in favour of*, so to speak, the catalytic nature of disease. He first of all brings arguments against the germ-theory, and afterwards other arguments in favour of the chemico-physical theory, hitherto applied to the processes of putrefaction and fermentation. His arguments against the germ-theory are four in number.

1. Dr. Bastian first argues that, as one disease where organisms are shown to exist—viz., "malignant pustule"—tends to death, so ought all diseases due to the presence and multiplication of cells tend to a fatal termination.

2. His next argument is that, as there are about twenty different zymotic diseases, therefore the germ-theory requires twenty different kinds of germs; none of which, however, have at any time been seen.

3. The third argument which he employs against the germ-theory is, that *bacteria* flourish in carbolic lotions.

4. Dr. Bastian's last argument is, he considers, his strongest. It is to the effect that, in a disease so virulently contagious as sheep-pox, the blood does not carry the disease from one animal to another, as it would be expected to do if the disease depended on the presence of living organisms.

Without attempting to fully answer these arguments, which are doubtless strong, as they are strongly reasoned, I should be glad to make one or two brief comments upon each.

1. In regard to the first, it does not appear *prima facie* why the presence of cells other than those of the blood should tend to death, more than that they should tend to elimination. The argument would, indeed, be of precisely the same force, if it were demonstrated that in some one disease germs were eliminated, to infer that, if present, they would be eliminated in all. Further, it is by no means certain that every case of "malignant pustule" does terminate fatally. On the other hand, so far as we know, hydrophobia does invariably cause death; and yet I imagine Dr. Bastian does not see in this circumstance any evidence of the presence of germs in the blood.

2. Referring to the second argument, there is nothing more inherently improbable, so far as I can see, in the existence of twenty different living organisms of an invisible character, than there is in the existence of but one. The low forms of algæ and fungi are very numerous, and yet, as a rule, breed true. Doubtless evolution has gone on here, as in the rest of the organic world; but, at the present day, persistent types exist, whether we speak of zymes or of fungi. It is no more difficult thus to conceive a cell, as yet invisible, endowed with the potentiality of typhus or scarlatina, than it is to conceive (what we know to be true) that a single sperm-cell and germ-cell contain all the morphological units of the future being.

3. That *bacteria* flourish in carbolic lotions will be new to many; and I shall look for Professor Lister's remarks on this head with great interest. In the meantime, I would observe that, far from *bacteria*

being the common cause of the different zymotic diseases, the contrary is probably true—that *bacteria* are never the cause of zymotic disease. The simple fact that *bacteria* are always and every where present, while zymotic diseases are only occasionally epidemic, would in itself render it improbable that this character of organism gave rise to contagious diseases.

4. Dr. Bastian's fourth argument is undoubtedly a very powerful one; and here again I shall await further discussion with much interest. It certainly appears to me that further evidence on this head is very much called for.

Passing to the later part of his subject, Dr. Bastian argues in favour of the catalytic character of contagious disease. But, sir, is it not legitimate to object to this, that he demands for himself exactly what he refuses to grant to others? for the establishment of his theory requires, equally with the germ-theory, the introduction of *something* into the blood—in the one case an organic ferment, in the other case a cell. In neither case are they demonstrated. The mind forms a distinct conception of a cell, even if it is invisible; but Dr. Bastian does not tell us what he wishes us to conceive by an organic ferment. I cannot but consider that Dr. Bastian's theory requires the existence of twenty different organic ferments, just as the germ-theory necessitates the belief in twenty different living organisms. The natural evolution of disease is certainly as comprehensible on the one theory as on the other.

I am, etc., S. MESSENGER BRADLEY.

Manchester, October 10th, 1871.

SIR,—It seems to me a matter to be regretted that Dr. Bastian should have chosen for the text of an address to neophytes about to commence their medical studies a subject much open to controversy, and concerning which many of his professional brethren, with the same evidence before them, arrive at opinions entirely opposed to his own. I beg you will allow me space for a few brief remarks on the "germ" side of the question, even though by such hardihood I should be placed, according to Dr. Bastian, on the scientific level of those who uphold homœopathy and phrenology. (*Vide* Address, BRIT. MED. JOURNAL, Oct. 7th, 1871, p. 402.)

The first objection adduced by Dr. Bastian against the germ-theory of disease is, that the maladies which depend upon the proliferation of germs within the body ought, from the very fact of such continuous proliferation, to be fatal to the host. But on this point Dr. Bastian answers himself: he concedes that malignant pustule in cattle depends upon living germs; but this disease, he says, is *almost* invariably fatal. The qualifying word "almost" proves the case of the other side, for it demonstrates that, in the case of a disease which depends upon the growth and multiplication of myriads of germs within the host, a condition of things may be brought about, *quoad* such host, leading to the arrest of the life of the germs, and so the arrest of the disease which they occasion.

The second objection is concerning the specificity of germs—a question which I have considered elsewhere (*The Antiseptic System*, chap. ix, p. 176), and in regard to which I will here only say that a belief in the germ-theory in no way renders necessary a belief in a multitude of disease-germs botanically distinct: it is far more probable that germs in the specific diseases owe their properties to the material which nourishes them. Just as a common fungus may be rendered poisonous by matter on which it grows, so the disease-germ may acquire its properties from the fluids of the organism in which it lives. Nor does the germ-theory postulate the doctrine that infectious diseases cannot arise *de novo*; it simply postulates a particle of living matter, which, with certain surroundings, can acquire special morbid powers with self-increase in the bodies of those whom it attacks.

The last objection—the final blow—is derived from the observation of Chauveau and Sanderson, that the *blood* in sheep-pox is non-infecting, whilst the fluids of the tissues, which are the seat of the disease, are highly infecting. To assert that this observation is fatal to the germ-theory appears to me about equivalent to asserting that the current of a river does not carry the seeds of plants which dot its banks, because observation and cultivation of a tumblerful of the water fail to demonstrate such seeds or plants. The *contagium* of sheep-pox, once absorbed, is carried by the blood-stream to the tissues, where, and where only (in this special disease) it develops, multiplies, and exercises, its morbid action. By parity of reasoning, Dr. Bastian, discovering no ova of trichinæ in the blood of a host, could deny the germ-origin of trichinous disease.

Dr. Bastian persistently quotes Liebig as the opponent *par excellence* of the germ-theory of fermentation, and places the two theories—the "vital" of Pasteur and the "physico-chemical" of Liebig—as if they were absolutely antagonistic the one to the other. I beg to ask Dr.

Bastian's authority for this. In his latest paper, Liebig distinctly asserts that in the case of saccharine fermentation it is *only* by the agency of the plant-organism that the phenomena are induced. The state of molecular motion by which fermentations are initiated is supplied by *vital activity*; and "in this sense", says Liebig, "Pasteur's view is neither inconsistent with mine nor antagonistic thereto". I am not aware that Liebig has ever given his adherence to the hypothesis of spontaneous generation. Clearly, therefore, Dr. Bastian must not fight behind the shield of Liebig, but must take the field alone.

There is a portion of Dr. Bastian's address which gives hope and joy to the "vital" school. He admits that such zymotic maladies as the silk-worm disease and malignant pustule are essentially due to germs. Will his further conversion be long delayed? I am, etc.,

Oct. 9th, 1871.

A. ERNEST SANSOM.

THE DENTAL PROFESSION AND THE COLLEGE OF SURGEONS.

SIR,—Your admirable article on Dental Diplomas in the last number of the BRITISH MEDICAL JOURNAL, cannot but be gratifying and encouraging to all who take an interest in the progress of dental surgery. But the statistics upon which you base your statements are not quite correct; and, as you have done me the honour of mentioning my name with the figures, you will excuse my wishing to rectify them as far as I can, though, unfortunately, we have as yet no trustworthy source of accurate information. At the request of the Dental Diploma Committee, I am endeavouring to compile a list of all persons calling themselves dentists; but, as yet, I can only furnish you with approximate numbers. Thus, in England I have collected over 1600 names; but, from the additional information which I am constantly receiving, I should say that the number of individuals of all classes calling themselves dentists are between 2000 and 3000. As to Scotland and Ireland, I have only been able to find the names of 150 practitioners in Scotland and 25 in Ireland (your printer has accidentally transposed these numbers); but I feel sure there must be many more.

Permit me to say one word more upon this list which I am compiling. Many qualified men practising as dentists, and many unqualified, but highly respectable and skilful dentists, feel aggrieved at the bare notion of their names being associated, even in a manuscript list, with hundreds of ignorant and unskilful men, who call themselves, and practise after a fashion as, dentists. In the present anomalous condition of dental surgery, however, this is a grievance of which they cannot complain with justice. If you take the *London Post Office Directory* you will find the *élite* of the dental profession in the same list as their mechanical workmen and those who combine dentistry with the business of a chemist; and the public have no means of judging as to the relative merits of these respective professors of dental science. It is the same in all provincial local lists; and even in our dépôts whence we are supplied with materials, all classes alike are reckoned as dentists on the lists of their customers. These lists are not open for our use, nor of service for statistical purposes; and it was imperative before the Dental Diploma Committee could advance one step on its course that it should be in possession of certain trustworthy statistics. This is the work, as yet incomplete, from which I have given you such particulars as have hitherto been collected, with more difficulty than anyone who did not actually do the work could conceive. For the satisfactory completion of this compilation I earnestly request the assistance of everyone who has the interests of the dental profession at heart. In a few days a rough list of the dentists in his neighbourhood will be sent to every known dental practitioner, so that he may make what additions and corrections are needed; and I trust that by each individual taking a little trouble, much of the collective labour which falls to me will be lightened. Thanking you once more for your able advocacy of our cause,

I am, etc., CHARLES JAMES FOX, M.R.C.S., L.D.S.

27, Mortimer Street, Cavendish Square, W.

THE MIDDLESEX HOSPITAL.—A gift of fifty brace of partridges has been kindly sent for the use of the patients of the Middlesex Hospital, by G. A. Dodd, Esq.

TESTIMONIAL.—Dr. James Sawyer, who has lately been appointed Physician to the Queen's Hospital, Birmingham, and Extra Acting-Physician to the Birmingham and Midland Free Hospital for Sick Children, has been presented with an address, a microscope, a time-piece, and the publications of the New Sydenham Society (forty volumes), as a "testimony of the high appreciation of the manner in which, for the last three years, Dr. Sawyer had filled the office of Resident Physician to the Queen's Hospital."

OBITUARY.

FRAZER THOMSON, M.D., PERTH.

WE announce with regret the sudden death on Tuesday afternoon, from disease of the heart, of Dr. Frazer Thomson, of Perth. He had just arrived by train from Edinburgh, and expired in the railway station. For many years Dr. Thomson acted as out-door surgeon to the Perth Infirmary, but he had resigned the office some years ago. He was engaged in an extensive practice. Benevolent, and taking an active and earnest interest in many of the philanthropic institutions of the city, Dr. Thomson gained the respect of the community.

THOMAS BUSHELL, M.R.C.S. Eng.

THE late Thomas Bushell was apprenticed nearly sixty years since to Mr. Coles, a surgeon, near Covent Garden. He was a pupil of the late Joshua Brookes, and of St. George's Hospital. Having passed the examinations at the Apothecaries' Hall and the College of Surgeons, he commenced, fifty years ago, practice at 117, Crawford Street, and continued there to the time of his death, being highly esteemed by all around. On the formation of the Royal Botanical Society in Regent's Park, he became one of its earliest members. Being much attached to botany, he was soon elected on the Garden Committee of the Society, to the welfare of which he was much devoted. He was constant in his attendance; and, on the day previous to his death, he was present at a meeting on business. Early on Thursday morning, the 5th instant, he awoke, and feeling ill, rang for assistance, but expired very shortly afterwards, in the 75th year of his age. He was buried at Highgate Cemetery.

ROBERT BUCHANAN, M.D., KNOXLAND, DUMBARTON.

THE subject of this memoir was born in Glasgow on April 13th, 1794. He was the son of Mr. William Buchanan, a much respected citizen. He received his education at the Grammar School, and completed it in the University of that city. As was once the practice with students of medicine, he served an apprenticeship to Dr. M'Dougall, a surgeon and druggist in Glasgow. In 1815, after being duly qualified, he commenced practice in Dumbarton, then a very limited field in population. He became well and favourably known not only in the town of Dumbarton, but throughout the county, and gained an extensive practice among all classes. In these times the means of transit were very limited, and many a long, exhausting, and ill-requited journey he cheerfully undertook wherever and whenever his aid was sought. Many years ago, he received the appointment of Surgeon to the garrison in the Castle of Dumbarton and to the County Prison. He was the official surgeon of the local magistracy; and often at the assizes he received high commendation from the judges for the simplicity, skill, and accuracy of his reports in criminal cases often of much delicacy. He was placed on the Commission of the Peace for the county at a period when its roll was very select. He possessed a very refined taste for music and painting, and other branches of the fine arts, to which he devoted his leisure hours to the close of his life. Of a manly frame, he had the frank and easy manners of the perfect gentleman of the olden school. In all circles, his acquaintance and company were eagerly sought and much appreciated. In 1829, he married Mary, the second daughter of Mr. John Dixon, of Levensgrove; she survives him with two daughters, one married and resident in England. Some years ago, on his completing his fiftieth year of practice, his medical brethren of the locality, as well as from a distance, presented him with an address at a public dinner. A year before his decease he had a severe attack of illness; but this gradually abated, and his friends were hopeful that he had recovered. In the latter end of the summer of the present year, his malady returned in an aggravated form; and, after much suffering, he died on September 10th, and was interred in the new cemetery of Dumbarton on the 15th. A numerous company followed the body. A party of the Royal Artillery showed their respect to his memory by carrying the coffin from the gate of the cemetery to the tomb. In passing to the cemetery, the shops were shut and the streets of Dumbarton were crowded by the inhabitants. In politics, Dr. Buchanan was a decided and consistent Tory, and a staunch member of the national church; but he never obtruded on others his opinions either political or ecclesiastical, and was ever as ready to allow liberty of judgment and free expression of sentiment to others as he claimed for himself.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received their certificates to practise, on Thursday, October 5th, 1871.

Addy, Boughton, Southport, Lancashire
Bradbury, John Batley, Leeds
Marshall, John, Bolney, Suffolk
Slater, John Samuel, Bath
Vores, William Mallam, Great Yarmouth

The following gentlemen also on the same day passed their first professional examination.

Clyma, Handsford Hosking, Guy's Hospital
Welch, Samuel, London Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ABERDEEN ROYAL LUNATIC ASYLUM—Assistant Medical Officer.
ARDWICK AND ANCOATS DISPENSARY, Manchester—Junior Surgeon.
ATCHAM UNION, Salop—Medical Officer for the St. Mary's District.
BALTINGLASS UNION, co. Wicklow—Medical Officer for the Kiltegan Dispensary District.
CAVAN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballyhaise Dispensary District.
CHARING CROSS HOSPITAL—Assistant Physician.
CORNWALL LUNATIC ASYLUM, Bodmin—Assistant Medical Officer.
GOVERNMENT DIOCESAN TRAINING COLLEGE FOR GOVERNESSES, Derby—Surgeon.
DEVON COUNTY LUNATIC ASYLUM—Assistant Medical Officer.
ENNIS UNION, co. Clare—Medical Officer for the Newmarket-on-Fergus Dispensary District.
GENERAL HOSPITAL, Nottingham—Resident Surgeon-Apothecary; Assistant House-Surgeon.
GORT UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ardahan Dispensary District.
GREAT NORTHERN HOSPITAL—House-Surgeon.
GUEST HOSPITAL, Dudley—Resident Medical Officer.
INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
LAMBETH, Parish of St. Mary—Medical Officer of Health.
LIVERPOOL NORTHERN HOSPITAL—House-Surgeon.
MALE LOCK HOSPITAL—Resident House-Surgeon.
MARLBOROUGH UNION, Wilts—Medical Officer for District No. 2.
OMAGH UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Eastern Division of the Omagh Dispensary District.
PEMBROKE UNION—Medical Officer for District No. 5.
POCKLINGTON UNION, Yorkshire—Medical Officer and Public Vaccinator for the Pocklington No. 2 District and the Workhouse.
PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—Two House-Surgeons.
RATHDOWN UNION, co. Dublin—Medical Officer for the Killiney Dispensary District.
ROMFORD UNION, Essex—Medical Officer for District No. 7.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Surgeon.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon.
ST. GEORGE DISPENSARY, Mount Street, Grosvenor Square—Physician-Accoucheur.
SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Assistant House-Surgeon.
TIVERTON UNION, Devon—Medical Officer for the Silverton District.
WARMINSTER UNION, Wilts—Medical Officers and Public Vaccinators for the Corsley and Warminster Districts and the Workhouse.
WARNEFORD HOSPITAL, Leamington—Medical Officer.
WEYMOUTH UNION, Dorset—Medical Officer and Public Vaccinator for the Melcombe Regis District.
YORK COUNTY HOSPITAL—House-Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CARRE, Fenwick, L.K.Q.C.P.Irel., appointed Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Bellaghy Dispensary District of the Magherafelt Union, co. Londonderry.
KISBY, Wm. J., L.F.P.S.Glasg., L.A.H.Dub., appointed Apothecary to the Workhouse and the Gort Dispensary of the Gort Union, co. Galway.
*TAIT, Lawson, Esq., appointed Surgeon to the Birmingham Lying-in Charity.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

DAY.—On September 1st, the wife of *W. Henry Day, L.R.C.P.Ed., Chapel Street, Pentonville, of a son.
MAPOTHER.—On October 11th, at Merrion Square North, Dublin, the wife of *E. D. Mapother, M.D., of a daughter.

DEATHS.

GREAVES, Augustus G., Esq., Surgeon, at Derby, aged 59, on October 1st.
YOUNG, Andrew Kerr, M.D., late of Glasgow, at Southend, Essex, aged 69, on October 1st.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Thomas's, 9.30 A.M.—St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Casual Communications. Mr. John Gay, "On Crural Venosity"; Dr. Richardson, "Preliminary Notes of a Research as to the possibility of Destroying Animals intended for Human Consumption without the infliction of Pain."

TUESDAY.—Pathological Society of London, 8 P.M.

THURSDAY.—Harveian Society of London, 8 P.M. Clinical Communications.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. W. BOURNE (Ambleside).—The Swiss condensed milk is a sufficient substitute for fresh milk (when the latter is not procurable) for hand-fed infants. It is made from cow's milk, and its price is rather below that of fresh milk in great towns.

THE TESTIMONIAL TO SIR JAMES PAGET.

SIR,—I have just read "A Charitable Proposition" of H. F. S. referring to the above-mentioned testimonial, in which he advocates its being thrown open to the whole of the profession, instead of being limited to those who have been connected with St. Bartholomew's. I do hope this suggestion may not be carried into effect; at any rate, not till it has been submitted to the approval of all those who, like myself, have already subscribed to the testimonial, on the understanding of its having a special connection with the hospital.

I am quite ready to agree with H. F. S. that Sir James Paget belongs to the "scientific world, both here and abroad", as well as to the "profession at large"; and if H. F. S. will only take the necessary steps to start the matter, I have no doubt he would have no difficulty in getting up a handsome testimonial from the whole of the profession; but I trust he will not think me selfish in expressing a hope that we may keep ours to ourselves.

As an old student of St. Bartholomew's, and a resident in the College there during part of the time that Sir James was Warden, I think he belongs more especially to us; and I do believe that there is a special corner in his heart, and a large one too, for dear old St. Bart's, and every one connected with it; and that a testimonial from the old students would, for this reason, give him especial pleasure.

I have written this entirely on my own responsibility, and without having been able to communicate with any one on the subject. Your columns will show whether I represent the views of the old students, or not; I feel sure I have not mistaken the feelings of Sir James Paget.

I am, etc., G. T.

October 9th, 1871.

FOREIGN DEGREES.

SIR,—In reply to your correspondent "Physician", I would tell him not to expect to get the Brussels degree easily. He will have to undergo an examination very like that for the License of the Royal College of Physicians of London, embracing all subjects of medical study, and extending over a week. Besides, he will be questioned at the bedside, and have to do operations on the dead body; and then, if he be not well up, he is plucked. In fact, one has to know and do a great deal more for the Brussels M.D. than many of our seniors who obtained their Scotch degrees on much more reasonable terms, and when they were just as useless in England as the Continental ones are now. It is, indeed, high time that some British University should do the right thing and admit qualified men, without the bugbear of residence, to the examination for its degrees. The rising generation of medical men will never be satisfied till this is done.

I am, etc., ANOTHER PHYSICIAN.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

LUNACY CERTIFICATES IN IRELAND.

SIR,—Would you or some of your numerous correspondents kindly inform me if the Bill introduced by Sir Dominic Corrigan last Session, by which Irish Poor Law Medical Officers are entitled to a fee of two guineas for examining and certifying in cases of lunacy at the request of the local authorities, has yet become law; and if so, how is the fee to be obtained? I am, etc., A MEMBER.

* * The Bill was withdrawn, and will be reintroduced.

POOR-LAW MEDICAL OFFICERS AND THE SANITARY SERVICE.

SIR,—I entirely agree with Dr. Gourley and with the recommendations of the Royal Sanitary Commission, that the medical officers should be the local sanitary officers for their district. Not only would the appointment improve their usefulness, influence, and position; but, whatever be the future sanitary organisation of the country, the district medical officer is far the most likely to foresee the propriety or necessity of sanitary alteration or improvement; he alone can carry them out promptly; and, in crushing out the origin of a contagious epidemic, for instance, promptitude is of the last importance. An officer for a large district, as a county, could not carry out sanitation with sufficient promptitude.

I have always thought it a great pity also that the Poor-law medical officers who are public vaccinators should not be registrars of death also for their district. Such an arrangement would secure the proper vaccination of infants, without the inconvenience which is now often experienced. I am, etc.,

October, 1871.

POOR-LAW MEDICAL OFFICER.

MEDICAL WOMEN.

SIR,—Presuming that you will give fair play to this discussion, I ask you to publish the following reply to the editorial comments which are annexed to my letter at page 396.

1. I have not surrendered any point for which I have ever contended. To make clear my own position, I cite the following extracts from an address delivered by me at the Hanover Square Rooms, in October 1866:—

"The teaching operations recently commenced by the Female Medical Society have been described as 'an attempt to revive the old midwives'—a description as false as to say that the Royal College of Surgeons was designed to revive barber surgery. The Female Medical Society, without setting any limits to the medical education of women, or to the future extension of the college it has recently commenced—without in any way obstructing, or even refusing to co-operate with, those who wish to agitate for the admission of women to University degrees, and to the general practice of medicine and surgery, precisely as now followed by men—has organised its present rudimentary teaching operations for the purpose of meeting a great and pressing social want, and of superseding what of the 'old midwife institution' has not necessarily perished, in presence of the educational advantages which have long been monopolised by men. It is now working to induct educated intelligent women into a full knowledge of modern obstetric science and the accessory branches of medicine; and, while attempting to do for female midwifery what the now wealthy and powerful corporation of the Royal College of Surgeons has done for barber surgery, and thus to raise women to a level in midwifery with medical men, it will rest for the present on the assurance that, if a good and true basis be laid down, the requirements of society will bring about a natural development of the plan. . . . Supposing a separate and complete medical school accessible, woman—in order to make herself passably acquainted with the whole circle of medical science, and to obtain the status of a general medical practitioner—must devote a term of five years to study, in displacement of many pursuits which, by common consent, are considered to be more appropriate for her probable future. She must expend a sum of at least £500 in supporting herself during that time, and in payment of professional fees; and, when legally qualified—unless accidental notoriety or personal genius enable her to outstrip average men—she must be prepared to devote a second five years to converting general information into practical knowledge, and to acquiring skill in her profession and confidence from the public; then, and then only, does a really professional education begin to return a profit upon its cost. In fact, nothing is clearer, to those who know the bearings of this question, than that general medical practice is the work of a lifetime, and that its responsibilities are not a something to be set down and taken up again at convenience. . . . But, beyond the organisation of a separate medical college, in conformity with the regulations of the Apothecaries' Company, there is nothing to obstruct women from entering fully into the profession, and undertaking all cases which are now treated by men. Many exaggerated statements have recently been floated upon the organs of the general press, and the passing of the examination for an apothecary has been represented as a prodigious feat. . . . Practically, there is nothing in that examination which may not be passed by any fairly educated person of ordinary capacity."

The objects which I have advocated are strictly practical ones. They are—1. To supersede the present ignorant midwives by skilled obstetrices. 2. To add one to the employments now open to the women who turn governesses. 3. To do away with the unjust exclusion by which women are now prevented from practising medicine—an exclusion totally uncalled for, and which violates the broad principles of free trade and personal liberty, while it imposes a disability and injustice upon the weaker sex. How far, when this exclusion is done away with, women may avail themselves of their liberty, is another question, and one which they should settle for themselves.

2. That the present exclusion is supported by an *animus* on the part of the medical men is, I think, shown by the whole current of affairs. Take the tenor of your own editorial in the JOURNAL of March 9th, 1867. There—referring to the action of the Apothecaries' Company—you remark approvingly:—"This amounts, as it is avowedly intended, to an exclusion of female candidates from the only diploma hitherto open to them." As the JOURNAL informs us that you interpret the sentiments of "more than four thousand medical men, the *élite* of the profession", your *dictum* must be conclusive. Last Saturday, also, you pounce upon our skeleton prospectus for a course on obstetrics and its accessories, and you tear it to pieces, as if we were clamouring for its recognition as a full medical school. Then, after demonstrating the non-existence of that which had never been asserted, you say—"The colleges cannot be blamed for not recognising what does not exist."

3. You ask as to the number of lectures. The obstetric course by Dr. Murphy comprises seventy-five lectures, and is equal to that given by him at University College. The supplementary course—of three sections—comprises forty-eight lectures; and the extra courses on chemistry, materia medica, diseases of women,

and diseases of infants, each comprise twelve lectures. There is also the following general provision, which you must have overlooked:—

"The minimum curriculum recommended for ladies intending to practise midwifery comprises:—1. Attendance during two winter sessions upon all the obstetrical and supplementary courses of lectures. 2. Attendance during the intervening summer upon clinical practice at a lying-in hospital or maternity charity, with personal attendance upon at least twenty-five deliveries, under the superintendence of an adequately qualified midwife or registered medical practitioner.

"Additional classes will be formed at the request of twelve students."

4. As to what ladies should do: if they will only take to heart the last sixteen lines of your article "*Minerva medica*", they will adopt what I have continuously urged. But, unfortunately, certain ladies, holding what are called "advanced views", have joined in depreciating the obstetrical work of the Female Medical Society, simply because it did not put upon paper a big, hollow scheme like that for the Women's College at Hitchin, which has now failed so disastrously.

4, Fitzroy Square, W., October 2nd, 1871. I am, etc., JAMES EDMUNDS.

* * Dr. Edmunds has a singular mode of expressing himself; but we shall not quarrel with his form of speech. We shall only reply briefly:

1. That we do not approve of the exclusion of women from examination for medical or any other degrees, when they have gone through the required curricula of study, and are able to satisfy the same intellectual tests as men. We do strongly disapprove of mixed classes of the two sexes for medical instruction.

2. That we did not "pounce upon" the prospectus of the "Female Medical Society", but that it was forwarded to us by Dr. Edmunds, who expressly challenged our opinion of it. Our candid opinion is, that it describes a farcically incomplete course of education, dangerously delusive in essence, in title, and in method; that the treatment of the diseases of women and children requires the same amount of medical education as the treatment of the diseases of men; and that for this purpose, the sort of education described in the prospectus is rather worse than nothing, and more dangerous than can easily and shortly be stated.

3. We cannot approve of the use made of the name of an aged gentleman, once a professor at a medical school, but who has fallen in the battle of life, and for whom a collection, to enable him to end his days in peace, has now for some months been actively and publicly made among the charitable members of the profession and through the columns of the medical journals.

4. We look upon the Female Medical Society, judged by its own prospectus, as the greatest obstacle which has yet been raised to the true interests of female medical education; and, however good may be Dr. Edmunds's intentions, we hold him to be in effect the worst enemy of the cause which he comes forward to champion.

THE TREATMENT OF CHOLERA.

SIR,—Having read with interest accounts of treatment in cholera in your JOURNAL lately, I think the following case may be of interest. Hearing, while at a midwifery case, that a man had been seized with sickness and purging, and cramps in his limbs and body, I sent a dose of chlorodyne, which I always carry with me at this time of year; and, as I returned home, called to see how he was. The purging still continued, though not so severely, and the sickness was rather better, but the cramps continued, and were very distressing. I left another dose of chlorodyne, and gave directions to let me know if he were no better in the morning. I then sent a mixture of carbonate of soda, with small doses of hydrocyanic acid, and ordered his body to be fomented, and rice and milk to be given as food, and toast-water *ad libitum*. The following day, he appeared something better, as, the cramps having quite left, he was free from all pain, the motions being reduced to a thin watery discharge, that ran from him as he lay; it was colourless, but of a very offensive odour. His tongue was warm, but the pulse fluttering and scarcely perceptible. He was ordered brandy in the rice-milk. The next that I heard of him was, that he was dead, after about fifty-six hours' illness. It appeared that, some weeks previously, he had been employed to empty a well into which sewage had for some time found its way; that, when opened, the stench from it was particularly offensive, causing, at the time, sickness to one of the bystanders, and subsequent ill effects to others present. The case was undoubtedly one of blood-poisoning from local cause; so I returned it as choleraic diarrhoea. I was very sorry afterwards that I had not given a dose of castor oil, which I was as near as possible doing when the discharges became offensive. The reason of my writing this is to further endorse the eliminative treatment in cholera as a blood-poison; it may be instructive in a negative point of view. In ninety-nine cases out of a hundred, I find small doses of tincture of opium, chalk mixture, or chlorodyne and mint water efficacious in the sickness and purging so common at this time of year.

Beeston, Notts, 28th September, 1871. I am, etc., JOHN ORTON.

HOSPITAL TENTS FOR EPIDEMIC DISEASE.

SIR,—I am glad to see your suggestion that it would be wise to pitch a hospital tent near Bridgwater, if a small-pox hospital be needed before a permanent structure is provided. It is an excellent suggestion, and might be wisely adopted to a larger extent than you propose, and at other places. A friend, who was engaged with the American ambulance corps during the siege of Paris by the Germans, informs me that their hospital-tent was at once well ventilated, sufficiently light, without glare, and comfortably warm. It consisted of thin double canvas; the air interposed, being almost motionless, greatly obstructed the passage of heat, except what was necessarily lost by a free but gentle passage of air through the canvas, and by its ventilating openings. The tent had no windows, and needed none, as the thin canvas allowed a gentle light to pass. Another tent with windows was used for operations. The tent was warmed by a stove, with long piping passing in a sort of channel in the ground underneath its floor. This mode of warming, and the double canvas for retaining the heat, seem to be the only important peculiarities, but they are important; as, when air is not chilled by contact with cold walls or windows, that which has been warmed by respiration or contact with the skin is not cooled and made to descend so as to be breathed again, but is at once carried away by the ventilating openings, and its place supplied by fresh and pure air warmed from below; moreover, by warming from below, the floor was always, as it ought to be, the warmest part of the room; while, the stove and flues not being near anything inflammable, the danger of setting the hospital-tent on fire was avoided, a subject of great anxiety when those unable to move are in a tent with an ordinary stove. Moreover, the economy of fuel is often a matter of great consequence, as, indeed, it was in Paris.

Such hospital-tents would be invaluable for all cases where an unusual amount of hospital accommodation is needed for a short time only, as they can be quickly and cheaply erected wherever required, easily removed when wanted elsewhere, and easily disinfected after having received cases of infectious disease; for example, by soaking the canvas in chloride of zinc solution, by which, also, it would be rendered unflammable.

I am, etc., P. H. H.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

OFFICIAL OBSTRUCTIVENESS TO VACCINATION.

SIR,—At a juncture when small-pox has been raging from John O'Groat's to Land's End, that any arbitrary regulations as to the periods of vaccination and in distinct contravention of the Act should be enforced by the Inspectors of Vaccination, seems inexplicably contradictory.

Allow me to instance my meaning by informing you that last spring one of the Inspectors made his periodical visit and inspection in my district, and, having satisfied himself, informed me that the Board of Guardians would make a new contract for the performance of vaccination, which at midsummer they accordingly did with me, and with the other medical officers of the union. The terms of the contract were that all patients were to be brought to my surgery to be vaccinated, only during the months of April and October in each year; thus at once violating that clause of the Act which expressly directs that children are to be "vaccinated within three months of the date of birth." A child born at the beginning of May would be five months old by the end of September. Now, in country districts it is found most convenient to vaccinate when a few cases present themselves, so as never to have any over three months unvaccinated.

I have always satisfactorily performed vaccination from arm to arm after having first procured well-charged points, which I generally have done for many years from the establishment in Russell Place, Fitzroy Square. Two preceding Inspectors had awarded me the extra gratuity from the Privy Council for successful vaccination.

As to making it compulsory for children to be brought to the surgery in all cases, this is almost impracticable, as parents cannot at all times leave their homes; the weather may be too inclement sometimes, especially at these months. Under these circumstances, to prevent trouble and delay, I contrive, as often as possible, to have a child vaccinated near where others require to be done, so that they may more easily be brought together; and have in some cases carried recent lymph, not quite dry, in a bottle.

I feel sure that, if mischievous impediments be thrown in the way, it will increase the difficulties with which medical men already have to contend, as well as perpetuate the scourge which we are endeavouring to stamp out.

October 1871.

I am, etc.,

A MEMBER.

DR. B. W. FOSTER is thanked for his courteous letter.

GRATUITIES TO VACCINATORS.

SIR,—From time to time, we see notices in the papers of bonuses or extra grants to public vaccinators. Now, I have been for some years a vaccinator in a small way under the Poor-law Board, but have not had the good luck to see a penny of any bonus. I am just now entering on a fresh contract with the guardians, and have been supplied with the modern form of register-book; so I hope that, under the new *régime*, I may come in for what I have only yet heard of. Will you kindly inform me, through the medium of our JOURNAL, what I must do to gain the desired end?

I am, etc.,

ASSOCIATE.

* * Observe strictly the rules of the department, and vaccinate carefully and successfully.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Altrincham and Bowden Guardian, Oct. 7th; The Philadelphia Evening Bulletin, Sept. 15th; The Wolverhampton Chronicle, Oct. 11th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. T. E. Beatty, Dublin; Mr. John Wood, London; Mr. Joseph Lister, Edinburgh; Dr. C. J. Gibb, Newcastle-upon-Tyne; Dr. W. Roysds, Reading; The Secretaries of the Harveian Society; Mr. W. H. H. Crossman, London; An Associate; Mr. James Haughton, Dublin; Mr. W. Whitehead, Manchester; Our Dublin Correspondent; Mr. A. W. Nankivell, Rochester; Mr. T. O. Wood, Newcastle-upon-Tyne; Dr. G. M. Brumwell, Mossley, Manchester; Dr. W. B. Cheadle, London; Dr. Tilt, London; H. H. P.; A Member; Our Manchester Correspondent; Mr. Richard Hare, Weymouth; Dr. Tibbits, London; Mr. J. Hancocke Wathen, Fishguard; Mr. W. Miller, London; The Secretaries of the Pathological Society; Dr. James Hardie, Manchester; Dr. Waller Lewis, London; Dr. F. M. Pierce, Fallowfield, Manchester; Dr. R. W. Crighton, Tavistock; Dr. A. Ernest Sansom, London; Mr. E. Newton Greaves, Derby; Dr. Octavius Sturges, London; Mr. George Terry, Mells, Frome; Dr. W. M. Kelly, Taunton; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Edmunds, London; M.R.C.S. Eng.; Mr. W. H. Day, London; G. T.; Mr. W. Bourne, Ambleside; Mr. Samuel Wood, Shrewsbury; Our Vienna Correspondent; Mr. Furneaux Jordan, Birmingham; Dr. Dobell, London; Mr. T. H. Bartleet, Birmingham; Dr. Bryan, Northampton; Mr. C. L. Todd, London; Mr. Reginald Harrison, Liverpool; Mr. Morratt Baker, London; Mr. R. G. Whitfield, London; Mr. Arthur Jackson, Sheffield; Dr. R. Bentley, London; Mr. H. Brown, London; Dr. Burder, Bristol; Mr. Charles James Fox, London; Dr. Cayley, London; Mr. Greenway, Plymouth; Mr. H. M. Morgan, Lichfield; Dr. B. W. Foster, Birmingham; Mr. C. J. Evans, Northampton; Dr. Aitkin, Carlsbad; Mr. S. M. Bradley, Manchester; Dr. T. H. Green, London; Mr. R. Cory, London; etc.

BOOKS, ETC., RECEIVED.

The Thirteenth Annual Report of the Herefordshire Medical Association, 1871. Address to the Cardiff Chamber of Commerce on the Present Aspect of Commercial Affairs. By John Morgan, President. Second Edition. Cardiff: 1869.
Fistula, Hæmorrhoids, Painful Ulcer, Stricture, Prolapsus, and other Diseases of the Rectum: their Diagnosis and Treatment. By William Allingham. London: 1871.
The Micrographic Dictionary. Parts I and II. London: 1871.

IMPORTANT NOTICE TO THE PROFESSION.

DR. RIDGE'S FOOD is rich in solids and earthy salts. The phosphates of potash and magnesia exist naturally, and are not introduced by any chemical process. As nature has produced them, so are they conserved and kept free. The nitrogenous substances are varied, consisting chiefly of soluble albumen and gluten. In the preparation of this Food, the outer covering of the grain used is carefully removed, for it is well known that the smut (which is a species of puccinia) lives upon the surface of wheat, and is apt to cause diarrhoea in children. The Food is so thoroughly desiccated that neither the *Acarus Farinae* nor the *Vibroni* can live in it. This renders this article of diet superior to all others, for it not only builds up healthy tissue, but prevents the introduction of any vegetable or animal parasite, which is often the cause of the incessant diarrhoea of children. Medical men, by sending their card to the Manufactory at Bermondsey, can receive a tin of food for trial, free of charge.

Sold in Packets and Canisters by respectable Chemists and Grocers.

SYR. FERRI PHOSPH. CO. (AMERICAN)

PARRISH'S CHEMICAL FOOD,

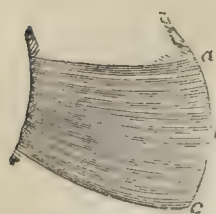
PREPARED BY PARRISH, OF PHILADELPHIA,

And Imported by his **SOLE AGENTS,**

P. & P. W. SQUIRE, 277, OXFORD STREET, LONDON, W.

For convenience and security, this preparation is supplied in 4 oz., 8 oz., and 1 lb. bottles.

Each Bottle bears the name **SQUIRE** on the Seal and Label.



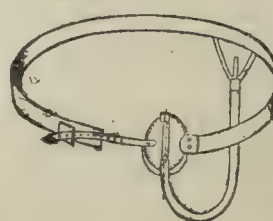
HUXLEY'S

Spiral Abdominal Belts, for

Pregnancy, Obesity, Ovarian Disease, and with Air-pads for Hernia. Made on Principles approved by the first Physician-Accoucheurs and Surgeons. Directions for measurements: Circumference at *a b c*; depth from *a* to *c*. HUXLEY'S OBSTETRIC BINDER, 3s. 6d. each. Discount to the Profession, 20 per cent. Illustrated and Priced.

Circulars on application to **ED. HUXLEY, 12, Old Cavendish Street, Oxford Street.**

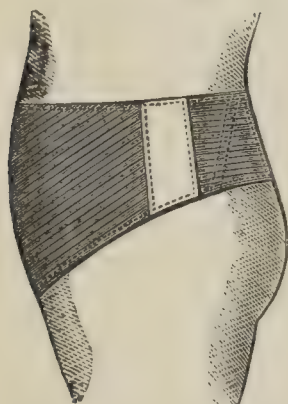
NO STEEL BAND.



Huxley's Patent Moc-Main

TRUSS, in which the troublesome lever spring is entirely dispensed with, is acknowledged by hundreds of wearers to be the most comfortable and efficacious Truss yet devised. Prices, to the Profession only: Single, 9s. and 12s.; Double, 14s. 3d. and 17s. net.

HUXLEY'S OBSTETRIC BINDER, 3s. 6d. each.
ED. HUXLEY, 12, Old Cavendish St., Oxford St.
Agents for Calcutta, Messrs. Bathgate and Co.
Bombay, Rogers and Co.; Montreal, R. Birks.



"MILLER'S" IMPROVED BELT,

TO LACE, BUCKLE, OR PULL ON.

W. MILLER,

ANATOMICAL MECHANICIAN,

29, LEICESTER SQUARE, LONDON, W.C.

KREOSOTE.

CAUTION TO BUYERS.

The Sole English Manufacturers of this article are the undersigned.

THOMAS MORSON AND SON,

31, 33, & 124, SOUTHAMPTON ROW, LONDON, W.C.

SAVORY AND MOORE'S PANCREATIC EMULSION.

Readily miscible in Milk, Water, and Wine.
NOT DETERIORATED BY KEEPING.

PANCREATINE,

IN POWDER, WINE, AND COCOA.

See "Experiments with Pancreatic Juice."—*The Lancet*, October 16, 1869.

IMPROVED LIEBIG'S FOOD.

"RESEMBLING MOTHERS' MILK as closely as possible."—Dr. T. H. BARKER.

No Boiling or Straining. Tins, 1s., 2s., 5s., and 10s.

PEPSINA PORCI PUR.

Free from Starch. Requires no Lactic or Hydrochloric Acid to ensure its digestive activity.

Has more than **EIGHT TIMES** the digestive activity of the best specimens of the so-called Medicinal Pepsine, or Nutrimentative Powder.

143, NEW BOND STREET,
And all Chemists.

BASS'S EAST INDIA PALE ALE.

BARCLAY'S STOUT.

Recommended by the first medical authorities for Invalids and Ladies nursing.

In 18 Gallon Casks, Bottles, Half-bottles, and Imperial Pints.

Also, DEVONSHIRE CIDER.

BERRY BROS., & Co., 3, ST. JAMES'S STREET, LONDON S.W.



Tasteless Pills.—Cox's Patent.

Surgeons and Chemists supplied with an excellent Aperient Pill (the formula for which will be forwarded), covered with a thin non-metallic film, rendering each pill perfectly tasteless, at 1s. 6d. a gross. Postage 2d. They present an elegant pearl-like appearance, and may be kept in the mouth several minutes without taste, yet readily dissolving in a short time, even in cold water. Any formula dispensed and covered, and samples, with a list of pills, from 200 formulæ which are kept in stock, forwarded free on application.

Now ready, a strong leather-covered Pill Case, resembling a pocket-book, filled with Tasteless Pills (nearly 7 gross), from 14 daily used formulæ, sent on receipt of remittance for £1 1s. Empty, 10s.

Cox, Son, and Co., Tasteless Pill Manufacturers, Brighton.

KINAHAN'S LL. WHISKY.

This celebrated and most delicious old mellow spirit is the very CREAM OF IRISH WHISKIES, in quality unrivalled, perfectly pure, and more wholesome than the finest Cognac Brandy.

Note the words "Kinahan's LL. Whisky", on Seal, Label, and Cork.

Wholesale Depot, 6A, Great Titchfield Street, Oxford Street, W.

Vaccine Lymph, preserved in

Glycerine, in Glass Tubes, 1s. each, or three for 2s. 6d. Fresh Points every Thursday, 2s. 6d. per doz.

Apply to Dr. WOODWARD, Public Vaccinator, Worcester.

AN ADDRESS ON PUBLIC HEALTH AND ITS MODERN REQUIREMENTS.

Delivered at the Annual Meeting of the Social Science Association, in Leeds, October 1871.

BY GEORGE GODWIN, F.R.S.,
President of the Health Department.

Progress in Sanitary Matters.—The Local Government Board.—Sir Charles Adderley's Scheme.—The Metropolis Water Act.—Sanitary Precautions.—Impure Water.—The Sanitary State of Leeds.—Partial Improvements.—The Example of Saltaire.—The Prevention of Diseases.—Dwellings for the Very Poor.—Recreation and Amusement.—Conclusion.

IT is tolerably well known that one department of the Social Science Association devotes itself to the consideration of questions relating to public health, discusses improvements in house-construction, drainage, and ventilation; means of recreation and amusement; the influence of external circumstances generally on health, and the legislative machinery necessary to effect desired ends in that direction. Called to the position of President of this department, it becomes my duty to address the Association; and I assure you I approach that duty with a full sense of the responsibility attaching to the position, and a vivid recollection of the admirable manner in which its obligations have been discharged by the able men who have preceded me; including, to speak only of recent times, Mr. Edwin Chadwick, Dr. Farr, Dr. Rumsey, Dr. Lankester, the late Dr. Symonds of Bristol, and Mr. Robert Rawlinson. Their labours, I do not hesitate to say, have materially assisted in bringing about an improved state of public opinion, and obtaining important enactments. The proceedings of the Association on some previous occasions have been treated as futile in journals of influence. It ought to be unnecessary now to combat on such ground. The earnest discussion of the wrongs, miseries, evils, and wants that afflict society, by men and women who have given lives of thought to the various subjects involved, cannot fail, and has not failed, to lead to good. It takes a long time to make the world listen, but it hears at last if the effort be not relaxed. If we look back over the fifteen years during which the Association has laboured, and note what has been done during that time in this special department alone—that of health—we shall feel satisfied that its labours have not been in vain, and, however depressed we may have been by the slowness of progress, and the enormous amount of work yet to be done, we shall find our views and hopes for the future cleared and strengthened.

Progress in Sanitary Matters.—The great object of our meetings and discussions is, by the production of facts and the collision of reasonings, to take a series of the most important subjects affecting the welfare and happiness not of this town alone, not of England, but of the whole human race, out of the domain of opinion into that of knowledge. Opinion means ignorance more or less. I may be "of opinion" it will rain to-day, but I "know" two and two make four. Gradually, but surely, this progress from opinion to knowledge has been going on in sanitary matters. Not many years ago there were numbers of educated and influential people, who were of opinion that there was no connection whatever between bad sanitary arrangements and ill health. At the present time we may, perhaps, go so far as to say that all admit, more or less fully, that this connection does exist. A whole host of questions, however, remain, correctly or incorrectly, matters of opinion; and it is with a view of their speedy removal from debatable ground, so that effective action may be at once taken, that this Association holds its meetings, and publishes the results of its deliberations. Thus: we have ceased to discuss as to the necessity of promptly getting rid of the sewage of towns, but the best mode of disposing of it is still with some a matter of opinion. This part of the inquiry, however, is gradually narrowing, and it may be hoped that the proceedings at this Congress will tend to bring about the right conclusion. In common with a large majority of those who have investigated the subject, I feel perfectly assured myself that the irrigation of land is the right use, except in some special cases, to which to apply sewage. Evidence that it may be thus applied with pecuniary advantage, and without injury to the health

of the neighbourhood, is accumulating day by day. The reports of the Sewage of Towns Commissioners, the Rivers' Pollution Commissioners, and the committee appointed by the British Association, all strengthen this view; and, amongst other indications, at a recent meeting of members of the Essex Chamber of Agriculture, it was resolved, after inspecting the sewage farm at Romford, "That, in view of the large amount of foreign wheat paid for every year by the population of this country, and the large amount of manure wasted in polluting rivers with town sewage, it is desirable that such pollution should now be prohibited by legislative enactment, and that the forty-five Sanitary Acts in existence should be repealed, and a general and comprehensive law enacted." It has been calculated by more than one competent authority that the amount we shall have to pay for foreign wheat this year will be above thirty millions sterling, a circumstance worth this passing allusion as showing the largeness of the interest involved in our inquiries.

The Local Government Board.—Events are tending, it may be hoped, towards the desired unification of existing Acts referred to in the resolution quoted. The new Local Government Board, of which the Right Hon. James Stansfeld, M.P., is president, will take the place of the Poor-law Board, with wider powers, specially embracing the statutes having reference to the sanitary arrangements of parishes, such as those relating to the sewers, nuisances, labour in workshops and factories, baths and washhouses, common lodging-houses, adulteration of food, and smoke-nuisances. The supervision of these matters will be transferred from the Local Government Act office and the Medical Department of the Privy Council to the new Board, and thus the government of matters relating to each other, and hitherto performed by three separate departments, will be united in one body.

Sir Charles Adderley's Scheme.—A new Public Health and Local Government Bill is in the hands of Sir Charles Adderley, and, when modified and added to, will probably become law. This proposes to repeal twenty Acts of Parliament, from the Public Health Act, 1848, to the Sanitary Act Amendment Act, 1870, the new Act codifying these repealed Acts, for England and Wales (exclusive of the metropolis). The several officers and clerks are placed under the authority of the new President, and will have to be amenable to him. Next session of Parliament ought to settle the mode of preventing river-pollution, and of providing the metropolitan water-supply; but this latter may probably be deferred until the local government of the metropolis is settled. It is to be hoped that by the new Act the medical officer of health will be made independent of local boards and of private practice, so that no fear of damaging or offending his patients and his masters may tend to prevent the proper and complete discharge of his duty at all times. It has been pointed out more than once, and may be usefully reiterated, that unless the medical officer of health be precluded from private practice he cannot hope to secure the co-operation of members of the same profession, to whom he must look for information of outbreaks of disease, and who would seldom be disposed to introduce another medical practitioner to their patients with the fear of his rivalry before them. The Act should also enforce in every district the appointment of a public analyst, who might do much towards the prevention of the adulteration of food, the cause of a large amount of ill-health and loss. Lead-poisoned water is another producer of illness, which such an officer would be able to detect. I must add, with reference to the contemplated new Act, that a report has just now been issued by a joint committee of the British Medical Association and the Social Science Association on the report of the Royal Sanitary Commission. This joint committee was presided over by our eminent associate, Dr. Rumsey; and its report includes various suggestions and observations that call for the serious consideration of those who are engaged in the preparation of the Public Health Bill.

The Metropolis Water Act.—The Metropolis Water Act passed at the close of the last session of Parliament has good intentions, but how far these will be carried out remains to be seen. After the expiration of six months from the passing of the Act, the local metropolitan authority shall, whenever they are of opinion that there should in any district be a constant supply, make application to the water-company, requiring compliance with the terms of the Act. There is a right of appeal to the Board of Trade upon the application being made to a company requiring them to furnish a constant supply. The Board of Trade may order a constant supply to be given if, after inquiry, the metropolitan authorities refuse to act, or unreasonably delay acting, or if, by reason of the insufficiency of the existing supply of water in such district, or the unwholesomeness of such water in consequence of its being improperly stored, the health of the inhabitants is, or is likely to be, prejudicially affected. Before a company is compelled to carry out the Act, however, various regulations have to be observed; and the companies seem to have the power, if so minded, to delay the desired

boon by objections which will have to be removed. Let us hope that the duty imposed on them will be loyally discharged. Of the desirableness of a constant supply I have myself not the remotest doubt. Some difficulties will probably be met with in the first instance, but these may be speedily overcome. One provision of the Act must be hailed with unmixed satisfaction—the requirement by Clause 6, that every company shall immediately supply on Sundays, as on other days, sufficient pure and wholesome water for the domestic use of the inhabitants within their limits. The amount of discomfort endured, and of evil produced, through the non-supply of water on Sundays, in the courts and slums of London and elsewhere, could scarcely be exaggerated. I have in my time visited some thousands of houses, the inhabitants of which were uniformly without a drop of water between Saturday and Monday. The story of their misery had to be told for years, with both pen and pencil, before the remedy came. The present Act, after all, can only be regarded as provisional. The great question, how best to secure an ample supply of soft pure water to London, will have to be looked fairly in the face before long and grappled with, let the cost of carrying out the decision be what it may. It is simply a question of time, and the shorter the time the better it will be for the health, the comfort, and, in the long run, the pockets of the inhabitants.

Sanitary Precautions.—The importance of the subject we are considering—the public health—is so great, it lies so entirely at the root of all national progress, that it is impossible to speak too strongly upon it. At the present moment, moreover, it is invested with unusually pressing interest. After a terrible visitation which has desolated homes throughout the country—a visitation which, all evidence shows, was the result of ignorance, carelessness, and wilful avoidance of a known means of prevention, or, at any rate, of amelioration—we note at no great distance from our shores the presence of a much-dreaded disease; and I should be neglecting a duty if I allowed this opportunity to pass without inviting all who have power to aid in making such preparations as experience shows to be calculated, under Providence, to mitigate its severity should it reach us. Should we happily escape its visit, we should still derive advantage from the steps taken. When there is no immediate prospect of danger the cost of precautions is begrudged. A large class of persons would sooner run the chance of death than incur the certainty of having to pay a small sum. We are all of us gamblers, more or less, and like to take our chance. The most vigorous and intelligent action is required on the part of our health-authorities, and their hands should be strengthened by public expressions and outside aid. I am anxious not to be thought an alarmist. There is no occasion whatever for alarm; it is, indeed, to be strongly deprecated. But it would be suicidal to think, ostrich-like, that if we shut our eyes, no one will see us; that if we say nothing about a possible danger ourselves, nothing will be heard of it. The way to defeat it is to meet it well prepared. “It is not known”, (says the Registrar-General, in a recent report (August 1871), “that where a place is clean, where the waters are pure, where the people are not crowded, where good administrative arrangements are made for the early treatment of attacks in the first stage of diarrhoea, the epidemic is disarmed of nearly all its terrors. But as English towns are still dirty, are dotted over with cesspools or fouled by bad drains, and the waters alike of wells and of rivers, from which towns draw their supplies, are soiled to some extent by sewage, we can at present expect no absolute immunity. Commissions and committees have left our water-supply much as it was; the hard waters of the rivers are not purified by Clark’s process, nor are the pure, unpolluted streams brought uncontaminated down to the cities in the plains. Still, much may be done, if cholera pursue its customary course, by commencing at once all useful works of purification, so as to mitigate its virulence.” And this is what all, in their several spheres, should aid in doing. The medical officer of the Privy Council, Mr. Simon, in his instructions on the subject, recently issued—wide attention to which would prove of great value—has dwelt so strongly on the part played by polluted water in propagating the disease, as to have led to the expression of fear, by an esteemed member of the Association, that the public may be induced in attending to this to neglect other important inquiries. Mr. Simon says: “The dangers which have to be guarded against as favouring the spread of cholera-contagium are particularly two. First, and above all, there is the danger of water-supplies which are in any (even the slightest) degree tainted by house-refuse or other like kinds of filth—as where there is overflow, leakage, or filtration, from sewers, house-drains, cesspools, foul ditches, or the like, into streams, springs, wells, or reservoirs, from which the supply of water is drawn, or into the soil in which the wells are situate—a danger which may exist on a small scale (but, perhaps, often repeated in the same district) at the pump or dip-well of a private house, or on a large or even vast scale in the source of supply of public waterworks. And, secondly, there is the

danger of breathing air which is foul with effluvia from the same sorts of impurity.”

Impure Water.—Without here discussing whether the objection taken to the medical officer’s expressions be sound or not, the evils resulting from the use of water containing ordinary faecal impurities are well known. Outbreaks of typhoid fever have been traced again and again to this cause. In many cottages in low-lying land, by the side of stream-lets which receive the overflow of house-drainage and other refuse, it is never absent, and cripples the working power of the country to a much greater extent than might be supposed. The serious outbreak of typhoid fever at Terling, in Essex, will be remembered, where, between December 4th, 1867, and January 13th, 1868, two hundred and eight persons, out of a population of nine hundred, were attacked; and was shown to be connected with the pollution, by sewage, of wells from which the drinking-water was obtained (*The Builder*, vol. xxvi, p. 105); and many other similar cases might be adduced, some of which were made public by myself at a time when the evil was not so fully recognised. A Norwich rector has quite recently shown how, within eight days, last August, the father of a family, a labouring man, and four of his children, died and were buried; the cause being, as the writer believes, “filth percolating into the well-water”. The rector adds: “I can point to four parsonage houses around me here, where deaths have occurred entirely from this same cause.” I have no hesitation in saying with him that the same evil exists in thousands of houses, where nothing of this kind is suspected until some severe illness breaks out and carries off its victims—sometimes not even then. The medical officer of health for Islington, in his last report, gives the particulars of a local outbreak of fever, which serve to show how small a quantity of water so polluted will do mischief. He traced the cause of the outbreak, with much care, to sewage which leaked into an underground tank, whence milk from a dairy was adulterated with water. The dairymaster very honestly aided the officer of health by giving him a list of his customers, and it was found not only that the fever was restricted to houses supplied by this dairy, but to individuals in these houses who used that milk, while others who used a richer milk from the same dairy, not diluted with water from the tank in question, were not attacked by the typhoid fever. London must not comfort itself with the notion, founded on the amount of the recent expenditure on the main drainage, that all its cesspools have vanished, and that its sewers are now good and in a proper state. Many of them are in a dreadful condition, and thousands of old cesspools yet remain. As a rule, wells sunk into town subsoils furnish contaminated water, and should be avoided.

The Sanitary State of Leeds.—The fine town in which the Association is now assembled suffers greatly from the existence of middens and other dangerous accumulations of refuse. I have on more occasions than one examined Leeds, and have noted these with sorrow in scores of cases. The condition of the river Aire is very unsatisfactory, nor is this to be wondered at by those who know the amount of filth daily thrown into it. Its foul condition is a heavy tax on the cloth-makers, dyers, and other manufacturers of the town. What is the amount of the tax it lays on the health and strength, perhaps the life, of the place, I will not here inquire. It is understood that the question how best to utilise the sewage of Leeds has long been under discussion by the Corporation. Let me express an earnest hope that a wise determination will soon be arrived at and acted on, and that the abolition of deadly cesspools and middens will be effected. A lesser evil here, but still one that nevertheless touches the health and the pocket, is very distressingly observable to strangers. I mean the enormous amount of unconsumed smoke allowed to escape into the air and disfigure the town. The appearance of many of the fine buildings, which would otherwise adorn the streets, is miserably changed by it, and the effect produced by the general gloom resulting at times upon the spirits, and consequently the health of the inhabitants, must be considerable. It is a misfortune, I am satisfied, and not an advantage, that the recent Local Act for the borough contains an exemption as to the consumption of smoke in favour of certain trades carried on here. The Royal Sanitary Commission, in their second report, when deprecating this exemption, speak of the manifest injustice thus done to similar works in the adjoining districts, competing in the same market as Leeds, under the more rigorous enactments of the public general statutes. The evil wrought by it in the town will be a stronger argument here, and ought to ensure its early abrogation. Very large sums, it is not to be denied, have been spent in Leeds on sanitary works, to the great credit of the town, but so much yet remains to be done that the death-rate is painfully high. The use of cellar-dwellings, of back-to-back houses—some of which I have visited—and the incompleteness of the sewerage already alluded to, are amongst the most prominent evils calling for immediate remedy. The death-rate in the Midsummer quarter this year was 23.2 in the 1,000, very much higher than it should have been; and yet we are forced to

recollect that, in parts of the town, the rate was more than double that amount, which means that thousands of persons died simply because they were placed under more disorderly circumstances than their neighbours; and this goes on year after year—surely a frightful reflection. It is well to remember that lessening the death-rate in Leeds, say only two per thousand, means saving 520 lives annually.

Partial Improvements.—Disappointment is sometimes felt that, after considerable expenditure in a district, the death-rate is not reduced to the extent expected. Careful inquiry would generally serve to show that the improvement made has been only partial. If the water-supply has been attended to, the drainage has been neglected; or if deficiencies in this respect have been remedied, the sewers are unventilated, or overcrowding, a deadly evil, has been permitted to an extent that counterbalanced the good effects otherwise produced. We may rest assured, however, that every improvement of this kind made does affect health, morality, happiness, and life, and so be encouraged to fight vigorously in aid of them. The story from Calcutta recently circulated that, in consequence of the effect produced upon the health of the town by recent improvements in drainage and water-supply, the undertakers were applying for compensation for loss of business, if not true, serves to show what, in public opinion, the result of the works has been.

The Example of Saltaire.—Many of the subjects relating to public health and social progress still offer problems for solution of extreme difficulty, and much good remains undone for want of its being known how best to do it. In confirmation of this, and for some other reasons, I am tempted to mention that I have for some time been authorised in writing, by an inhabitant of London, to state that he is willing and ready to appropriate to the improvement of the health and condition of the poorer classes of the metropolis a sum equal to that given by the late George Peabody for a similar purpose—or say half a million of money—when he can see a mode of satisfactorily effecting this without the fear of pauperising the classes he seeks to benefit. Means were taken to make this offer known to a limited extent, and a large number of suggestions have been sent to the proposer, but he is not yet satisfied as to the course that can wisely be taken. We must congratulate this individual on holding in his hand the power to achieve a glorious end, and I would add a hope that he may speedily come to a wise determination. A noble example of what may be done by an employer to improve the condition of those engaged for him is to be found in this district—I mean, of course, Saltaire—where intelligence and far-sighted benevolence have provided healthful homes, education for the children, innocent enjoyments, and means of culture. The time is coming when the history of the results of that establishment, in a sanitary and social point of view, should be written with a view to the guidance of others.

The Prevention of Diseases.—We lose, on moderate computation, a hundred thousand lives annually by preventable diseases, and millions of money in consequence of these deaths, and of premature disability in cases where death does not ensue. A million paupers receive relief weekly in England and Wales. With complete study of the laws of health, preventive medicine, and improved sanitary arrangements throughout the kingdom, the number of this melancholy army would soon be materially diminished. I have spoken of disability where death does not ensue. With reference to this let me say, we want registration of it. The registration of deaths which is now enforced is of the greatest value, but we need beyond that the registration of sickness, which would show the magnitude, not only of the grief and poverty to individuals caused by disease, but of the money-loss to the public. The desirability of this is fully recognised by the Royal Sanitary Commission, so that we may hope for legislation to enforce it before long. The connection between bad sanitary arrangements and ill-health is now largely admitted, as I have said, but not fully, or we should surely not find, in unnumbered places, accumulations of filth vitiating the air, large populations drinking polluted water, and debilitated by unhealthy dwellings, and preventable diseases annually carrying off their thousands, pauperising the families left, and injuring the whole community from the highest to the lowest. What is wanted is, after all, very simple. We want clean air, clean water, clean food—purity, in fact. And as we strive for purity in life, moral purity, so let us strive to obtain for society the advantages of physical purity. “Unto the pure all things are pure,” says St. Paul (Titus i, 15), which may be true in regard to conduct, but at present the belief may not be safely acted on with reference to the air we breathe, the water we drink, or the food we eat. Moreover, how is it possible for moral purity to be retained in such dens as those in which multitudes of our fellow-creatures pass their lives? The assertion, as the home so the people, denounced as almost impious when first written, has come to be pretty generally accepted; but the homes in thousands of cases remain in the most wretched condition, and the natural results continue to follow. The injury done to our agricultural population by the want of

proper dwellings can scarcely be overstated; in fact, the whole condition of this part of the people is a disgrace to the age. I must restrict myself, however, to the question of health. I have visited hundreds of cottages with rooms scarcely of the height of a man, damp, cold, undrained, and overcrowded, with heaps of decomposing matter around, and where, in short, everything was being done to counterbalance the advantage offered by nature of a plentiful supply of pure air. In parts of the country where Portland cement and gravel, broken stone, or burnt clay are readily obtainable, a considerable saving in the cost of building may be effected by the use of concrete walls. It is absolutely necessary, however, that the concrete should be properly made and rightly applied; when this is the case, it is an excellent and enduring material; otherwise, it is worthless rubbish. It may be mentioned, as it will give confidence to those disposed to employ it, that the Metropolitan Board of Works now allow the use of it within their boundaries, and that the Enclosure and Tithe Commissioners permit money lent by them for the improvement of estates to be expended in the erection of concrete buildings. In both cases, however, the work is required very properly to be done under stringent regulations. It is to be regretted that the number of builders who have applied themselves to the economic execution of such work is still very small. By lessening the cost of erecting cottages, something is done towards inducing a proper provision of them. With good plans, wise superintendence, and the choice of proper materials, much may be done in this direction. Non-absorbent walls and floors are amongst the *desiderata*, and, above all things, such arrangements for the removal of the refuse that it shall not by any possibility contaminate the water-supply.

Dwellings for the very Poor.—Sound and healthful dwellings are required in towns for a lower class than have yet been thought of—the multitude who are unable to pay more than, say, a shilling a week as rent. There are a large number of these who require only one room, a man and his wife without children, single men and women, and widows. There seems no valid reason why a part of the Peabody Fund should not be applied to meet this want, and it is to be hoped the trustees of that fund will turn their attention to the subject at once. The desire to produce cheap houses by speculators has necessarily this bad result, that the efforts of the builder are all directed simply to that end, to discovering the means of erecting a dwelling at the least possible cost, not in providing to the utmost extent for the health and the comfort of the occupant. If the wages of a labourer be not sufficient to enable him, by the exercise of due prudence, to pay for a decent habitation, warm, dry, airy, and well drained, calculated therefore not to destroy his health and working power, and to send him to a premature grave, and his widow and children to the union to be maintained at the expense of the ratepayers, it is time they were made so. It is found to be wise and paying policy to provide horses with good stables, and pigs with healthful styes. Surely it ought to be thought necessary to do as much for the men who drive and feed them. Among minor evils in these homes, ill-ordered dust-bins should be mentioned as the fruitful source of sickness; decomposing matter, under present arrangements, being allowed to remain in them for weeks, sometimes months, to pollute the air. Better supervision is needed here. If the occupants of houses were to see that all consumable matter was burnt the danger would be lessened, and the quantity would be so much reduced that arrangements might be made for its removal day by day. Then, again, a vast deal of ill-health, to say nothing worse, results from the too early occupation of newly built houses. In the suburban districts of London, as in many of our large towns, small houses by the thousand are planted on the ground, often on heaps of unwholesome deposits placed there to fill up hollows whence brick-earth or sand may have been removed, are finished with pauseless rapidity, and, all reeking as they are, receive a family, often before the workmen have left. The danger involved was recognised long ago. An ancient foreign proverb says, as to a new house, “The first year for my enemy, the second for my friend, the third for myself.” The speculative builder of to-day too often cares for neither friend nor enemy; the houses, like certain historic razors, are made to sell; to turn a penny is his sole object, and the buyer must look out for himself. Alas! for such a state of feeling; it unfortunately prevails in modern society to a much greater extent than is consistent with the right condition of public health, giving that word its full meaning.

Recreation and Amusement.—Among the arrangements for furthering the object we have in view, facilities for recreation and amusement must not be forgotten. Amusement must be had—will be had; and, if that which is rational and innocuous be not obtainable, less wholesome excitements will be resorted to. The provision of open and adorned places, picture-galleries, social gatherings, flower-shows, the practice of window-gardening, facilities for obtaining books, for the enjoyment and the study of music, “penny readings,” cricket, swimming, archery,

drill, are all matters calling for the fostering aid of those who desire to see a good state of health prevailing, and would contribute their share in rendering the world happy, and leading to a higher type of manhood. Popular meetings for recreation have a further value in serving to bring classes together, counteracting the tendency to severance now in operation, and which has aided to produce the great danger that threatens society at this moment. It is the opinion of some who have inquired, that we are deteriorating physically as a people; that the number of men, for example, rejected on physical grounds from amongst those who offer themselves as soldiers or policemen, is greater proportionately than it was a dozen years ago. I am not disposed to accept this belief in our deterioration without reservation. It may be, and indeed unquestionably is, true in the case of thousands of our fellow-creatures pent up in close courts, garrets, and cellars, without pure air and water, or knowledge which would lead to an improvement in their condition, and of the thousands born of this class who go to fill prematurely the hospital and the graveyard. But there are other portions of the population of whom a different story may, it is hoped, be told. Still the destruction of health and life by preventable causes is enormous; and we are again made to feel, by the belief alluded to, the vital necessity of continuous efforts to bring about a better state of things.

Conclusion.—Every one may assist in this particular sphere in disseminating knowledge of the kind required, and building up a proper state of public opinion. By the exercise of this alone may we hope to obtain satisfactory laws, and to see those laws properly carried out. The want of education in what affects the human frame—the operation of the agents by which it is influenced—is unfortunately almost universal. If it were not so, laws to enforce sanitary requirements would be much less necessary than they now are. Sanitary science should be taught to all from the earliest years in schools of every grade. Until this is more generally done, we shall go on, as now, destroying one another, and blind to the fact, obvious to a Latin poet eighteen hundred years ago, that “life is not to live, but to be well.” This great question of health calls for the primary and unremitting attention of statesmen and legislators; it is far above party considerations, far superior in importance to the great majority of subjects which monopolise attention. Without education and health, no nation can advance and be happy; and to bring about those conditions should be the chief object of all government.

THE RECOMMENDATIONS OF THE ROYAL SANITARY COMMISSION.

Extract from an Address delivered at the Meeting of the Social Science Association in Leeds, October 1871.

By GEORGE W. HASTINGS, Esq., President of the Council.

TURNING to the subject of Public Health, I may observe that there are facts which should constitute an useful warning against any attempt to subject our sanitary administration to the close control of a central office. The Act passed during last session has a taking name, as it was meant to have. But what if a Local Government Board means the preservation of local government in name and its abolition in practice? This may not be the object aimed at, but it is the ultimate mischief to be dreaded. It is, I think, unfortunate that this portion of the recommendations of the late Sanitary Commission has been adopted by the Legislature before the rest have been adequately considered; for the whole scheme in a great degree hangs together. Those recommendations were embodied in the bill that has been laid before Parliament by Sir Charles Adderley, and they have been commented on at length in a report lately issued by our Council. I beg for that document the attention it deserves from our members; it was mainly prepared by Dr. Rumsey, whose opinion on health questions, especially on all relating to the due organisation of a sanitary service, is probably more weighty than that of any other man in the kingdom. It reviews at length the recommendations of the Royal Sanitary Commission, and enters into minute detail on questions which I can only cursorily bring before you. I will, however, ask you to bear with me for a short space in reference to one or two leading points.

Let me, before doing so, bear willing witness to the value of the late Sanitary Commission. We may feel a legitimate interest in its work, for it was in compliance with a request urged by a deputation from our Council in the spring of 1868 that the commission was issued by the Crown. A deep debt of gratitude is due to its members, and especially to its chairman, Sir Charles Adderley, for the vast labour with which they have accumulated evidence of high value, and for their

learned, able, and most suggestive report. It is at once a reward and a justification of the pertinacity with which our Council, in conjunction with a sister society, the British Medical Association, sought for an authorised inquiry into the defects of our sanitary laws and administration, that the Commission has put on record a series of facts and opinions which will absolutely compel legislation.

But it will be admitted that, if we are to consolidate our law, and remodel our administration as to health matters, it were well to do so in the best possible way. Now, at the bottom of this whole subject lies the question, What is to be the area, or, as it has been the fashion lately to call it, the unit, of sanitary administration? Is it to be the parish, or the union, or the county, or some still larger district? This is not, as might at first sight appear, a question of convenience merely, but one of principle; one which, decide it how you will, must affect the whole complexion of future legislation. It will be admitted at once that ancient prejudice, not to be disregarded without reason, is in favour of small areas of local government. But in this case there is reason to set aside the wisdom of our fathers, because the great innovator, Time, has swept away the state of things on which their ideas were founded. In old days local administration was limited as much as possible to a small space, on account of the difficulty of locomotion. When the roads were so impassable in winter that it took a day to perform a journey of a few miles, it was obvious that the more work that could be done within the boundaries of the parish the better. The creation of turnpike roads in the latter half of the last century, and the subsequent improvement of parish highways, made such an administration as that of the Poor-law unions a possibility. But at the present time the general introduction of railways, even in remote districts, has made the access to our county towns an affair of an hour or two. Probably it is now as easy to collect the necessary attendants at quarter sessions and assizes from all parts of a shire, as it was formerly to gather the ratepayers of an average-sized parish in their vestry-room. Increased facility of locomotion has enabled us to use enlarged areas of administration, with all their advantages of greater economy in time, money, and efficiency, just as easily and conveniently as we formerly used small. When, therefore, Mr. Göschen, in his bill of last session, proposed to establish the parish as the unit of local government for the future, he created nearly as much astonishment as if he had asked us to revert to stage-coaches in lieu of the rail. His project was the more remarkable inasmuch as, when he framed his bill, the report of the Royal Sanitary Commission, based on information from his own office, was already in preparation, recommending the union as the primary area of administration.

It will be admitted that the same arguments which tell against the parish apply, though no doubt with diminished force, to the union. If the union be better than the parish, is not the county better than the union? The Sanitary Commissioners do not think so; but I confess to have searched their report in vain for any solid reason in support of their decision. It seems to me a halting between two opinions, and one, consequently, which on appeal to principle cannot be sustained. The question involves the fundamental reasoning of the science of society. If in the organisation of communities it be desirable to vest the primary functions of self-government uniformly in the smallest possible aggregation of individuals, that is one thing; but such a principle would compel the adoption of the parish as the unit of administration. If, on the other hand, it be believed that the establishment of the area which gives us the maximum of efficiency, economy, and convenience, is the true rule of legislation, then I venture to believe that the Poor-law union must stand condemned. Let us consider what are the advantages which large areas possess in comparison with small, especially in sanitary matters, and then we can judge whether the union comes up to the mark.

The first advantage is in the kind of men who are willing to serve on their governing bodies. It is very well to exhort men of standing and intellect on the duty of serving in parish vestries and such like bodies; they admit the obligation, but in nine cases out of ten decline to fulfil it. Human nature, as a rule, requires some reward for labour; and those who give their unpaid services to the public desire generally to be recompensed in one of two ways—the vulgar seek social position, and the high-minded aim at moral influence. The secret of the great position occupied by the House of Commons in this country, far beyond its legal claim, lies in the immense power it exerts as representative of the nation, the imperial questions it discusses, and the certainty that no man can be prominent in its ranks without possessing exceptional gifts of ability or character. The principle applies in less degree to other governing bodies. Take for instance the School Board of the metropolis. If the original intention of the Act had been carried into effect, and a separate board been instituted for every district in London, would you have had the same class of men who were glad to come forward as candidates for

a body controlling the education of three millions of people? The happy suggestion of Mr. Torrens has proved what may be done to elevate administration by the enlargement of local constituencies, and he deserves well of the whole country for compelling the adoption of this admirable example. Let us take care that it is followed in sanitary matters. Let us judge for ourselves, and make the public understand, what must be the difference in all the qualities that go to make government efficient and pure, between the men who will serve on the thousand and more small administrative bodies which it is proposed to constitute, and those who will compose the fifty or sixty assemblies regulating the counties of England.

The second advantage presented by large areas is the superior class of officials they are able to obtain. The wider the area, the more important the work and the higher the salary. Ambition and emolument alike attract to them the best men. In sanitary organisation this is of peculiar importance, for success depends chiefly on the qualities of the health-officer. Our Council have already published an earnest protest, which on their behalf I here repeat, against the idea of the Commissioners that duties requiring for their beneficial exercise much tact, prudence, matured judgment, and large experience, can, as a general rule, be safely intrusted to the inexperience of "young men entering on practice", by whom they would be discharged "only so long as they were acceptable, and then resigned to younger men, fresh from the schools". Such a proposition seems to imply a misconception, or rather a want of conception, as to the great science of preventive medicine, which, for the adequate mastery of its wide principles and multifarious details, requires the devotion of a life. An officer of health should be paid such a salary as will secure the services of trained intellect and high character; and, being thus remunerated, he should be rigorously debarred from private practice, not only that he may devote his whole time to the functions of his office, but that he may be free from personal influence in performing his duty. Such an officer can be obtained by counties, but seldom or never by unions. The rateable area of a county, supplemented as it would be by boroughs which would unite with it for sanitary, as they now do for gaol and police, purposes, can sustain a cost under which the union must break down.

It is urged, indeed, that every union has a medical officer, and it is proposed to place the sanitary welfare of the country in his hands. We protest against such a system. No one has a higher sense of the services and merits of a body of men, signally underpaid for their work, denied the social recognition of enrolling them in the civil service of the Crown, and struggling manfully, in the great majority of cases, though beset with difficulties, to do their duty to the poor. But I cannot believe that these meritorious officials possess the qualifications necessary for sanitary work. It is no blame to them that they have not been trained for duties which require, as our late colleague, Dr. Symonds of Bristol, pointed out, very different acquirements from those which are successful in the treatment of sickness; nor is it easy to see how professional men, whose time and energies are absorbed in daily toil, are to qualify themselves by that "study of all sanitary questions" which the Commissioners recommend as desirable for medical officers of health. Granting them even the necessary qualifications, these Poor-law practitioners are under the great disability of private practice. On that important point I will content myself with quoting from a valuable minute issued by the General Board of Health, dated December 20th, 1855, and signed by the Right Hon. William Cowper, President of the Board. The minute deals with the duties and qualifications of a medical officer of health, and says: "It will be well to debar him from the private practice of his profession; first, because the claims of such practice would be constantly adverse to those of his public appointment, the duties of which (especially at times of epidemic disease, when his official activity would be most needed) private practice could scarcely fail to interrupt and embarrass; secondly, because the personal relations of private practice might render it difficult for him to fulfil with impartiality his frequent functions of complainant; and thirdly, because, with a view to the cordial good-will and co-operation of his medical brethren, it is of paramount importance that the officer of health should not be their rival in practice, and that his opportunities of admonitory intercourse with sick families should not even be liable to abuse for the purposes of professional competition." Now, if this reasoning be sound—and much evidence has been collected both in our own country and on the Continent in its support—it follows that the Poor-law practitioners, who depend on private practice for their livelihood, are not fitted for the functions of health-officers. But I would not be supposed to argue that they may not be usefully employed in our sanitary organisation. I believe, on the contrary, that they could render valuable aid as subordinates, with some small increase to their present meagre remuneration, under a highly trained superior, such as a county administration would supply.

The third advantage derived from the adoption of large areas of administration would be the diminution of conflicting authorities, and of the delays and difficulties incident to the carrying out of joint works. It must be remembered that the boundaries of Poor-law unions were never adjusted with any view to sanitary purposes, and would frequently be found singularly ill-adapted for such works as drainage and water-supply.

It would be difficult to overrate the obstacles to an adequate administration which will be raised by the multiplicity of sanitary districts advocated by the Commissioners. In fact, I believe their scheme could never work except under one condition, viz.—that local government should be granted in form and denied in reality; that the central office should interfere in every detail, and be absolute over all authority. If such be the object, the plan proposed is logical enough; small areas can be easily "managed", and small men readily coerced; important bodies, on the other hand, are apt to hold their own. The question rests with the country. Centralisation is not popular, and it can hardly be made so by calling the machine of dictation a "Local Government Board." The true remedy for this and other perils is to make the government of counties more extensive and complete. It is objected that the present system is not representative; and though this is not accurate, since the governing assemblies are really representative of their districts in the highest sense of the word, yet the time has probably come when an elective element should be introduced into the administration. What is most needed is, that this should be done with the least possible disturbance of existing good. I believe that a far better plan than the creation of new "boards" would be found in the restoration, under forms adapted to modern life, of the ancient County Court. That tribunal, which came down to us, as to other nations of Europe, from those masters of organisation and government, the Romans of old, used to administer not only the civil and criminal justice, but the finance and government of every county. No one would propose to revive it in its antique fashion, when every freeholder attended its councils; but a system of representation, fairly divided between the existing authority, the justices, and the local taxpayers, might reassume all or most of its former powers. Such a body might be trusted to levy taxation on a more equitable basis than the present rude injustice of mulcting one kind of property for the benefit of all. It would take the charge of all roads, and would probably absorb the functions of the smaller boroughs. It would administer the sanitary laws, through competent officials, over an extent of territory adequate to their due execution, and with an authority which no extraneous office would venture to impugn. Such a body might well relieve the Imperial Parliament of a portion of that local bill business, such as gas and water supply, which now weighs down its energies; and in Ireland it would remove all legitimate grounds for "Home Rule" agitation. More than all, such bodies would perhaps be the best guarantee that the wit of man could devise for the perpetual preservation of liberties which may yet be endangered by anarchy. It is remarkable that the one country in Europe which has preserved in its entirety the ancient county organisation, is the one whose constitutional freedom has survived more disasters than any other. The history of the kingdom of Hungary, too little known to Englishmen, bears record of three periods when parliamentary government was submerged by war and despotism; and on each occasion it rose triumphant from the flood, because the national institutions were founded on local liberties which could not be rooted up. England has probably nothing to fear from individual tyranny; but, unless the signs of the times mislead us, there is much to be dreaded in the future from the despotism of the mob. The avowed aim of the revolution now meditated by the fanatics of disorder is to crush out individual freedom as much as to abolish proprietary rights. The best bulwark against such a foe will be found in the power and stability that are native to local institutions. The brawlings and corruption of unqualified democracy have sickened the world, and sound government, the final end of all legislation, is to be found only where property and education have weighted the scale in favour of order and honesty.

I have dwelt at some length on this question of sanitary organisation, not only on account of its intrinsic importance, affecting, as it does, in so large a degree the material prosperity of the people, but also because the report of our special committee on the subject has occupied much time and labour for months of this year. That document is before the public, and may be judged on its own merits; but I could not pass to another topic without acknowledging the services of Dr. Rumsey and Dr. Stewart. Nor can I refrain from expressing once more the sense entertained, I am sure, by the whole Council, of the value of the volumes compiled by the Royal Sanitary Commission. Should the legislation which must soon come go no farther than their recommendations, although I sincerely trust it may, a great stride will have been taken in the path of sanitary improvement.

INTRODUCTORY LECTURE

TO

THE COURSE OF CLINICAL OPHTHALMOLOGY AT ST. THOMAS'S HOSPITAL.

By R. LIEBREICH, M.D.,

Ophthalmic Surgeon and Lecturer to the Hospital.

GENTLEMEN,—Ophthalmology was formerly considered a subordinate branch of surgery. By its astonishing progress, however, during the last twenty years, it has risen to the rank of a separate science. The most eminent physiologists, surgeons, and physicians, have, by persevering study and attention, developed the science and practice of ophthalmology until they have given it a scientific independence. Special studies and special training have become a necessary consequence of its high development.

The treasurer, the governors, and the medical staff of this hospital and medical school have promptly recognised the importance of the subject. With the greatest care and liberality, the governors have fitted up a special department for the treatment of the diseases of the eye, and for instruction therein. The completeness of all the arrangements of this institution justly entitles us to indulge the pleasant expectation that it will not turn out inferior to similar departments of other general hospitals, nor even to any special eye infirmary.

I hope, gentlemen, you will be anxious to derive all possible benefit from those favourable circumstances. For some time, however, there will, no doubt, be some difficulties arising out of my incomplete command over the English language; but I trust they will soon be diminished. Indulgence on your part, and my best intentions, assisted by long experience in teaching, will speedily help us over these difficulties.

The teaching of ophthalmology aims at two widely different objects. The one is merely to give the student a concise view over this part of medicine, and to impart to him as much knowledge of the subject as every practitioner ought to have, whatever branch of medicine he may take up afterwards; the other purposes to educate ophthalmologists.

The relation of our department to this hospital and medical school requires that our principal attention should be directed to the first object—namely, to impart a general knowledge of the treatment of diseases of the eye. I hope, however, that those who may take special interest in this branch of study, and may intend devoting themselves entirely to it, will have every opportunity of doing so, and they will always find me ready to assist them in their pursuits. The laboratory attached to this department will afford them the means for original researches, and my ample pathological collection, which I have brought over from my *cliniques* in Paris, will give them material for microscopical investigations.

A systematic course will be given in the summer session. During the winter I purpose giving clinical lectures twice a week on cases in the out-patient department. On Mondays we will analyse cases of more medical interest, and practise the use of the ophthalmoscope; on Thursdays we will take surgical cases, and perform the necessary operations.

Now, before I enter into the nature, the course, and the treatment, of an individual case, I shall have to draw your attention to the best method of examining your patients. I shall first try to teach you what you ought to learn by looking at a patient before you ask him a single question—how to examine his eyes in ordinary daylight, how to examine them by lateral illumination, and how to use the ophthalmoscope.

In subsequent meetings we shall have to complete this by examination of the refraction, accommodation, acuteness of vision, field of vision, binocular vision, and so forth, for which we require answers from the patient to our questions. I shall bring before you first three patients—one we will examine together by ordinary daylight, a second by lateral illumination, the third by the ophthalmoscope.

In examining a patient in broad daylight, I warn you, before all, not to adhere to the wide-spread practice of taking hold simultaneously of both his eyelids and drawing them asunder, in order to see at once as large a surface as possible. It is, if done by one, already disagreeable for the patient; and it will certainly be insupportable if done by a larger number of students. But the chief bad consequence is, that the irritation produced by thus handling an inflamed eye increases the hyperæmia, and gives an erroneous impression of the actual state. In inflamed and irritable eyes a similar mode may even prevent you from a successful examination. I advise you, therefore, first to look at this eye at a distance, and then close to it, without touching it, and then to observe the different parts of the surface of the eye by making the patient move the eyeball in the different directions—namely, upwards, downwards, to the left, to the right. During these examinations you

may gently draw alternately on the upper and on the lower eyelid; only, after having examined the surface of the eyeball in the way just described, you may then evert the eyelids, if necessary, in order to see their inner surface.

In the second patient, you will easily recognise in daylight a cataract of his left eye. But in order to distinctly recognise the nature, the consistency, the maturity of this cataract, it is necessary to examine him by lateral illumination. In a dark chamber, we will, by means of a convex lens of two inches focus, concentrate the luminous rays of a gas-flame, placed at the side of the patient, upon the point which we wish to examine. This method allows us to look through the anterior part of the crystalline lens, even if it be not perfectly transparent, to the nucleus, and even to the posterior surface.

After having shown you an instance of each of these three methods, I shall now treat more explicitly of lateral illumination. For a long time the illumination of eyes by means of a convex lens has been occasionally resorted to. But the idea of introducing it into practice, as a systematic method of examination, was conceived by myself after I had become acquainted with Helmholtz's treatise on "Accommodation." One of his experiments showed so clearly the substance of the cornea and the crystalline lens, that I concluded that it must equally well, if not better, show even the slightest cloudiness in the refracting media. The practical application verified my conclusion, and I then combined this method of illumination with a strong magnifying power, a pocket lens, and even a microscope. I finished the first communication I made, seventeen years ago, on this subject, with the following words:—"Such an intense illumination, directed upon a single point by means of a light which can be freely regulated, allows us the minutest investigations. The most practised observer could only in a very imperfect manner recognise, by the most attentive examination, in daylight, such details as the lateral illumination shows with the greatest facility and clearness."

Yet this very clearness is not without the danger, for an inexperienced observer, of overestimating the alterations so easily observed. Thus, for instance, one who for the first time sees, by dilated pupil and lateral illumination, a senile crystalline lens, may think it to be a cataract. The somewhat lessened degree of equal transparency which is proper to the crystalline lens of everybody in advanced age is sufficient to make its substance very distinctly appear of bluish-grey colour, even if it seem absolutely transparent by daylight, and by the ophthalmoscope. To get a correct idea of the effect of lateral illumination, let us compare it with a beam of sunlight entering a dark room through a hole in the shut window-blinds. In the bluish-grey stripe which indicates the passage of the luminous ray we can see even the finest particles of dust, and thereby recognise to what illusions common daylight leads us in regard to the purity of the air which we respire. In an analogous way, and even in analogous colour, the cornea, as well as the crystalline lens of the normal eye, are seen by lateral illumination. It is necessary, therefore, to begin observing normal eyes of the different periods of life before studying any pathological changes.

In observing the cornea, it is easy to combine lateral illumination with a strong magnifying power. Here, the slightest changes can be recognised with the greatest certainty. The different kinds of cloudiness which, by common daylight, appear of quite identical nature, are easily distinguished; and we are able to state whether they belong to the superficial or to the deeper layers of the cornea. Very extensive opacities in the cornea may prevent us from observing the iris and the pupillary region; but we can overcome this obstacle by concentrating the light upon the iris without illuminating the opacities of the cornea. Of the utility of this process, I shall show you to-day an example. In one patient, with extensive central cloudiness of both corneæ, you will, by concentrating the light upon the crystalline lens, be able to see extensive opacities in the latter, if you look through the non-illuminated part of the cornea. This would be impossible by daylight.

Of the two convex lenses usually given with the small ophthalmoscope, you will do best to use the stronger one to illuminate the eye, the other to regard the illuminated part. You are holding the latter before your eye, and about one inch and a half to two inches before that of the patient. It will be better, however, to begin with simple illumination without any magnifying power. The cornea and pupillary region must be illuminated quite from the side, whilst the observer is looking from the opposite side. The equatorial part of the crystalline lens is also to be illuminated from the side, but it is to be observed nearly in the same direction. For the posterior pole of the crystalline lens, and the neighbouring parts of the vitreous body, it is necessary to have the light fall a little more from the front. Very different effects of illumination are obtained by somewhat approaching or removing the lens, by shifting it forwards or backwards, and by letting the light fall in a more or less oblique direction. By practice only you can learn how to profit in a special case by the variety of the luminous effects.

TUBERCULOUS PHTHISIS.*

By EDWARD LONG FOX, M.D., F.R.C.P.,

Physician to the Royal Infirmary, and Lecturer on Principles and Practice of Medicine in the School of Medicine, Bristol.

AMID the various opinions upon phthisis, it seems absolutely necessary to give up the idea of Laennec and Louis, that "tubercles in the lungs should be recognised as the anatomical character of phthisis". Further research and more accurate observation enable us now to class under the head of phthisis several tolerably well-known diseases, and especially those forms of chronic pneumonia which Dr. Addison described and figured beautifully long before Niemeyer published anything on the subject. But the questions which I would venture to propose for our consideration, are—How far are we to go in this direction? To what extent are these new views in accordance with the clinical experience of many of us? The data for discussion are contained in Niemeyer's monograph upon Phthisis, and would include the following propositions.

1. Chronic catarrhal pneumonia is one of the very commonest diseases, and is not particularly dangerous, under appropriate treatment.
2. The greatest danger to most phthisical patients (*i.e.*, those suffering from chronic catarrhal pneumonia) is the development of tubercles.
3. If there be only a few tubercles, they are almost exclusively found in the immediate neighbourhood of cavities or cheesy deposits; and they seldom, if ever, exist without there being found somewhere or other in the body cheesy deposits.
4. Tuberculosis is in most cases a secondary disease, originating in some way unknown to us in the action of cheesy morbid products on the organism.
5. The connection is probably a local influence, in which perhaps the lymphatics take a prominent part, rather than an infection of the blood.

Niemeyer's views seem to me to be too much confined to the lungs. Although I am very far from allowing Virchow's dictum to be true—*viz.*, that the lungs are the organs least often affected with tubercle—yet in the consideration of this subject it is necessary to look at the disease as it affects the whole system. General tuberculosis, as seen in young children, may affect almost every internal organ of the body. We see it complicated with, and perhaps dependent on, chronic disease of the ear; we see it often enough associated with cheesy bronchial or mesenteric glands; but I confidently appeal to the experience of all pathological observers, when I say that it is not unusual to meet with general tuberculosis without any glandular or inflammatory lesion that can have preceded the tuberculous growth in point of time. Even Niemeyer himself confesses that miliary tubercles are found without any pre-existing cheesy deposit or cavity, though in his opinion this occurs but seldom. I know that the growth of tubercle in many organs after the injection of various substances into the cellular tissue of guinea-pigs, as seen in the experiments of Dr. Wilson Fox and others, will be cited against the blood-view of this disease; but none of these experiments exclude the idea of septic influence, and thus they rather support the opposite of Niemeyer's dictum.

But if this condition of general tuberculosis can exist, say even once in a hundred times, without pre-existing cheesy deposit or other degenerative result of previous inflammatory action, there must be some other factor not recognised by the author of these new views, which may possibly at least influence the development of tubercle in all cases. Do we not learn something of this by studying the mode of death in these victims of tubercle? I do not speak of cases in which the lungs are enormously implicated, and much of the pulmonary substance rendered useless, or of those in which exhausting diarrhoea with intestinal ulcerations may have hastened the fatal event. But what do we constantly see? a patient ill for two or three weeks with symptoms simulating enteric fever or acute pneumonia, and no *post mortem* appearance, save lungs studded with miliary tubercle, but otherwise healthy. It is not from interference with the pulmonary function that such a patient dies. Collect all the tubercles together, and they would not take up the space of half a lobe of one lung—and we know with what amount of lung-spoiling a man may live for years. It is not even from the high fever (bad as that is) that death ensues—for in these cases the temperature often manifests the most startling remissions; it is from the condition of the blood, hopelessly unfit for any of the functions of the body. The man dies, just as one dies in the first week of typhus or variola, before any lesion of the internal organs can be recognised. Take, again, tubercular meningitis. The lungs may be scarcely affected; the lesion of the

meninges so slight that it requires a practised eye to realise it: nay, even in some cases death ensues with headache, convulsions, strabismus, that terrible specific cry, etc., and without any lymph being poured out even over the base of the brain, and without any tubercle on the vessels. To what does such a case succumb? Clearly not to pressure on the brain; clearly not to lesion of any organ. Death must depend on the condition of the blood itself. Similar facts occur to us in connection with tubercle on the peritoneum and pleura.

It is useless to talk to us of special vulnerability of such patients if there be no wound of tissue or organ to be found; but inherent tendency to tubercle, irrespective of all preceding inflammation, is intelligible, and, I believe, in accordance with daily experience.

Let us turn for a moment to chronic bronchopneumonia. It is idle to object to this disease being a true pneumonia because of its occurrence at the apices of the lungs, or because its primary symptoms differ from what we meet with in acute inflammation of the parenchyma of the lung, or because the physical signs are not the same. Bronchopneumonia is much more rich in cell-growth than acute parenchymatous pneumonia. In the latter, the air-cells are filled with an exudation much more rich in fibrine. Acute bronchopneumonia is just as likely to affect the apices of the lungs as the bases, as is often seen in croup and whooping-cough. But between ordinary acute bronchopneumonia and that chronic form that results in phthisis, there are what seem to me specific differences, apart from the question of duration of the disease. The acute form is singularly amenable to treatment; the chronic can be by treatment rendered inert for years, but is scarcely ever cured. The acute form is generally unilateral; the chronic, in a large number of cases, bilateral; the acute form never, so far as is known, hereditary; the chronic not seldom hereditary. These points go some way to show that the latter disease is not merely accidental, but that it depends on some constitutional condition. And when, in addition to this, we find after death miliary tubercle profusely scattered over the portions of both lungs that are unaffected by the original disease, or attacking the pleura or the peritoneum, it is more reasonable to believe that it is a manifestation of constitutional disease rather than a consequence of the previous inflammation.

The very incurability of the disease points, I think, to its constitutional origin. How often do we see the consolidated spots in one and often in both lungs remain in the same condition for many years. Now, under Niemeyer's view, there surely is no need that a large surface of the lung should be so consolidated for infection of the system to take place. The smallest spot of disease would act equally well. But if the disease be of small compass it will remain inert, under suitable treatment, for a whole life. I have lately seen a lung *post mortem*, in which, from the history of the case, we were sure that the small portion of lung affected had become consolidated thirty-five years before. Certainly, in the face of facts like these, if Niemeyer be right at all, that tuberculosis originates in the action of morbid products on the organism, it is indeed, as he says, in some way unknown to us.

Take another instance. There are instances—unhappily too frequent—in which every member of a family becomes phthisical at a certain age. It is not unusual to see large families with one or both parents phthisical, and almost every member of the family will die of phthisis before twenty-one. In a case lately under my care, and in which no tubercle could be detected, although the right lung was everywhere riddled with cavities, there was a strong family history of phthisis, four sisters having died of it.

Niemeyer says that pneumonia, resulting in cheesy infiltration, occurs chiefly in delicate badly nourished persons. This experience is partly founded on the great vulnerability of such persons, and partly on the fact that the inflammatory nutritive changes occurring in them show a tendency to an abundant production of cells, and thereby to a cheesy metamorphosis of the inflammatory products; and that pneumonia of this character does not usually occur, even in delicate and vulnerable persons, before the age at which pulmonary diseases generally become more frequent, and it then takes the place of those inflammatory diseases of other organs which have prevailed during the preceding period of life: and he would also say that, although it is not proved that tuberculosis is an inheritable disease, yet an inherited disposition to pulmonary phthisis may exist; *i.e.*, a weakness or vulnerability of constitution, which in the parents has already been either the cause of pulmonary phthisis, or has only been developed in them by the disease. Now this seems to me to be forcing facts to suit his theory. Clinical experience demands an explanation of the close relation between scrofula and phthisis, considering how large a number of phthisical persons have suffered from glandular swellings in early youth, from which they have entirely recovered, and after death we find in them no caseous degeneration of either cervical, bronchial, or mesenteric glands. So our author falls back upon this delicacy of constitution imparting

* Prepared for the Medical Section of the Annual Meeting of the British Medical Association at Plymouth, August 1871.

a vulnerability; *i.e.*, increasing the chances of having pneumonia, leaving out of sight—in fact, denying—what seems to be a much more reasonable explanation of the phenomena—*viz.*, that the phthisis is only another manifestation of the same constitutional diseased condition; for we question that the great tendency to pulmonary disease exists more specially at puberty than during childhood. The age at which pulmonary phthisis is most prevalent and most fatal is certainly not the age at which patients are particularly liable to other morbid conditions of the lungs. It would be more in accordance with medical experience to say that childhood showed a greater liability to diseases of the lungs; and, if so, then, according to Niemeyer, the age most liable to pulmonary disease shows tuberculous disease in other parts of the body more frequently than in the lungs.

Take the case of gout. It is a fairly recognised fact that we may inherit gout—and not only so, but that we may inherit it from a grandparent, although the parents may have shown no manifestation of it. But at what age does gout manifest itself? Certainly not, as a rule, at all ages of life; much more frequently at or after middle life. We do not say that such a person inherits a vulnerability; we say that he inherits a constitutional taint, that manifests itself most usually at late periods of life, probably because then the system is weaker, repair more difficult, the mode of life more conducive to that partial and insufficient metamorphosis which seems to act as the exciting cause of this disease. Is not the fact that phthisis often does not attack its victim until the age of puberty to be explained in a similar way? It is a matter of common observation that childhood is the age for general tuberculosis, tuberculous meningitis, and tubercle of the peritoneum; that puberty is the period most liable to tubercle associated with pneumonia; and that acute miliary tubercle of the lungs is about equally to be found at puberty and between the ages of twenty and forty. But that a constitutional taint should be inherited and manifest no special phenomena until the age of seventeen, and then attack the patient with all possible virulence, is only analogous to what we see in other diseases universally recognised as transmissible from parents to children.

Does clinical observation throw any light on this subject? Certainly the stethoscope does not help us. The physical signs, as gathered by auscultation and percussion, are pretty much the same in tuberculous and non-tuberculous phthisis; or at least, excluding acute tubercle (in which disease the physical signs are mainly negative), the breaking down of lung associated with tubercle, and a similar condition without tubercle, cannot be distinguished by means of the stethoscope. The flattening of the chest may exist with both; the emaciation, the rapid pulse, the hurried breathing, the perspiration, the curved nails, the dyspepsia, and the diarrhoea. Albuminuria, which is often found in acute tubercle, is absent in these other conditions, unless the patients have renal disease unconnected with the pulmonary mischief. The chlorides are never, or scarcely ever, diminished in either disease; indeed, although constantly examining this point, I never but once found any diminution of the chlorides in the urine, though possibly this experience may be due to the fact that the majority of cases come under notice long after their commencement.

Is there any help to be got from the thermometer? Wunderlich says that it is impossible by means of the thermometer to distinguish tuberculous from non-tuberculous phthisis, and it is not easy to express a different opinion, considering his long and careful observations upon temperature. Still, in the progress of these cases, there does seem to me to be a difference in temperature. In the chronic pneumonia of the non-tuberculous subject, the temperature will stand between 100 deg. and 103 deg. Fahr., not necessarily higher in the evening than the morning—indeed, not unfrequently higher in the morning than the evening, but keeping regularly about these points without sudden and irregular remissions. It may also, under suitable treatment, reach the normal point and remain quiet for a considerable time, or can be entirely recovered from any recurrence of the progress of the disease, however, being manifested by an exacerbation of temperature. But the case is somewhat different in tuberculous phthisis. Niemeyer says, "We have not yet arrived at definite conclusions in our investigation of the hectic fever of phthisical patients, especially concerning the causes by which its regular courses are disturbed. But we can already say this much, that in tubercular phthisis in the restricted sense, and when tuberculosis complicates a destructive pneumonia, the differences between morning and evening temperatures are as a rule much smaller. We give, therefore, *ceteris paribus*, a more favourable prognosis as long as the pyrexia has the character of a febris remittens, with almost intermittent type, than when it approaches to that of a febris continua."

Now this is only very partially correct. The height to which the temperature ascends is often in excess of what is seen in chronic pneumonia; but, as has often been said, the temperature in tuberculous phthisis is as irregular as in typhoid fever it is regular. Any one who pays at-

tention to this point will find how often and yet how irregularly the temperature will fall from 104 deg. or 105 deg. Fahr.—five, six, and even eight degrees Fahr., to rise again in the course of a few hours. Except in certain examples of pyæmia, the intensity and irregularity of these remissions will be found in no other morbid conditions, and in certain cases of obscurity they will prove of diagnostic value. The marked difference between this irregularity of tubercle and the comparatively regular remissions of non-tuberculous phthisis will prove useful in the determination of the special form of disease we may have before us, and affords an illustration of the truth of an idea, sometimes lost sight of, that nosological distinctions must be drawn not only from minute microscopical alterations of structure, as seen *post mortem*, but from such appearances plus the clinical phenomena during the life of the patient.

We would sum up the basis for discussion thus.

1. There are several forms of disease included under the head of phthisis.

2. Tubercle, whether of the lungs or of other organs, is due to a constitutional disease; and this is shewn by death occurring without *post mortem* results sufficient to have caused it.

3. Tubercle often exists quite independently of caseous deposits or vomicae.

4. This morbid condition is inheritable, but may be developed *de novo* by debilitating influences.

5. Its possible manifestations at all ages, and its frequent non-manifestation until the age of puberty, is only analogous to what is seen in other constitutional and inheritable diseases.

6. Chronic pneumonia found associated with miliary tubercle is not connected with it as cause with effect. The tubercle only becomes developed in cases in which the patient has previously had the tuberculous taint of constitution.

7. Some fatal chronic pneumonias may owe their irremediable properties to the same constitutional weakness, even where no miliary tubercle is discovered after death.

8. In general, non-tuberculous phthisis can be distinguished from tuberculous by clinical phenomena, and especially by the use of the thermometer.

ON PUNCTURES OF THE COLON FOR THE RELIEF OF TYMPANITES.*

By J. HANCOCKE WATHEN, L.R.C.P.Ed., M.R.C.S.Eng., etc., Fishguard.

THE case which forms the basis of this paper has already been recorded in the columns of the *Practitioner* for October last. My object in again bringing it forward is to elicit an expression of opinion on the propriety of resorting to puncture in those distressing cases where other means have failed to relieve the tympanites. Having read in the *Practitioner* for February, 1869, the notes of a case of obstruction of the bowels under the care of Dr. Clifford Allbutt of Leeds, in which the distension was so great that Mr. Teale, whose assistance was obtained, punctured the colon, I determined to adopt such a procedure in the first suitable case that presented itself. Such an one came under treatment in a few days. On the 13th of the same month my father, Mr. Wathen, was requested to visit Mrs. G., aged 29, who had, half an hour previously, while engaged in some domestic duties, been suddenly seized with most severe lancinating pain in the lower part of the abdomen. She was cold and collapsed, presenting the appearance of one suffering from severe shock. The patient supposed herself to be about six weeks gone in pregnancy, and stated that in her previous pregnancies she had experienced pain and faintness about this period. Acute peritonitis soon declared itself. This, under full and frequent doses of opium, turpentine stupes, etc., was considerably subdued; but the abdomen became intensely tympanitic. We failed to afford any relief, although free fæcal evacuations were procured by turpentine and castor-oil enemata, administered by an O'Beirne's tube. The distension increased, causing great distress, accompanied by vomiting. I advocated puncture of the bowel, but could not obtain consent until the evening of the third day, when the patient earnestly requested relief by operation. After consulting with Mr. Brown of Haverfordwest and Mr. Wathen, I first plunged a small hydrocele trocar and cannula into the transverse colon, then into the descending, and lastly over the ascending colon. As soon as the force of the current of gas lessened, the cannula was withdrawn and reintroduced, being guided by the most prominent portion of the colon. The first two punctures emitted gas with sufficient force to blow a candle out when held near the cannula;

* Read at the annual meeting of the South Wales and Monmouthshire Branch.

but, through the puncture over the ascending colon, no gas escaped—to be accounted for, I think, by the fact that the colon was emptied, and, not offering sufficient resistance to the trocar, was pushed in front of it. The abdomen was very considerably diminished in size; the patient expressed herself as being much relieved, and appeared grateful for this diminution of her sufferings. The immediate object—viz., relief—was obtained; and I think that, had this simple and painless operation been performed earlier, it would certainly not, to say the least, have had any prejudicial influence on the case. The patient became more exhausted, and sank next morning. No *post mortem* examination could be obtained.

As far as I can ascertain, abdominal puncture for the relief of tympanites has been performed in five other cases, to which I would briefly draw your attention. The first case is the one already referred to, which occurred in the Leeds Infirmary. Mr. Teale punctured the colon in the transverse and descending portions with the best results as regards the intestinal mischief; the obstruction being completely overcome, and the patient, who had not passed either flatus or motion for many days, freely voided both. Unfortunately, the patient was also suffering from secondary double pneumonia, to which he eventually succumbed. At the autopsy, “no traces of the punctures could be detected, except upon the outside of the body; no air had escaped into the peritoneal cavity”. The second case is one recorded by Dr. Davey of Northwoods, Bristol, in the JOURNAL for August 21st, 1870. The patient was a little girl aged nine years, whose abdomen was punctured by Mr. Salmon of Thornbury, for an intense tympanites, accompanying tubercular peritonitis. The patient lived twelve days after the puncture, which, Mr. Salmon states, “gave great relief, and tended much to mitigate her sufferings, previously to which the difficulty of breathing had been most distressing.” The *post mortem* examination showed that the puncture had in no way hastened the end.

Dr. Davey refers to two cases of intestinal puncture performed under the advice of Dr. Fonssagrives of Toulouse. In the first case, the patient “was perfectly cyanosed and suffocating; an exploring trocar was inserted into the most distended part of the lower umbilical region. Two fresh punctures were made next day, and gave so much relief that the patient’s life was prolonged four days”. In the second case, six punctures were successively made and the patient cured.

The last case to which I have to refer is one that occurred in the practice of my friend, Staff-Surgeon J. R. Thomas, while on the West Coast of Africa. The patient, an American, was suffering from chronic dysentery, accompanied with gradually increasing tympanites, until he became so much distended as to implore for relief by any means possible. Puncture of the transverse and ascending colon was practised with the best result; but, unfortunately, a few days afterwards the patient, who had been up and about, went in for a heavy debauch, had a relapse, and eventually succumbed.

You are all no doubt well aware that puncture of the intestine has long been practised on the lower animals. The manner in which the operation is usually demanded is thus. A herd of cattle is turned into rich clover or grass; some of them, unless great care be taken, become gorged on the luscious vegetation; rapid fermentation takes place, which results in great distension by gas; the animal drops, and, unless relief be promptly afforded, soon dies.

The treatment is simple, and well known to most graziers. A puncture is made into the most prominent point in the flank with any sharp instrument at hand—generally a pocket-penknife. I have just been informed by a most intelligent farmer that he has repeatedly performed the operation, always with the best results, never having lost a case. In the case of one calf he has punctured as many as twelve or fourteen times, and has occasionally done it with an ordinary butcher’s-knife.

I must confess that the results obtained in the lower animals are more favourable than those in the six cases I have quoted as happening in the human subject; but one must recollect that puncture has only been resorted to after all other means have failed, thereby losing much valuable time, and generally in those cases having a fatal tendency. On reviewing the evidence afforded by *post mortem* examination, I cannot conceive any real objection that can be urged against the operation, as not a trace even of the punctures could be detected in some of the cases, and in none had there been anything found which would contraindicate it. When I picture to myself the immense distress and suffering present in an intensely tympanitic patient, whatever may be its cause, and then recall to mind the ease and quiet, if not anything more, which we are enabled to afford our patient by what I am bound to describe as a simple, harmless, and painless operation, I feel drawn to the conclusion that it is a proceeding not only justifiable, but urgently demanded at our hands.

If this paper be the means of obtaining a more extended trial of the operation, my object in reading it will be entirely gained.

CASE OF HÆMORRHAGIC SMALL-POX: WITH CLINICAL REMARKS.

By ROBERT GRIEVE, M.D., Medical Superintendent of the Hampstead Hospital.

THE following notes of the case were made by Mr. Bland, Assistant Medical Officer.

T. I., aged 27, a cabman, was admitted to the Hospital late on the evening of the 9th of October. He had two vaccination-marks. He had been ill for six days. The eruption was copious and in the papular stage, and of a dark purple hue.

October 10th. In the morning, he had severe epistaxis and hæmoptysis. His tongue was dry and brown; his bowels were confined. He had passed a good night. He took very little food. Pulse 120; temp. 105 deg. He was ordered to have ten minims of tincture of sesquichloride of iron in half-an-ounce of water every four hours; with ice, beef-tea, and milk *ad libitum*.

October 11th. He had now epistaxis, hæmoptysis, melæna, and hæmaturia. There was great ecchymosis of the eyelids and effusion of dark-coloured blood beneath the ocular conjunctiva. He took food more freely. His breathing was laboured. Pulse 130; temp. 105 deg.; respirations 28.

October 12th. The hæmorrhages continued. There was ecchymosis of the whole of the skin. The patient was much worse. Pulse 128; temp. 105 degs.; respirations 28.

October 13th. He had had slight delirium all night. He took large quantities of milk and beef-tea. Pulse 104; temp. 104 degs.; respiration feeble. At 3 p.m. he became quite unconscious, and continued in this state until his death, which took place at 9.20 A.M. on the 14th.

Post mortem examination thirty hours after death. The body was well developed and nourished. Rigor mortis was well marked. The eruption was confluent on the face, copious on the trunk and extremities. It was in the vesicular stage; the contents of the vesicles on the abdomen and lower extremities were purple, the areola not fading on pressure. The left pleura was adherent throughout with old adhesions; the right was much injected and ecchymosed, but there was no lymph or effusion. The right lung was dark and heavy, breaking down easily. Much black blood could be squeezed out, but there was no consolidation. Through the substance of the left lung were scattered masses varying in size from a bean to a walnut, which were red, solid, and granular, and sank in water. This lung was otherwise in the same state as the right. The left ventricle was moderately firmly contracted. The valves and orifices were healthy. The pericardium had a few spots of ecchymosis. The liver was softer and paler than natural. The spleen was dark and moderately firm. The kidneys had slight venous congestion.

One of the most noteworthy features in connection with the small-pox epidemic of 1870 and 1871 has been the large proportion of cases of the hæmorrhagic type which have occurred. In the Hampstead Hospital alone, over 400 instances of this form of the disease have been under notice since the 1st of December, 1870. Unfortunately, recovery from variola hæmorrhagica when well marked is rare indeed, and a specific for this terrible disorder has still to be found. Vaccination does not prove a preventive; the majority of the cases here had marks of some kind of previous vaccination. Certain occupations predispose to this type of the disease; thus, amongst males, engine-drivers and stokers, and in females, cooks and kitchenmaids, and others exposed to great heats, suffer severely. Above all these causes is to be placed a dissipated or irregular mode of life. Hæmorrhagic small-pox is very rare in childhood; but occasional instances are to be met with.

There is great variety both in the extent of the subcuticular effusions and also in the amount or seat of the active hæmorrhages. Sometimes the effusions are limited to small purpuric spots situated principally on the trunk and lower extremities; sometimes there are huge patches of ecchymosis here and there over the entire surface, as in the case of T. I.; but one symptom, which is almost constant enough to be called invariable, is the effusion under the conjunctiva, which is sometimes so great as to cause the membranes to bulge out, making the cornea seem a depression instead of an elevation, and giving a peculiar and characteristic look to the patient. Among the hæmorrhages, bleeding from the buccal mucous membrane is the most constant, except in women, when vaginal hæmorrhage is invariable. Then comes epistaxis; much more rarely hæmaturia; and, most rare of all, bleeding from the bowels. The case narrated above presents the peculiarity of having concurrently all these forms of hæmorrhage. The eruption appears and goes through the different stages more slowly than in ordinary small-pox. It rarely reaches the pustular form, and the vesicles are filled with bloody serum in place of the usual secretion. It is very

rare indeed to see the bold flat-headed pustule in the hæmorrhagic small-pox. In the case above related, on the eleventh day the eruption was still in the vesicular stage.

The patients emit a peculiar foetid odour, very different indeed from the characteristic smell of ordinary small-pox: it conveys the impression of putridity, and is consequently more disgusting.

T. I. had only slight delirium, which did not come on until within thirty-six hours of his death; and this will be found to be the history of a large proportion of the hæmorrhagic cases. Delirium as a rule does not occur at so early a stage of the disease, and is not so violent in its character, as in ordinary small-pox; and is usually the immediate precursor of a fatal result.

Patients take nourishment freely during the whole course of the disease, if we except those cases where, in the earlier stages, there is much swelling of the fauces and consequently difficulty of swallowing.

The temperature and the pulse, and I may add the respiration, do not seem to bear any fixed ratio to one another, but in almost every case vary to a great extent. As a guide to prognosis, most reliance is to be placed on the indications shown by the last named—namely, the respiration. In this individual, the temperature ranged high for a hæmorrhagic case; but, as usually happens, death was preceded by a decrease. In small-pox, 105.6 deg. may be taken as the limit of safety; but we have had many cases of fatal hæmorrhagic small-pox where the temperature at any stage after the appearance of the eruption has never exceeded 102 deg. As we never get any patients in the hospital till after the appearance of the eruption, I can only speak as to the subsequent stages. The range of temperature in hæmorrhagic cases is decidedly lower than in regular unmodified small-pox. In this form of the disease, the use of the thermometer as a help towards prognosis becomes of secondary importance, as we have other and visible symptoms which are to be relied upon. As mentioned above, the respiration is a safer guide to prognosis than either the temperature or the pulse; and this, in my opinion, applies to every form of small-pox. A steady increase from day to day in the number of the respirations is a most unfavourable sign.

The *post mortem* appearances found are those characteristic of the hæmorrhagic form of variola, if we except the old standing pleurisy. We have the ecchymosis extending to the serous surfaces; we have the engorgement of the lungs—in most instances, the immediate cause of death. The kidneys merely showed venous congestion; but, in other autopsies of similar cases, clots have been found in the pelvis of one or both kidneys. In this case, the bowels were examined; but, owing to the quantity of iron taken, were so discoloured that no opinion could be given on their state.

And now, lastly—and I am afraid with truth it may be said leastly—comes the treatment, which with T. I. was what for some time has been usual in this hospital—namely, small doses of tincture of sesquichloride of iron, and a free administration of ice and bland nutritive fluids. The iron seems in some degree to control the hæmorrhage, and acts as a general tonic. Whether it permanently affects the issue, is more difficult to say. But one thing to be learnt is, if we can do no good, let us avoid doing harm; and I believe that the administration of stimulants in variola hæmorrhagica does positive injury. The capillaries are evidently in such a state that the slightest pressure, either from external or internal sources, causes their disruption. If the heart's action be stimulated, the weakened capillaries of the lung give way, reducing that organ to a pulpy mass, rendering it totally unfit to perform its function, and hurrying on the fatal result, which in any case, perhaps, is inevitable. Although not believing stimulants to be so injurious in other forms as in the hæmorrhagic, I take this opportunity of entering a protest against their indiscriminate use in small-pox. In this disease, the dermatitis plays a more important part than that with which it is sometimes credited. The most common and fatal complications are those which occur with any extensive inflammation of the skin, such as scalds and burns; and I cannot but believe that stimulation will hasten the advent of congestion of internal and vital organs—a result much to be dreaded.

EXPERIMENTS ON SANTONIN.

By ROBERT FARQUHARSON, M.D. Edin.,

Late Medical Officer to Rugby School, etc.

THE subject of santonin is both interesting and obscure, and I should be glad of permission to add my experience to the interesting remarks published by Dr. David Page in the BRITISH MEDICAL JOURNAL for September 16th.

About two years ago I was consulted in the case of a little boy on

whom a great variety of treatment had been unsuccessfully applied for the removal of thread-worms. Five grains of santonin were ordered at bedtime; and on my next visit I found the whole establishment in consternation at the effect of the remedy, which had caused a very copious and involuntary discharge of urine towards early morning. Such an accident was naturally most distressing to a boy of twelve, and pupil in a large private school; and more particularly so, as no consolation was afforded by any beneficial action on the disease for which the drug was prescribed.

Shortly afterwards I instituted a series of experiments on myself, and briefly append the results under the following heads.

1. *Effect on Vision.*—Twenty minutes after swallowing five grains, I observed flames to assume a decidedly yellow colour, as though spirits were being burnt. Ordinary white gas globes became deeply tinted with yellowish green, and writing-paper presented the same phenomena in somewhat less marked degree. During three hours the tints gradually increased, after which they faded by slow stages, until vision was restored to its normal standard.

The precise conditions under which these singular results take place, and the exact alterations of colour observed, have been submitted to most exhaustive study by a German physiologist, whose name I cannot now recall. *Post mortem* examination proves that a true staining of the retina is rapidly produced, but it is not probable that this can be detected during life by the ophthalmoscope. This opinion I base on the authority of an eminent oculist, and on the fact that, in the somewhat parallel group of cases where yellow vision attends jaundice, I have been unable to discover any unnatural appearance on careful inspection of the fundus of the eye.

2. *Effects on the Urinary Organs.*—Five grains were taken at bedtime, and next morning an irresistible and almost uncontrollable desire to micturate was felt, the act being attended with some irritation and smarting. The urine was of a deep saffron yellow, staining the pot and linen precisely as bile. It was of specific gravity 1.028. The quantity was decidedly increased, and the urea was somewhat in excess. The diuretic action continued during the day; and it was not until 8 o'clock P.M. that the secretion was quite free from foreign pigment.

3. *Effects on the Digestive Organs, and General Symptoms.*—Nausea and dryness of tongue were generally present; and on one occasion, after a ten-grain dose, well-marked tenesmus was experienced both by myself and by a friend who shared the experiment. After five grains, sleep was generally disturbed, and I usually woke unrefreshed, with sickness, frontal headache, and deficient appetite. But the best marked symptom, and one which I have not hitherto seen described, was a feeling of profound and most unusual depression, accompanied by so much irresolution and want of confidence in my own powers, as to render me quite unfit for work of any kind. This invariably followed even a single five-grain dose; and, beginning with dulness and heaviness, ran on into very much that sort of melancholia which I imagine jaundice sometimes produces. This denotes an effect on the nervous system which ought not to be overlooked; and, should further investigation prove its occurrence to be constant, and not to depend on any peculiar idiosyncrasy of my own, we may yet find in santonin an agent of some value in the almost unexplored regions of mental therapeutics.

SULPHATE OF IRON AS A LOCAL APPLICATION IN PHLEGMASIA DOLENS.*

By R. W. CRIGHTON, M.D.,

Physician to the Tavistock Dispensary.

I WAS first induced many years ago to employ this remedy in phlegmasia dolens, chiefly on the recommendation of Velpeau, who reported great success from its use in cases of erysipelas. Every one who has seen much of phlegmasia dolens, especially that form of it in which the pain and swelling commence at the calf of the leg and extend upwards to the groin, knows the tedious and painful course of such cases, and their not rarely fatal termination. Believing that the treatment which I now recommend is much more effectual than that usually employed—viz., leeching and ordinary hot fomentations—I venture to ask those who may not have previously used it in these circumstances to give it a fair trial.

In recent cases, it is best employed in the form of lotion (twenty to thirty grains to an ounce of water), applied as hot as the patient can comfortably bear it. Much trouble is avoided, and the constant

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

saturation of the skin with the lotion secured, by using spongio-piline, fastened loosely by tapes round the limb.

All the cases which I have so treated—five or six in number—have made good and rapid recoveries; and in one only, which was not seen for several days after the disease commenced, was there any great amount of hardness left in the superficial venous trunks at the end of ten or twelve days. In this case, the application of equal parts of belladonna and iodide of potassium ointments was effectual in dispersing it. In all the cases, after the bowels had been freely acted on, the muriated tincture of iron, either alone or combined with quinine, was given internally.

The rapid introduction of waste material into the blood during the puerperal state affords, I believe, some explanation of the action of sulphate of iron externally, and of the muriated tincture internally, in cases of phlegmasia dolens.

Arnott (*Med.-Chir. Trans.*, vol. xv, "On the Effects of Inflammation on Veins") has shown that, in inflammation of veins, the changes begin in the connective tissue towards the *outer part* of the vessel; and this even when irritant bodies are introduced into the cavity of the vein itself. The application, therefore, to the immediate proximity of the coats of an inflamed vein, which it cannot fail to reach either by absorption or imbibition, of an agent which is known to control vascular dilatation in erysipelas and other allied forms of inflammation, seems a rational method of treatment; while the antiseptic effects of the remedies, both external and internal, are doubtless of great importance.

Whatever the true explanation may be, I venture to hope that the use of sulphate of iron locally in phlegmasia dolens, and possibly in other cases of phlebitis, may prove a valuable addition to the means of treatment at present employed in these affections.*

SHOULD EVISCERATION EVER BE PERFORMED IN ARM-PRESENTATIONS?

By F. W. WRIGHT, Esq., Derby,
Late Surgeon to the Birmingham Lying-in Hospital.

DECAPITATION *versus* evisceration in arm-presentations is a subject not without either interest or importance. Churchill says that, should ordinary measures fail "and version be impracticable, we must open the chest of the child and eviscerate;" and Dr. Collins condemns decapitation. Dr. Barnes, it would appear, gives the preference to evisceration; for he says that—"Sometimes perforation and evisceration are insufficient in themselves, and another step will be necessary in order to complete delivery. This ultimate step is decapitation." On the other hand, Dr. Davis makes this important statement: "It ought to be an established rule in practice, to decapitate in arm-presentations not admitting of the safer performance of turning." Perforation and picking out the viscera of the foetus is an operation so complicated and prolonged, and so abominable in detail, that it is matter of surprise how it comes to be advocated as preferable to the much more simple, much less disgusting, and much speedier operation of decapitation.

I propose the following as a simple and ready method of bisecting the foetus *in utero* in an arm-presentation, in which, from early evacuation of the liquor amnii, version is impracticable. The presenting member is to be seized with the right hand, and, while considerable traction is employed, the left hand is to be passed into the vagina as far as the shoulder-joint of the presenting arm, and thence to the neck of the foetus. The exact position of the neck having been determined, the left hand must be kept firmly upon it. A blunt hook, with a curve sufficiently large to embrace the neck, and having a perforation at the extremity of the curve, is armed with a piece of tape, and taken in the right hand; and the left hand being still in the vagina as a guide, the hook is passed over the neck and made thoroughly to embrace it, the tape which it carries being seized on the opposite side. The neck being now secured, to the end of the tape should be tied a leash of about a dozen very thin wires a yard long, twisted together at the ends. By pulling at the tape it will be drawn out of the vagina, and the wires attached to it will be drawn over the child's neck. By pulling these wires backwards and forwards with a saw-like motion, the head may be cut off in five seconds. The body may now be extracted by the

protruding arm; or if, as has happened to myself, it have been necessary to amputate the arm at the shoulder-joint to give room, the body may be readily removed by the crotchet hooked over the clavicle or one of the ribs. The head has now to be removed, and obstetricians are eloquent upon the difficulties which this part of the operation presents. But what can be more simple if the rule be observed, *decapitate close to the shoulders*? The head should then be firmly fixed on the pelvic brim by pressure on the abdomen from the hands of an assistant. A pair of strong forceps, somewhat resembling craniotomy-forceps, but with horrent teeth on the inner aspect of both blades, should then be made to seize the whole length of the neck which remains attached to the head, and traction made upon it until the head escape. I am confident that those who adopt this method will never again have recourse to evisceration.

CASE OF RUPTURE OF THE UTERUS.

By GEORGE CLEMENTS, Esq.,
Senior Surgeon to the Chorlton Union Hospital, Manchester.

E. E., aged 38, married, was admitted on August 25th, 1870. The patient, who was much emaciated, was in a state of extreme exhaustion, almost approaching collapse; the surface of the body being cold and clammy. The tongue was dry and parched; the lips and teeth densely covered with black sordes. The countenance was pale and haggard; while the expression revealed the fact that she was suffering intense pain. The pulse was small, rapid, and feeble; the respiration being hurried, difficult, and almost entirely thoracic. She complained of constant unceasing pain all over her belly; and, on inspection, the abdomen was found extremely distended. The tenderness, on the least pressure being applied to any part of the abdominal wall, was excruciating; and so great was the suffering thereby caused, that the patient refused to allow further examination to be made. It was ascertained, however, that the greatest pain existed in the left iliac fossa. There were tympanitis, and constant vomiting of dark greenish fluid. She was only comparatively easy when on her back, with her knees well drawn up.

On a vaginal examination being made, a very copious discharge of a thick, grumous, offensive character, was found freely escaping from the vagina. The os uteri was firmly contracted and closed, so that no presentation could be detected. The stethoscope was applied over the region of the womb, but neither foetal heart nor placental *bruit* could be heard. The patient could not pass urine without the aid of the catheter, and her stools came involuntarily under her.

She was the mother of four children, and stated that her confinements had been in every way natural, and unattended by difficulties. The circumstances connected with her domestic life had necessitated her working very hard to maintain her family, and this she did by taking in washing. But, after all, she had been living on in a wretched state of poverty and dirt, half starved and over-worked.

A day or two previously to her admission, and within a short period of the time when she expected to be confined, when lifting a heavy bucket of water, she felt of a sudden intense pain in the left side of her abdomen; it was much increased by her standing on a chair, and attempting to hang up the garments to dry. From this time, she took to her bed.

There is no evidence to prove that labour had commenced, for she stated, on admission, she had experienced "no pains" previously to her sudden illness; and the condition of the os uteri testified to the same fact. The rupture must therefore, in all probability, have taken place while she was lifting the heavy bucket, when she first complained of the intense pain. She remained at home three days; when, finding herself worse in every way, she came to Hospital.

Her condition, on admission, I have attempted to describe above; and it only remains for me to add that, during the seven days she survived, all the symptoms before enumerated became more and more exaggerated. The vomiting was relieved from time to time by the administration of bismuth and similar remedies, but opium was the chief agent employed to deaden, to some extent at least, the frightful agony she was suffering. She took it in various forms, but I think the subcutaneous injection of morphia gave her the most relief. The fact that labour had never commenced, and the knowledge that the child had been three days in the peritoneal cavity before her admission, together with the existence of active general peritonitis in a feeble exhausted subject, rendered all obstetric interference quite out of the question.

The necropsy was performed the day after the death of the patient, and the following are extracts from the notes taken on that occasion. The body was much emaciated and ill-nourished. The abdomen was extremely distended and tympanitic. There were scattered tubercles in

* As an illustration of the efficacy of a remedy applied externally, may be mentioned that of a strong infusion of digitalis in ascites. Dr. Christison (*Monthly Journal of Medicine*, October 1850) gives several cases where the drug so applied to the abdomen completely removed the dropsy, after the same remedy with many others had failed when given internally. He also found it useful when applied to the limbs in cases of dropsy in Bright's disease. I have frequently used a strong infusion of digitalis (one ounce of powdered leaves to twenty ounces of boiling water) in similar cases, externally, with remarkably good results.

both lungs, but, with this exception, the thoracic organs were normal. On opening the abdominal cavity, a quantity of most offensive gas escaped; and, on reflecting the skin, the body of a full-grown male child presented itself. The nates pressed against the under surface of the liver, and displaced that organ upwards. The body crossed the peritoneal cavity, and the head was found deep in the left iliac fossa. The placenta had also been expelled, and was in contact with the face and chest of the child. All the abdominal organs were covered with lymph, and bound together in every conceivable manner; there was, moreover, a large quantity of very dark offensive fluid in the cavity. The foetus, placenta, and umbilical cord were in a state of advanced decomposition. The uterus was firmly contracted, and occupied its usual position in the pelvis. On its left side, a rent extended from the fundus to within an inch of the cervix. Decomposed clots and shreds of membrane covered the edges of the laceration, which were very jagged and irregular. The bladder, vagina, and rectum had sustained no injury.

REVIEWS AND NOTICES.

LECTURES ON THE PRINCIPLES AND PRACTICE OF PHYSIC. By Sir THOMAS WATSON, Bart., M.D., F.R.S., etc. Fifth Edition. London: Longmans, Green, and Co. 1871.

[Concluded from page 441 of last number.]

IN the lecture on Pulmonary Hæmorrhage, Niemeyer's recent doctrines as to the relationship between hæmoptysis and phthisis are discussed; and, while it is admitted that hæmoptysis may result from the accidental rupture of vessels in a lung previously healthy, and that a portion of the effused blood, being retained in the lungs, may give rise to secondary changes there, it is believed by Sir Thomas that, if tubercular disease is ever a result of such retention, a predisposition to tubercular disease must have existed.

Introductory to the subject of Phthisis Pulmonalis, the modern doctrines relating to tubercle are concisely and clearly set forth. We will endeavour by extracts to indicate the course of the argument.

"The key-note to the latest hypothesis on this subject was struck, I apprehend, when Villemin first announced, in 1865, that tubercles may be introduced into the lungs and other organs of the body by *inoculation*. It seemed probable that the tubercles found in human lungs—the tubercles with which we as physicians have to deal—might or must have a similar origin. But where or whence was the contaminating matter? Now it is asserted by Buhl, and especially insisted upon by Niemeyer, who is the chief expounder of the modern doctrine, that, speaking generally, this problem has been solved; that the source of the tubercles can be assigned. Niemeyer and the rest affirm that the grey granulations, which all agree to call tubercles, are derived in the greater number of cases, if not in all, from pre-existing inflammation—a proposition which you see is exactly the reverse of what Laennec's theory asserts—not that the tubercles are the *direct* product of inflammation. To simplify the explanation, I will confine myself for a moment to what takes place (they say) in the lungs. In pulmonary inflammation, of whatever kind, there will always be inflammatory products. Some of these are from first to last fluid, and are soon and easily expelled through the mouth. Some are more solid, consisting of coagulable and coagulated lymph, or of an unnaturally profuse and crowded cell-growth, or of both of these together. These more solid products often undergo gradually a fatty or other degenerative change, liquefy, and so become reabsorbable, and are actually reabsorbed and gotten rid of; and then the recovery from the inflammation is complete. But in other cases there is no such liquefaction. The mass of cell-forms grows denser and denser, till the compressed shrivelling cells lose something or all of their vitality, and suffer a change which, from the colour and consistence of the resulting material, has received the disagreeable name of *cheesy*. Now the new theory says that particles of this cheesy or caseous matter, whatever may have been its origin, are liable to enter the blood by a sort of internal inoculation, and so to give rise to a crop of miliary granulations which are truly nascent tubercles. And this may happen in lungs which previously to the inflammation were quite healthy, or in lungs which were previously phthisical and tubercular. More than this. Products of inflammation that have not been reabsorbed, but remain pent up in *other parts than the lungs* (remnants of pleuritic, pericardial, or peritonitic effusions, of chronic inflammations in joints, in bones, in lymphatic glands, and so forth) may and often do undergo the caseous transformation, and so at length give rise to the dissemination of tubercles in the lungs and in other parts of the body. In this way is explained the occasional existence of crude tubercles in lungs which are free from any other

semblance of disease. Blood detained in the lungs after pulmonary hæmorrhage may (it is held) have similar changes and consequences. . . . It is especially maintained by Niemeyer that 'the formation of tubercle never takes place unless preceded by pneumonia terminating in caseous infiltration of the pulmonary tissue'. He elsewhere virtually excepts from this broad statement those rare cases in which (according to his theory) tubercles in the lungs are derived from decayed inflammatory products pent up in other parts of the body. . . . In connexion with these theories, the careful experiments made in this country by Mr. Simon, Dr. Sanderson, and Dr. Wilson Fox, are of extraordinary interest." And the conclusion is thus stated: "Upon the whole, we must believe with Laennec, with Niemeyer, with (I think) Drs. Sanderson and Fox, that the yellow opaque tubercle is often merely an advanced stage of the grey semitransparent granule; but we must also believe that it may occur independently of the granule, and even become its parent."

Defining phthisis pulmonalis, in the words of Dr. Andrew Clark, as "comprehending all progressive consolidations and circumscribed suppurative degenerations of the lung", it is shown to be a disease of many forms and aspects. The chief of these are discriminated and separately surveyed. We extract the following account of the anatomical characters of the lung in cases of "fibroid phthisis", as a model of clear and concise description.

"The affected lung is shrunk within its natural dimensions; and a great part of it is solid, dry, heavy, and tough, and grates sometimes when cut through with a knife. The cut surface is slate-coloured, or like grey granite, or of an iron-grey tint. Through these solid portions run fibrous septa in various directions. The connecting tissue that bounds and separates the pulmonary lobules is hypertrophied and augmented, and therefore unnaturally visible. Cavities are sometimes found in the apex of the lung, or scattered through the indurated parts. These appear to consist for the most part of dilatations of the bronchial tubes. Occasionally, however, the ragged sides of a cavity and the offensive odour of its scanty contents suggest the notion of its having originated in circumscribed gangrene. Amid the grey fibroid degeneration may sometimes be seen a few cheesy-looking spots of soft consistence. The pleuræ are often adherent, or, if not adherent, are considerably thickened. Both lungs are liable to this morbid condition; but it is often limited to one lung only, and, so far as observation has yet gone, the left lung is most frequently the one affected; and the disease begins almost always in the upper lobes."

It is stated in books that in cases of pericarditis distension of the pericardium with fluid beyond a certain amount stops, for a while, the friction-sound. Sir Thomas demurs to the accuracy of this statement, and suggests that this temporary suspension of the friction-sound "has been more often inferred as probable than actually observed; inferred through a supposed analogy with the friction-sound of pleurisy." He explains that "the two cases differ materially. In pleurisy with effusion the yielding pulmonary surface is held apart from the fixed and rigid costal surface during the successive acts of respiration; whereas, the tilting movements of the heart against its loose containing bag, can seldom fail to bring the roughened surfaces into partial collision, especially towards the base of the organ. I find that Dr. Latham's experience led him also to say, that serous effusion within the pleura *always* obliterates the attrition sound, and that serous effusion within the pericardium *generally* leaves it unaltered."

In the treatment of peritonitis, as also of obstinate obstruction of the bowels, the value of opium is strongly insisted upon. In the latter class of cases "we seek to restrain within salutary limits the healing force of nature; to moderate without suspending the propulsive movements of the affected bowel."

By the kind permission of Sir Thomas Watson we some weeks since had the satisfaction of making our readers acquainted with his views as to the mode of diffusion, the pathology and the treatment of cholera; it is, therefore, scarcely necessary for us to say that he has treated this subject with his usual ability, and that he adopts the doctrines and the practice which have long been advocated by Dr. George Johnson. The theory of choleraic collapse he believes to be "a reasonable theory, it is founded on a true analogy; it is consistent with the symptoms noticed during life, and with the conditions discovered after death. We may therefore legitimately regard it, until fairly refuted, as a sound as well as a most ingenious and important theory. In truth, it derives strong confirmation from the fact that it unlocks, like the right key, the whole of the pathological intricacies of the disease." Now this is more than can be said of any other theory of the disease; and, in short, it must in fairness be conceded, that while Dr. Johnson's theory of collapse has successfully withstood all the assaults that have been made upon it, and they have been neither few nor feeble, all other theories have been shown to be untenable, on account of their obvious incon-

sistency with acknowledged facts. Then it follows, as Sir Thomas Watson says, that "If the doctrines advanced by Dr. Johnson be well founded, it must be wrong to dam the choleraic poison and its products within the body." It is now acknowledged by all competent authorities that the brandy and opium treatment of collapse is a mischievous mistake, and our recently published reports of the treatment adopted by various London and provincial physicians, have shown that evacuates, diluents, acids, antacids, and other comparatively inactive and unrepulsive remedies, have largely superseded the use of opiates and astringents in the treatment of diarrhoea. In fact, it appears, that an indiscriminate opiate and astringent treatment is now becoming as unfashionable as we believe it to be unscientific. It is no argument against the theory and practice of elimination in cholera to assert, that castor-oil fails to cure cases of extreme collapse. To expect such a result is unreasonable; yet it is notorious that the evacuant or cleansing principle of treatment has sometimes been brought into discredit by its employment in cases of collapse which were obviously beyond the reach of all remedies except, perhaps, injections into the veins.

Amongst the lectures that have been rewritten and extended is that on worms, and other human parasites. The results of the most recent researches in this important but unpleasant department of natural history, are given with characteristic clearness and completeness.

In looking through the lectures on Liver Disease, we find condensed within the space of two pages the leading facts that have been ascertained with regard to *acute or yellow atrophy of the liver*. Then, with regard to the relation between hepatic abscess and dysentery, it is admitted that in some cases the link of connection between them may be that which Dr. George Budd suggested; namely, that there is a primary dysenteric ulceration of the bowel, and a secondary pyæmic infection of the portal blood. It is stated, however, that, in this country at least, "dysentery often occurs without leading to abscess of the liver. During an epidemic dysentery in the Penitentiary at Millbank, among many hundred cases, not one (according to the testimony of the late Dr. Baly) was complicated with hepatic abscess. It is believed that in the hepatic abscesses associated with dysentery in hot climates, what Dr. Murchison calls *tropical abscesses*, the two morbid conditions are mostly, or often, the common result of one and the same cause, and not connected together as cause and effect. The abscess may occur without any dysentery; or precede the dysentery when both occur in the same person; or sometimes be a pyæmic consequence of the dysentery. These opinions are held by Dr. Murchison, as the upshot of observations made by himself while residing in Burmah."

In describing the pathology of cirrhosis of the liver, Sir Thomas, relying upon the authority of Dr. Beale—an excellent authority upon this subject—rejects the commonly received doctrine that the anatomical changes are mainly due to chronic inflammation, and a consequent increase of connective tissue. "Careful examination of the cirrhotic liver demonstrates that the change commences in the hepatic cells, which, from some vice in the blood, undergo degeneration, shrink and shrivel up, and are gradually destroyed, from the circumference of the lobules towards their centres. The lobules themselves are seen to be wasted, and the spaces between them occupied by a fine white material, looking like fibrous tissue, but being granular rather than fibrous." This appearance of fibrous tissue is believed, and shown by Dr. Beale to be due to the wasted remains of ducts and blood-vessels, rather than to the presence of any adventitious tissue.

The subject of fever is discussed at considerable length, and the spontaneous origin of any of the specific forms of fever is held to be extremely doubtful. "The main argument for this view (of their spontaneous origin) is the frequent occurrence of each of these diseases when no exposure to contagion can be traced or easily imagined. But the same argument would be equally valid in favour of the spontaneous origin of small-pox, which scarcely any one, I suppose, would now maintain. 'The evidence (Dr. Budd truly observes) is negative only, and consists solely in our inability to trace with the eye the continuity of a chain whose connecting links are known to be invisible. To conclude from this that no chain exists is palpably absurd.' There are a thousand unsuspected ways in which the invisible contagion may be conveyed."

We have endeavoured by our extracts, and by reference to some of the more prominent subjects, to indicate the extent and the thoroughness of the revision to which these lectures have been subjected. The result is that, as a text-book on medicine, the work is unrivalled, combining as it does, in an extraordinary degree, scientific accuracy, practical wisdom, and an unapproachable charm of style. These characteristics will insure its popularity with students and practitioners, and even with educated general readers, who never fail to appreciate a clear statement of scientific truths. We were once assured by an eminent dignitary of the church, that his familiarity with Watson's *Practice of*

Physic had on more than one occasion secured him the victory in a discussion with members of our profession! It appears, then, that if any of us are unacquainted with the teachings of this great authority, we run the risk of being defeated in argument by a dean or a bishop, or some acute and learned lawyer.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 21ST, 1871.

MEDICAL RELIEF AT HOSPITALS.

THE correspondence relating to this subject still continues. The abuse of our hospitals—more especially of their out-patient departments—seems to be admitted by all the writers, though there is some difference of opinion as to its extent and remedies. Sir Charles Trevelyan, who regards the question as a statesman and philanthropist, appears to think the evils which the out-patient departments are inflicting upon society so great that they ought to be abolished altogether, in order that those who now frequent them might be obliged to apply either to a private practitioner or provident dispensary on the one hand, or to the Poor-law medical officer on the other. This was also the view of Mr. Kitto, to whose letter, announcing the closure of the out-patient department at the Poplar Hospital, we last week drew attention. Other correspondents, without going quite so far, are of opinion that the applicants for out-patient treatment should be carefully sifted. One writer proposes that they should pass through an "inquiry office", similar to that which the Charity Organisation Society has now established in most districts of London. This is a suggestion worth bearing in mind, and might easily be tried. An official of the class employed by this society might be engaged to give tickets to the out-patients on their application at the hospital. A little practice would soon enable him to judge which were suitable for hospital treatment, which required Poor-law relief, which should be directed to the provident dispensary, and which were above the level of all these forms of charity; and the means at his disposal would enable him rapidly to investigate any case about which there was a doubt. Thus with comparatively little expense, and without anything like harshness, the benefits not merely of the hospital, but also of other kindred institutions, might be greatly enhanced. Another correspondent seems inclined to treat the evils somewhat more lightly, and to throw the burden of scrutinising the cases upon the physicians and surgeons who see out-patients. This is a proposal to which we strongly object, and against which we must enter our protest. The assistant-physicians and surgeons have quite enough to do already in examining and prescribing for their cases, and in giving clinical instruction upon them, without being always on the watch to detect an abuse or expose an impostor. Seeing out-patients is no easy task. It requires a great deal of energy to transfer the mind rapidly from one case to another; and the physician or surgeon ought to be able to give his undivided attention to his work. But even if he had time and strength to devote to sifting the patients, it is a duty which he ought resolutely to decline. It is alien to the purpose for which he visits the hospital, and scarcely consistent with the dignity of his profession. If the patients are to be scrutinised at all, it ought to be done before they reach the consulting-rooms by an official engaged *ad hoc*—an official who has the special knowledge and aptitude which such delicate investigations would require, and who is conversant with the medical charities of the district, and the particular grade of applicants which each is designed to assist.

Of those who have taken part in this correspondence, almost all have pointed to the provident system as the most hopeful remedy for the existing evils. The public seem at length to be awaking to a fact which has been often put forward in the pages of this JOURNAL—

namely, that as long as the metropolis and the country generally are so deficient in medical provident institutions, so long must we expect to see the free hospitals and dispensaries grossly abused. The first step towards getting rid of this evil is to put good medical attendance within reach of the working classes on terms which they can afford to pay; and this can best be done by that form of "co-operation" which is known as a provident dispensary. To help the poor to help themselves in time of sickness, as well as in other seasons of adversity, is, in the vast majority of instances, a wiser policy and a truer kindness than to treat them on the eleemosynary principle by gifts and doles.

The Secretary to St. George's Hospital adds a fresh item to the correspondence, and one which is of no small importance. He writes to say that at that institution the governors have given up the privileges to which they have hitherto been accustomed; and that the patients recommended by them now stand upon the same level as other cases, and are admitted or not solely with reference to their medical necessities. This is just as it should be, and St. George's deserves all honour for having set a good example. It would be well if the governors of all our hospitals were contented to give their money for the support of the institutions and for the relief of suffering humanity, without the paltry desire of securing certain privileges which experience has shown are very apt to be abused. It would be well if other hospitals were to follow the step which has been taken at Hyde Park Corner, even though their funds should fall off for a time, and the roll of their out-patients be somewhat diminished. In the long run they would not be losers. Their subscription-lists would undoubtedly recover themselves when the motives from which they acted were understood, and the charity would stand ever after upon a healthier basis.

PUBLIC MEDICINE AT LEEDS.

THE interest of the medical profession in questions of Public Medicine is steadily increasing. Thanks very largely to the influence of this Association, the study of the main problems affecting public health has become recognised in late years as a part of the ordinary work of medical men of all grades, and in all parts of the country. The Public Medicine Section at the annual meetings of our Association has had a great success, and is, we hope, destined to a yet wider extension. That Section has gone hand in hand with the Public Health Department of the Social Science Association, in promoting definite public action in respect to necessary legislative reforms. The great success of their efforts is known; it remains to mould the outcome of the Sanitary Commission into the most satisfactory form, and for this purpose a further labour will be imposed on the Joint Committee of the two Associations.

The extremely able report of the Joint Committee, which we printed two months ago, urges with powerful logic some important modifications of the proposals of the Sanitary Commission. These recommendations of the Committee have been adopted after discussion at the annual general meetings of both Associations; and we presume it will now be necessary to urge them upon the Government by a representative deputation from both these bodies.

Our readers will, we feel sure, thank us for giving this week a full report of the proceedings of the Public Health Department of the Social Science Association. The problems discussed are important, not more by their magnitude and close relations to the vital progress and physical welfare of the people, than by their pressing and constant urgency. They relate to events which every day impede the medical man in his saving work, and as to which he is incessantly consulted. The following is the official appreciation of the work done in the department this year.

"In the Public Health Department, the first special question, relating to the disposal of sewage, excited unusual interest. There was a very general feeling in favour of sewage-irrigation schemes for the disposal of the excrement of large towns. On the special question as to the means for promoting the health of factories and workshops, the

papers of Dr. Arlidge and Dr. Stallard deserve special mention; and amongst the voluntary papers brought before the notice of the members, that of Dr. Rumsey, on the progressive degeneracy of race in the town populations of Great Britain, and of Dr. Acland, on the habits of the labouring classes in rural districts, were of great interest and value. A large amount of interest in the sanitary improvement of Leeds was aroused by the paper of Dr. M. K. Robinson, on the measures which have been taken by the Corporation of Leeds to improve the sanitary condition of the town within the last three years. The report of the Joint Committee of this Association and the British Medical Association on the report of the Sanitary Commission was discussed both in the opening address of the President of Council and in the department, where it was unanimously agreed that the Joint Committee should still continue their labours, both with a view of obtaining some modifications of opinion expressed by the Commission in relation to enlarged areas for administration of health-laws, and for securing officers of health with better qualifications than what is proposed. In connection with this department it may be mentioned that the Sanitary Exhibition has excited great interest, and has been visited during the week by 35,000 persons. A special report upon it has been drawn up by the honorary secretary, and will be ready for presentation at the next Council."

THE TREATMENT OF SYPHILIS BY THE HYPO- DERMIC INJECTION OF MERCURY.

THE treatment of syphilis by the subcutaneous injection of mercurials—usually corrosive sublimate—which was some time ago brought under the notice of the profession in England by Dr. Walker of Peterborough and others, has had much attention devoted to it by surgeons on the Continent; and the method has had both its supporters and its opponents. We have before us a recent article by Dr. Sigmund,* the well-known syphilographer of Vienna, in which he examines the subject with care and impartiality. It will be seen from the subjoined abstract, that, while he does not hold with the more enthusiastic supporters of the method, he sees so much possible good in it as to lead him to regard it as a remedy worthy of further trial, with a view to the determination of its proper place among our therapeutic agents.

He first speaks of the disadvantages said to attend the subcutaneous injection of mercury. These are, the occurrence of tedious subcutaneous infiltration, inflammation, and abscess; pain during the process of injection; the details and difficulties of the process; disturbances of circulation and respiration; stomatitis and salivation; and the inferior success of the method as compared with other plans of treatment.

Subcutaneous infiltration at the seat of injection, he says, no doubt occurs, but it does no harm: the effused material is soon completely absorbed. The occurrence of inflammation and abscess is, on the other hand, very troublesome, and interferes with the treatment; but it depends solely on the manner in which the injection is made, the degree of concentration of the solution used, and the condition of the patient after the operation. Dr. Sigmund has used subcutaneous injection in more than two hundred cases in private and hospital practice, and in two only has there been abscess. His patients have been of both sexes, of various ages and constitutions, and had syphilis in various forms. In some cases, as many as thirty injections were given; generally one each day, sometimes at intervals of two or three days. The injection in almost all the cases consisted of four grains of corrosive sublimate to the ounce of distilled water, as recommended by Lewin. The injections were generally done on the trunk, sometimes on the arm, care being taken to avoid parts that would be laid on or exposed to pressure or motion; and rest and simple care of the part were enjoined. When inflammation and abscess have occurred, it has arisen, in his opinion, not from the operation, but from the patients having been allowed to go about their ordinary business immediately or a few hours after the injection, and from the part operated on not having had sufficient rest and protection.

The pain produced by injection Dr. Sigmund has found to vary

* Zur Beurtheilung der Subkutanen Sublimat-Injectionem gegen Syphilis. Von Prof. Dr. v. Sigmund in Wien. *Wiener Medizin. Wochenschr.*, Sept. 9th and 16th, 1871.

much in different cases; but in the great majority it was slight and transient; in most it was at once relieved by cold applications. In some cases, however, the pain is severe and of long duration, no matter where the injection may be done, or how gently. Such patients are not fit subjects for subcutaneous injection: even the addition of morphia to the solution does not relieve the pain.

The difficulties of the operation are scarcely worth notice. Good instruments can be easily obtained, and can easily be kept clean and in order. There is no difficulty in the operation itself.

Stomatitis and pyalism are liable to occur if the patients do not carefully and often clean their mouths. Dr. Sigmund has found the gums slightly affected in a few only of his patients; but he takes care to use prophylactic measures.

Disturbance of respiration and circulation, or any general disorder of importance, as a result of the action of corrosive sublimate, has never come under his observation. The continued use of all mercurial preparations is attended by a moderate increase in the frequency of the pulse and rise in the cutaneous temperature. Disturbance of the digestive organs often occurs, but is generally clearly traceable to errors in diet. Perspiration and the urinary secretion are but little affected; and those cases in which they are said to have been disturbed in consequence of the injection, must be regarded as exceptions.

In speaking of the alleged advantages of the hypodermic treatment, Dr. Sigmund says that one of them—the possibility of the patient continuing to exercise the part operated on and to go on with his ordinary labour—is but limited. He insists on the necessity of rest and care of the part, for a time at least, not only because a neglect of this precaution is liable to lead to the occurrence of inflammation and abscess at the seat of injection, but also because in many cases it is necessary to apply local treatment to the syphilitic manifestations. He more strongly insists on the necessity of care, as he teaches that free air and exercise are integral parts of the treatment of syphilis.

An essential advantage of the subcutaneous injection of mercury, and one that cannot be sufficiently insisted on, is the precision of the remedy. The surgeon knows the when, the how much, and the where, of the introduction of the medicine into the system; and he can determine most accurately the locality, the time, and the interval for repetition, of the dose. Further, the patient is saved from the immediate disturbance of the digestive organs which is liable to attend the administration of mercury by the mouth.

The two factors, Dr. Sigmund says, that are necessary before a long and repeated series of observations can enable a definite conclusion to be arrived at as to the value of the treatment, are, on the one hand, perfection of the mechanical details of the operation, and careful attention to the diet and hygienic condition of the patient. No clinical observer is as yet in possession of facts whereon to ground a final judgment of the method. We find—unfortunately not unfrequently—that in certain cases of syphilis all the ordinary means of treatment fail, or are contraindicated; and hence subcutaneous injection must be regarded as a valuable addition to our resources. According to Dr. Sigmund's experience, it may be employed in simple papular, pustular, and squamous syphilides, in simple catarrhal affections of the fauces and larynx, in diffuse inflammation of the joints, muscles, tendons, periosteum, and perichondrium, and in syphilitic neuralgic affections; and it may also be tried empirically in cases where other means have proved unsuccessful, or where for some special reason on the part of the patient their use is contraindicated. To cases of the kind here enumerated, he would for the present limit its use in private practice. Clinical observation, on the other hand, must take a wider range. As far as his observation—which, he says, is as yet limited—has gone, Dr. Sigmund is led to consider as unfounded the assertions put forth by the supporters of the plan, that the development of secondary syphilis is prevented by employing subcutaneous injection in the earliest stage—that of induration. In all the cases which he has observed, the consecutive cutaneous and mucous syphilides have appeared, just as they do in patients who have been treated only locally or not at all. One great advantage which attends

subcutaneous injection in common with friction and fumigation, is the possibility of giving at the same time internal remedies, such as quinine, iron, the iodides, cod-liver oil, etc. This advantage is not a small one; for such combination is often of the highest value in syphilitic cases.

The determination of the relative value of the hypodermic injection of mercury in syphilis is, Dr. Sigmund says, a very important question, and one that can only be solved by continued experience. Before a correct judgment as to the value of the treatment can be arrived at, observations must be carried on for several years, on cases of syphilis presenting all the varied forms of the disease. He has, he says, hitherto specially advocated mercurial inunction; but he would cease to do this, if extended experience showed him an equally good or a better means of treatment.

A COMMITTEE of the Keighley Board of Health have recommended that a Medical Officer of Health shall be appointed for the town.

OPERATIONS at St. Thomas's Hospital will henceforth only be performed on Wednesdays at *two* o'clock.

THE subscriptions of the Indian Army for the Sick and Wounded Fund during the late war, amounted to 37,000 rs.

AT the meeting this year of Russian naturalists in Kiew, the Section of Chemistry was presided over by a lady named Anna Volkow.

MR. DIGBY SEYMOUR, Recorder of Newcastle, states that the death-rate during the strike had risen from 25 to from 40 to 50 in 1000, much of the increase being attributable to the effects of privation.

A VOLUNTEER Medical Association has been formed in Sydney, New South Wales, on the model of that first proposed for this country by the BRITISH MEDICAL JOURNAL.

CHOLERA has reappeared at Bushire, and is said to have carried off many persons. The poor are still in a miserable condition, and four or five deaths occur daily from starvation.

A RETURN to the House of Commons has been issued this week, of all lieutenants who have been appointed to Royal Naval Hospitals since the year 1830. The list contains eleven appointments from 1831 to 1868.

THERE are now three medical candidates for the Coronership of Northumberland, viz., David N. Carr, M.R.C.S. Eng., L.S.A. Lond.; John C. Reid, M.D. Univ. Glasg., L.F.P.S. Glasg.; and Edward Smiles, M.R.C.S. Eng., L.S.A. Lond. The election will take place on Tuesday the 24th.

AN interesting collection of drawings, by the best masters of the English school, is now being exhibited at the Gallery of the Institute of Painters in Water Colours. They have been arranged by the Committee of the Hospital for Consumption at Ventnor, to aid in raising funds for the maintenance of the charity.

WE (*Nature*) have received the examination-papers for the Scholarship and Exhibition in Natural Science recently awarded by St. Mary's Hospital Medical School. The questions appear to have been very carefully framed to show the attainments of the candidates in chemistry, physics, zoology, and botany; and we congratulate this young school on setting so admirable an example to its older sisters in encouraging a real knowledge of science among its students.

MISS M. E. TRAFFORD SOUTHWELL having offered to erect and present to the town of Wisbeach a building for any purpose which might be considered most advantageous to the inhabitants, a public meeting has been held at the Town Hall, the Mayor presiding, to consider the matter, at which it was resolved to accept Miss Southwell's kind offer for the establishment of a cottage infirmary, to be called after the lady.

A TELEGRAM, dated October 15th, states that the fifth Italian Medical Congress was opened that day at the Lyceum in Rome, numerous delegates being present. Cheers were given in honour of the King and Italy.

LECTURES ON HELMINTHOLOGY.

DR. COBBOLD, F.R.S., commenced at the Middlesex Hospital, on Tuesday, a course of lectures on parasitic diseases and their treatment. The lectures will be continued on Tuesdays at 4 o'clock, and are open to all members of the medical profession.

THE PRIZE SYSTEM.

SOME rather silly and far-fetched objections are occasionally made to the system of prize giving. Lord Granville discussed these objections in a sensible practical way this week on a public occasion. He said: "The first objection that may be made to it is this—that the system of giving prizes is altogether wrong; that it encourages self-conceit, undue emulation and jealousy; and that the acquisition of knowledge ought to be left to higher motives entirely. I believe such an objection to be marvellously far-fetched; and, like other far-fetched things, not accurate or true. I believe that, so long as human nature exists, you must apply to it a system of punishment and reward; but you must take care that the punishment is exercised in such a manner as to be deterrent in its character, whilst the reward should be justly and properly applied, and never given except in cases of real merit."

THE HALIFAX INFIRMARY.

SOME time ago, Sir F. Crossley offered the handsome donation of £10,000 to the Halifax Infirmary, on condition that a new building should be provided on a more suitable site, and the old structure converted into a convalescent home. The offer was at the time thankfully accepted, a site for the building was chosen, and plans for the new infirmary were prepared by Mr. Bakewell of Leeds. The plan provided for ninety-one beds, at a cost of £22,050, and embraced arrangements by which the building could be extended in accordance with the growing demands of the district. We observe, however, that there is now some doubt whether the estimated expenditure upon the new infirmary can be at present obtained, and it was therefore decided to allow the whole question for the present to stand over.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of this Society, held on October 13th—Dr. Prior Purvis in the Chair—the following gentlemen were elected officers for the ensuing session. *President*—J. M. Burton, Esq. *Vice-Presidents*—E. Clapton, M.D.; A. Roper, Esq. *Council*—J. Anderson, M.D., W. Carr, M.D.; S. Giles, M.D.; R. Gooding, M.D.; W. Lockhart, Esq.; Chas. Nind, Esq.; J. C. Thorowgood, M.D. *Treasurer*—Prior Purvis, M.D. *Secretary*—J. P. Purvis, Esq. *Librarian*—G. G. Bothwell, L.R.C.P.E. The newly elected President, Mr. Burton, delivered an inaugural address. The night of meeting was altered from the second to the first Friday in the month.

MAYNE'S EXPOSITORY LEXICON.

WE understand that the Council of the New Sydenham Society have purchased, from the representatives of the late Dr. R. G. Mayne, the copyright of his *Expository Lexicon*, in the preparation of which he spent many years of assiduous labour. It is intended to produce a revised edition, which shall include definitions of all the terms introduced in recent years into medicine and the allied sciences. A Committee has been appointed for the purpose of considering the best mode of proceeding in the matter, and of laying the foundation of the work by inviting those members of the profession who already possess the *Lexicon* to send lists of such words as have occurred to them as being wanting in the present edition. We have every confidence that, through the combination of skilled labour which the Society has within its reach, a most useful work will be furnished to the readers of modern works on medicine and its cognate sciences, while at the same time the valuable classical and antiquarian character of the present work will be preserved.

A NATURAL SOLUTION.

THE female medical movement is gradually receiving a satisfactory and not altogether surprising solution. We mentioned lately that one of the *septem contra Edinam* had contracted a matrimonial engagement; and it is now intimated that another of this devoted band of students is about to enter the bonds of wedlock with a distinguished Scottish journalist. What with tedious delays and the interposing interference of Venus, the siege of Edinburgh is likely to have many points of resemblance to the siege of Troy.

THE SANITARY EXHIBITION AT LEEDS.

THE Sanitary Exhibition at the Leeds Congress last week was attended by 35,000 people—a proof in equal degree of the attractiveness of the show, and of the expediency of its being thrown open to all comers without payment. It of course must be regarded as a merely tentative experiment; but it is stated that it is to receive its full development next autumn in an exhibition on a much completer scale, and a Congress to be specially convened for the consideration of sanitary appliances. The good people of Leeds, it is added, are not likely to let drop a scheme which they have once taken in hand.

A GREAT NATIONAL SERVICE.

THE admirable and deeply interesting researches of M. Pasteur upon the nature of the silkworm-plague have been made familiar to English readers by the references made to them in the recent discussions on dust and disease. M. Pasteur proved that the disease "pébrine" was one of parasitic origin, and propagated by parasitic ova. He recommended a method of rigid microscopic selection, excluding and destroying all taint. His advice has been adopted with magnificent results. M. Dumas, at a recent sitting of the Académie des Sciences, reported that a large proportion of the French silkworm-breeders have adopted M. Pasteur's advice: the plague is almost suppressed, and next year all will adopt it, and the extinction of the destructive epidemic may be confidently anticipated.

THE ANATOMY OF MR. HOME.

IF anything were necessary to cover with suspicion the evidence of the witnesses for "spiritualistic feats", and to crown their pretensions with ridicule, it would be the volume of reports just issued by a society called the Dialectical Society. The most obvious juggling tricks and the most infantile absurdities are described with equal minuteness and gravity by the persons on whose power of judgment the inquiry rests. Lord Lindsay, one of the most important witnesses, for example, swears that he saw Mr. Home, in a spiritual trance, *elongated seven inches*: he measured him against the wall, and marked the place. He explains this by stating that "the tip of the hip-bone and the short ribs separate; in Home they are unusually close together. There was no separation of the vertebræ of the spine." He is, of course, utterly oblivious of the structure of the spine, and does not know that to talk of an elongation by seven inches of the dorsal spine; the bones composing which are bound together by strong fibrous ligaments, is to describe a process which, if carried out to only one-seventh part, must be followed by death. Neither the spine nor the contained spinal marrow are capable of more than very slight extension without disruption and consequent death. The same witness also most positively testifies to "levitation"—Mr. Home floating out of one window and in at another. But he candidly admits subsequently that he was at one time the subject of a singular optical delusion. He used to see a spectral black dog glide along: he often went up to it, and sometimes passed through it. He was then overworked, and he is not now troubled with the black dog. In answer to a question whether Mr. Home's clothes were elongated as well as his body, a gentleman present said that "a space was visible between the waistcoat and trousers". We may observe that most of the spirits seem to wear clothes which "rustle like silk"; and spiritual fustian is the favourite wear of rural (and other) spirits; so that no difficulty need arise as to the elongation of Mr. Home's clothes, any more than of his spinal cord and vertebræ.

THE RECENT EPIDEMIC OF SMALL-POX.

ONE deeply significant fact has been elicited in the course of the Hampstead inquiry. Into the Small-pox Hospitals of the Asylum Board Managers, upwards of eleven thousand patients have been received during the recent epidemic, in a period of little more than six months; Hampstead alone sheltered more than five thousand. No metropolitan hospital, except that at Highgate, would receive these patients, and, but for the rapidly improvised hospital accommodation, most of these patients must have remained at home as foci of disease. This enormous number of patients received will show at once the magnitude of the recent epidemic, and the great services which the new establishments have rendered. But for them the epidemic must have continued much longer and spread far more widely. For their establishment the public are indebted to the efforts of the Metropolitan Workhouse Infirmaries Association, and the resulting legislation by Mr. Hardy. It is satisfactory to find that the mortality of these small-pox asylums does not in any degree exceed the standard mortality of the disease in epidemic periods. It is highly important also to note that the same absolute immunity from contagion has been secured for all the servants, nurses, and attendants of the hospitals by re-vaccination, and that the one solitary exception of a nurse who took the disease and died is the exception which proves the rule. She was the one person who, for some reason, was not vaccinated.

WELL-DIRECTED LIBERALITY.

MRS. BROOKE of Selby has, in order to carry out the wishes of her late husband, the Rev. Richard Brooke, intimated her intention of giving £30,000 to the Royal Albert Asylum for Idiots, Lancaster (half immediately), £30,000 to the Leeds Infirmary (half immediately), £15,000 to the York County Hospital, and £10,000 to the Leeds Convalescent Home.

CHOLERA IN RUSSIA AND GERMANY.

THE returns from St. Petersburg show that on September 6th there were 106 cases under treatment. During the week from September 6th to 12th, there were 71 new cases, 56 recoveries, and 30 deaths; from September 13th to 19th, 27 new cases, 40 recoveries, and 22 deaths; and on the 20th there were 56 cases remaining under treatment.—In Königsberg, from September 23rd to 29th, there were 51 cases and 36 deaths; from September 30th to October 6th, 18 cases and 15 deaths.—At Altona, during the week ending September 21st, there were (besides 8 cases remaining under treatment) 14 new cases, 5 recoveries, and 15 deaths; in the week ending on the 28th, 2 new cases, 2 recoveries, and 2 deaths.

THE SEQUEL OF A STRIKE.

WE have made inquiries as to the effects of the late strike at Newcastle-on-Tyne, and are informed by Mr. H. E. Armstrong, the Resident Medical Officer of the General Dispensary, that the returns of the Dispensary for the past four weeks show that both the number of admissions and the death-rate are above the average of the corresponding weeks in former years. Thus, from September 14th to October 14th of this year, there were 291 admissions by letter. During the same period, 20 deaths occurred, or over 6.8 per cent. The corresponding weeks of 1870 show 214 admissions by letter, with 11 deaths, or 5.1 per cent.; and for 1869, 224 cases, with a death-rate of less than 5.8 per cent. Although a large proportion of Dispensary letters proceed from the subscriptions both of employers and workmen at the different factories, yet during the strike none have been issued by those subscribers. Dispensary letters in general are at present scarce. The difficulty of obtaining medical attendance for the strike hands and their families has, therefore, been considerable. Yet the increase of admissions to the Dispensary is chiefly attributable to the privative effects of the strike. That the diseases treated have been due to starvation is shown by the great draught on the Samaritan Fund, which supplies beef and wine to such Dispensary patients as require them.—At the Small-pox Hospital, several cases of that disease have been observed

in persons more or less physically reduced, in consequence of being thrown out of work. In all of these the disease was undoubtedly rendered more grave by the previously existing condition. As yet during 1871, the place of typhus in Newcastle has been occupied by small-pox. But the want entailed on the working classes by the late strike is only too likely to prepare the way for an outbreak of fever on the accession of cold weather.

RETURN OF INDIAN TROOPS.

IT has been over and over again represented to the military authorities, that the sudden change from the climate of India to that of an English winter, to which many of our troops sent by overland route are exposed, is productive of great injury to the health of the men, but no steps of importance had been taken to mitigate the hardship thus entailed upon soldiers. We learn, however, that Lord Napier of Magdala has shown that consideration for the welfare and comfort of the private soldiers which has been strangely neglected so long, by issuing an order to the effect that medical boards shall assemble in the several circles of India to ascertain what men of regiments under orders to embark in the coming cold season for this country will be unable to bear the rapid change to our winter climate, and that those who are not passed as fit by the boards shall be sent by the Cape route, thus diminishing, as far as possible, the risks of sudden change.

THE REPUBLIC OF LETTERS.

PROFESSOR VIRCHOW published lately in his *Archives*, and has now reprinted for general circulation, a paper with the title "After the War", in which he seeks to allay the remaining bitterness of the quarrel, and to obtain for France, in the minds of his countrymen, a due recognition of her many and great merits. It appears, however, that his friendly offices receive little encouragement, from one side at least, and in circumstances, too, where nationality might well be forgotten. The professor lately found himself at Bologna, representing German science at the International Conference for Archæology, in which subject he is an authority. According to the story, for which the *Germania* is responsible, Virchow there met certain brother *savants* from France whose acquaintance he had made at previous scientific meetings. The professor, it is said, coming up to them at the opening meeting, held out his hand to greet them, but the French men of science turned away, with a decisive "*Jamais!*"

KING'S COLLEGE MEDICAL SOCIETY.

THE introductory meeting of this Society was held on October 12th at King's College. Dr. Rutherford, President, occupied the Chair, and was supported by Dr. Johnson; Mr. John Wood, F.R.S.; Dr. Bentley; Mr. Cheere, the Treasurer of King's College Hospital; and other members of the hospital staff. Dr. Cotterill, one of the vice-presidents, read the inaugural address on "Medical Reform". After the usual complimentary speeches the meeting was brought to a close.

CHOLERA IN THE EAST.

THE last advices from the East state that cholera is slightly on the increase. Isolated cases have occurred in several parts of the city of Constantinople, in which city, in the week ending September 26th, there had been thirty cases, out of which nineteen were fatal cases. Quarantine is now enforced in all Ottoman ports. Cholera is, however, reported to have ceased in Brussa.

A BOARD OF GUARDIANS IN A DIFFICULTY.

THE Narberth Board of Guardians have found themselves in a difficulty from the resignation of Dr. Evans as medical officer of District No. 3, unless his salary was increased from £35 (which included medicines) to £50 *per annum*, and their inability to find a member of the profession to undertake the appointment. By way of getting over the difficulty, the Board have given notice to the relieving officers that in case of any necessity the nearest medical man (perhaps ten miles distant) may be employed, at the expense of the guardians, for the

next three months. Now, considering that the union embraces sixteen parishes, covering an area of 40,000 acres, in a mountainous country, in many parts inaccessible by any kind of vehicle, with a scattered population of 4,744, we think we may safely predict that the guardians will find that, for the sake of attempting to save a miserable £15 a year, they have been penny wise and pound foolish.

PATHOLOGICAL SOCIETY OF LONDON.

THE opening meeting of this Society was held in the council-room of the Royal Medical and Chirurgical Society, Berners Street, on Tuesday evening; Mr. Timothy Holmes, Vice-President, in the chair. There was a fair attendance of members. Some interesting specimens were exhibited, pre-eminently one of Multiple Hydatid of the Peritoneum by Dr. Murchison. The plethora of mediocre specimens, and the undue haste of the exhibitors customary at this Society, were happily not features of the first meeting. May this augur well for the rest of the session! The popularity of the Society has seemed at times to threaten its utility. Specimens which present features of no particular interest to any one but the exhibitor have constantly been brought to the Society, to the exclusion of others of greater value. But this is not all. The work of the evening is thus rendered generally so heavy that a taste has become engendered, whereby anything short of a constant supply of plates filled with viscera throughout the meeting is distasteful to the bulk of the members. Pathological papers are consequently discouraged, and exhaustive discussions unknown. The Society is, in fact, more of a Morbid Anatomy than a Pathological Society. Selection of specimens would no doubt be difficult, if not impossible; but if discussion were encouraged, the specimens would then decrease in number, the interest of those exhibited would be greater, and their value still more enhanced by their fuller consideration. Members would thus learn to be less impatient of scientific pathological papers, which we are confident would soon multiply.

THE CLINICAL SOCIETY.

THE first meeting of this Society was held on Friday of last week. Dr. Gull, President, occupied the Chair. On taking the chair, he congratulated the Society on the publication of the fourth volume of its *Transactions*; and, without making a formal address, expressed a hope that the coming session would be still more prolific of useful results. Clinical medicine, he remarked, still required, and must for ages to come require, the united efforts of all practical men to promote more exact diagnosis of disease and its therapeutics. The aim of the Clinical Society was not limited to the report of cases alone, but included the advance of every kind of knowledge which could make our bedside-work more exact was acceptable. The value of a sign or symptom in diagnosis; the improvement or invention of better means for physical examination; the operation of any therapeutical method or drug; in fine, any means promoting the end in view, was the fit object for the consideration of the Clinical Society. There was, indeed, no practitioner who had not opportunity at some period in his daily work of adding something to the stock of our knowledge in these respects. The contribution might, perhaps, seem insignificant; but it could not be really so if, by due proof, it could be made to take its place among the facts of Nature. The attendance was, we regret to say, meagre, and not commensurate with the interest and importance of the subjects brought under discussion. The tact and skill of the President succeeded in raising a discussion of interest on a subject collateral to the paper read, but not directly involved in it. Notwithstanding the ability of the President, however, and the tact with which he seized the flying opportunities of raising a discussion, he with difficulty succeeded. The discussions at the Clinical Society are by no means equal to what might be expected; and if the Society is to fulfil the hopes which were entertained of it, more vigorous means must be taken for obtaining good papers, and for collecting together on the nights of meeting gentlemen specially acquainted with the subjects to be discussed, and who are disposed worthily and seriously to debate them. This will, do doubt, involve some labour and increased energy on the part of the secretaries and

other officers. But Dr. Buzzard and Mr. Lawson will not, we are persuaded, think labour devoted to the progress and successful development of the society to be ill spent. *Defluit amnis dum rusticus expectat* is an old saying, from which the officers of a young and ambitious society should take an useful lesson. The Clinical Society is capable of great things; it has done good things; but it is as yet only a half success: and more energy, a more skilful distribution of work, and a more fertile initiative, are necessary if the society is to advance. Not to advance would be to recede.]

THE CORONERSHIP OF NORTH NORTHUMBERLAND.

DR. REID of Newbiggin has announced his candidature for the vacant office of coroner of North Northumberland. Dr. Reid is well known as a man of energy, experience, and information. Many of the improvements, especially the sanitary ameliorations, of Newbiggin, have been effected through his instrumentality. A very little consideration of the duties of the office of coroner will show the electors that this office is one in which medical knowledge is the first and chief requisite. The object of the coroner's inquiry is to determine the cause of death—not to detect or punish a guilty person: that is a business entrusted to subsequent procedure and a different class of officers—the magistrates and judges. These are properly and necessarily lawyers. The coroner has to make an inquiry habitually requiring not only a complete knowledge of the facts of medical science and the terms of art, but the power of appreciating the precise bearing of the statements made to him—often *ex parte*—by men of medical knowledge; to detect their hollowness, if they be hollow; their insufficiency, if they be insufficient; their falsity, if they be false. More often than not, the coroner has no legal or medical assessor to assist him in testing the technical evidence given before him. It may happen that the medical witness on whose information the coroner is then solely and helplessly dependent is the one person chiefly interested in misleading him. A miscarriage of justice is nearly inevitable in such cases where the coroner has not himself received a medical education, and does not possess the means of forming an independent judgment. Still more often, in the absence of medical evidence or medical assistance on either side, the coroner has to decide whether an inquest is necessary, or whether medical evidence and *post mortem* examination are demanded. Legal coroners are likely to be fearfully misled. They have not the preliminary knowledge necessary to awaken suspicions in cases apparently plain and above board. They are apt to be unduly suspicious where a little more thorough knowledge would have saved pain, trouble, and expense. The most distinguished authority in this country has expressed his conviction, which all who have inquired into the subject and have had much experience will share, that more secret poisonings escape detection than meet with punishment. The unfitness of legal coroners is largely at the bottom of this impunity.

MIDDLESEX AND UNIVERSITY COLLEGE HOSPITALS.

A LETTER addressed to us by the Dean of the Medical School of the Middlesex Hospital contradicts a statement to which a contemporary has once again given currency this year—that special privileges have been accorded by the authorities of the Middlesex Hospital, for clinical study in their wards, to those students of University College for whom the University College Hospital may be unable to find clinical accommodation and teaching. The question has been discussed, as is well known; but no arrangement has been made, other than that students from University College, as from all other hospitals, are welcome to the wards of Middlesex on paying the usual clinical fees; a prior claim for clinical offices being, moreover, reserved for the students of Middlesex School and Hospital. No doubt an amalgamation of the didactic and clinical teaching of these and other hospitals is desirable, and, if effected on satisfactory and equitable terms, would tend, as we have more than once pointed out, to widen the basis and improve the completeness of medical teaching in the metropolis; but such an amalgamation must be a matter of careful and equitable adjustment, and not favouring the staff of one school more than another. Middlesex

Hospital has no reason to take any step which would separate the interests of its lecturers from those of its medical officers; and the injudicious zeal of the particular *attaché* of the journal in question, which annually prostitutes its columns to these erroneous reports, cannot be agreeable or useful to the authorities of University College Hospital; for, if it temporarily produce an impression that the capacity of the hospital for clinical teaching is increased, the contradictions which such erroneous statements evoke only tend to draw attention more pointedly to the present deficiency of beds for supplying clinical offices for the students of the school. The repetition of such statements and contradictions cannot but be mischievous, and tend to postpone any ultimately satisfactory arrangement. They must be as annoying to University College as to Middlesex Hospital, both which have every reason for seeking to cultivate a close union of interests and a friendly arrangement which should create a great school of medical instruction with five or six hundred beds available for clinical instruction.

SCOTLAND.

AN EFFORT is being made to secure for Dalkeith and its neighbourhood a small permanent hospital. Serious complaints are made of the incompetency and behaviour of the local authority.

MONUMENT TO DR. ELLISON OF TAIN.

A VERY elegant monument has been erected, by public subscription, to the memory of the late Dr. Ellison of Tain, Ross-shire. It is of granite, eighteen feet high, and bears the following inscription: "In remembrance of James Ellison, M.D., who died at Tain, 18th November, 1870. Erected as a public testimonial of the respect and esteem in which he was held wherever his duties led him, and as a mark of public appreciation, not only of his skill, but of his usefulness and zealous attention to his patients. Studiously devoted to his profession, he was eminently successful in his medical career: peculiarly kind, gentle, and considerate, his services were ever ready to the calls of the poor. His memory will be long cherished by many friends. *Semper honos, nomenque tuum, laudesque manebunt.*" The cost of the monument is about £70; the amount subscribed was nearly £160; and the balance is to be presented to a relative.

MEDICAL BURSARIES IN THE UNIVERSITY OF ABERDEEN.

WE have had occasion more than once to call attention to the poverty of the Faculty of Medicine of the University of Aberdeen, in so far as bursaries are concerned. There is probably no University in Scotland which offers to the poor student so many opportunities of acquiring an excellent general education as Aberdeen, and these advantages are thrown open *pauperrimis* by means of the numerous small annual bursaries possessed by the University, which are mostly tenable for four years. But although the Faculty of Arts has become enriched, the Medical Faculty, strange to say, practically possesses no such prizes for the student of medicine. It is, indeed, true that one medical bursary exists, and has been dispensed under a system, or rather want of system, which it is generally believed has failed to meet with approval, but the existence of this bursary scarcely even qualifies our statement. To remedy such a state of matters, a Committee was some time back appointed by the General Council of the University, and on Wednesday of last week they presented an interim report. They considered that the best method of procedure was to have a statement drawn up, setting forth the great want of bursaries in the Medical as compared with the other Faculties in the University, and indicating the condition under which such bursaries would prove most useful. It was the opinion of the Committee that such bursaries should be open to all, and gained by competition; that the competition, while embracing the parts of general education, should give prominence to natural science, and that, after two years had expired, the tenure of these bursaries should depend for the next two years on the passing satisfactorily of an examination in the earlier branches

of the medical curriculum. The report met so far with the approval of the meeting that the members of Committee were reappointed to prepare their statement. When thoroughly matured it will be well to circulate the report amongst all medical graduates and alumni, inviting their co-operation in a matter of so much importance to the University. A very remarkable proposition, which had the merit, certainly, of striking originality, was brought forward by a member of Council, the chief principle, as we shall call it, of which was, that the arrangement of the medical classes in the University curriculum should be dependent on the hours of visit at the dispensary!

IRELAND.

A HANDSOME tablet has been placed in the Derry Cathedral to the memory of the late Dr. Thomas Henderson Babington.

A SALUTARY ACT.

THE Irish Poor-law Commissioners have exercised their prerogative in the case of the Millstreet Union, county Cork, and have dissolved the Board of Guardians of that Union, appointing paid officers in their stead. The charges against the guardians are stated to have been—utter indifference to the needs of the helpless poor committed to their charge, constant irregularity in attendance, frequent insufficiency in the number of guardians to constitute a quorum, and a constant inattention to the financial affairs of the Union. It is many years since the Commissioners considered it to be their duty to take such a decided step; and we have no doubt that it was the result of mature consideration, and much required. It will have an important effect in stimulating other boards to a clearer appreciation of the necessity of the performance of their duties. The same proceeding might occasionally be adopted with advantage in the case of certain English boards of guardians.

REGISTRATION IN THE MEDICAL SCHOOLS.

THE registration of students at the eleven metropolitan medical schools has been completed, and the returns have been made to Mr. Charles Hawkins, F.R.C.S., the Government Inspector. From these, it appears that, notwithstanding the large number of rejections during the present year in the Arts Examination at the University of London, the College of Surgeons, and Society of Apothecaries, there is an increase of 35 in the new entries over the number registered in October 1870.

The following represents the number of students registered at the College of Surgeons at each of the hospitals, including new entries; but there are also some gentlemen pursuing their professional studies for the Fellowship of the College of Surgeons at each of the institutions who are not required to register.

| | New entries. | Total students. |
|----------------------------------|--------------|-----------------|
| 1. University College | 88..... | 271 |
| 2. Guy's Hospital..... | 86..... | 328 |
| 3. St. Bartholomew's Hospital .. | 81..... | 255 |
| 4. St. Thomas's Hospital | 58..... | 145 |
| 5. King's College..... | 43..... | 121 |
| 6. London Hospital..... | 29..... | 99 |
| 7. St. George's Hospital..... | 22..... | 85 |
| 8. St. Mary's Hospital | 21..... | 61 |
| 9. Middlesex Hospital..... | 19..... | 46 |
| 10. Charing Cross Hospital..... | 11..... | 40 |
| 11. Westminster Hospital..... | 10..... | 23 |
| Totals..... | 468 | 1468 |

The above includes also those studying for the dental profession.

The following analysis of registrations during the present decade will doubtless prove interesting. In 1861, there were 1228 students at the eleven recognised medical schools; in 1862, 1116; in 1863, 1045 (in this year the Grosvenor Place School of Medicine was closed); in 1864, 995; in 1865, 1013; in 1866, 1027; in 1867, 1125; in 1868, 1194; in 1869, 1241; in 1870, 1298; in 1871, 1468. The returns from the provincial hospitals and schools have not yet been completed for Dr. Ogle, the recently appointed successor of the late Dr. Cursham.

SOCIAL SCIENCE ASSOCIATION.

Annual Meeting held in Leeds, October 1871.

DEPARTMENT OF PUBLIC HEALTH.

President: George Godwin, F.R.S.—*Vice-Presidents:* Charles Chadwick, M.D., D.C.L., Edward Filliter, C.E., J. D. Heaton, M.D., Frederick J. Mouat, M.D., F. S. Powell, and Robert Rawlinson, C.B., C.E.—*Secretaries:* William Clode, and William Hardwicke, M.D.—*Local Secretaries:* T. Clifford Allbutt, M.D., and M. K. Robinson, M.D.

Thursday, October 5th.

The PRESIDENT, in opening this section, directed attention to the Sanitary Exhibition. Although got up in a very great hurry, and further delayed by the hesitation of some of the exhibitors, it was nevertheless a very valuable collection; and although those gentlemen who had taken the pains to put it together regret that they had not been able to classify the articles more, yet, considering the short time, he hoped that that had been done to a considerable extent. There were some very important inventions, applying to plans, schools, and cottages; and there were a number of dry closets. Mr. Jennings, of London, had sent a number of his sanitary appliances, and, with regard to cookery, there were a number of inventions which might be very usefully examined and reported upon.

SEWAGE OF TOWNS.—The subject of discussion was, "What are the best and most economical Methods of Removing and Utilising the Sewage of Large Towns?"

Mr. C. RAWSON, General Manager of the Native Guano Company, read a paper on the Utilisation and Deodorisation of Sewage by the A B C Process. In consequence of the unsuitable works in which the experiments had been carried on at Leamington, and from other unfavourable causes, he admitted that many of the objections which had been made to the process had some foundation in fact, although he must deny many of the theories or hypotheses drawn from them. Only three schemes had been proposed for dealing with the sewage of towns—irrigation, filtration, and precipitation by chemical means; and circumstances might occur in which either would be preferred in practice, while in some instances their combination might be more effective, and lead to improvements in agriculture. By the A B C process all the suspended, and from 60 to 75 per cent. of the soluble matter, could be removed from the sewage, even by the ordinary working of the process. Still greater results might be obtained by further treatment; but even if some portions of the manurial properties did remain in the effluent water, he believed these might be utilised by putting it over the land, and thus all waste might be avoided. With regard to irrigation, certain difficulties must necessarily occur, and were inseparable from the adoption of that system. At least one acre of land was required to utilise the sewage of one hundred adults annually—according to many eminent authorities; but at least scores of towns could not secure the requisite land for their purposes. Again, neither landlords nor farmers had shown any very strong desire to receive this sewage on to their lands; and land must generally be acquired by town authorities by means of Acts of Parliament. He could not pass on without remarking the probable injury to the adjacent land by its propinquity to a sewage farm; and if the feeling of the richer class of the community was against such a course, what right had we to force on our poorer brethren a process which might result in serious illness to their families from the typhoid and other forms of disease from miasmatic exhalations? Not only, however, did he admit, but he proudly acknowledged, that magnificent crops had been obtained by a judicious use of sewage through irrigation. Their only difference with the most enthusiastic irrigationist was how to give the land the benefit of the valuable constituents of sewage in the most remunerative and least objectionable way. The irrigationist would pour it on the land in what he thought a wasteful quantity, whilst the A B C process would convert the same sewage into a dry, portable, and effective manure. Mr. Rawson described the A B C process in detail. The name was derived from the initials of the chief ingredients used: Alumina, Blood, Clay, and Charcoal. For a considerable time there had been substituted for the ammonia-alum formerly used, a crude sulphate of alumina, which was just as effective, and much more economical. The proportions of these ingredients were adapted carefully to the nature of the sewage, both as regarded quality and quantity. In the manufacturing districts, the condition of the sewage was subject to sudden and violent fluctuations, arising from the waste liquors of all kinds of processes; while in towns where few manufactures were carried on, domestic causes operated similarly, though in a less degree. Experience was required to secure complete

success; but as these changes in the sewage were exceedingly regular, it was not difficult, by a little attention and forethought, to be fully prepared to meet them. The manure had been submitted to the tests of chemical analysis, and of actual use by the agriculturists. From the former, Mr. Rawson said, it met with little favour; while many agriculturists gave unqualified approbation of the native guano used in the garden, the field, and the orchard. Last spring, the demand by those alone who had previously used the guano far exceeded all powers of supply. The price of native guano was £3:10 per ton at the works, and the company had already disposed of upwards of 30,000 bags at the price; and in almost every case farmers who had made a trial of it in small quantities eagerly sought for larger supplies. From the unfortunate defects of the Leamington Works, Mr. Rawson was not surprised at some of the unfavourable conclusions drawn by the Rivers Pollution Commissioners, during their two visits to Leamington. They were, however, quite unwarranted in publishing such an attack on the company without more thorough investigation. He hoped their future inquiries into the process would be conducted in a more considerate spirit. In suitable works, not the slightest nuisance arose from the process. Another important feature in the process was that in the A B C works the excreta collected from such receptacles as Moule's or other similar system, might be turned into native guano by mixture with the deposited mud, with probably but a slight addition of A B C mixture. The contents were at once deodorised, and could be dried without nuisance. It was the intention of the company to establish in some central town, in the neighbourhood of which the chemicals could be cheaply obtained, and where there was an abundance of suitable clay, a manufactory of dry A B C mixture. This would relieve towns from the necessity of having a chemical staff. Another important consideration in connection with the A B C process was the comparative cheapness at which the works could be erected. As a comparison, Birmingham would have to incur an outlay of £1,200,000 for land for irrigation, whilst the A B C works would not cost above £50,000. Blackburn was spending £185,000 on an irrigation farm, while sewage could have been treated by the A B C process at an expense of £15,000. The last argument which Mr. Rawson advanced in favour of the A B C process was, that it was successful in a commercial point of view. The metropolis daily poured into the Thames 100 millions of gallons or 448,740 tons of sewage; and it was estimated from experiments, the A B C process would convert this into over 1,000 tons of dry manure, worth annually, at £3:10 per ton, the sum, for the metropolis alone, of £1,282,500. The authorities of Leeds resolved some months ago to make an experimental trial of the A B C process. The works, which were situated at Knostrop, to the south-east of the town, and adjacent to the River Aire, were hardly yet completed; but Mr. Rawson trusted that they would be found a success. In conclusion, Mr. Rawson asserted that the A B C process was pre-eminently suited for treating and utilising the sewage of large towns. The effluent water could be made clear, inodorous and almost chemically pure; the process could be carried on free from nuisance, and the profits were large and certain. He felt confident that these would be admitted facts, as soon as the works at Leeds, Bolton, and Crossness were in working order.

Mr. HARDWICKE (Secretary) read a paper by Dr. Robert Elliot, of Carlisle, upon the best means of Utilising Sewage. The only system advocated by the author was an elaboration and extension of the plan of Mr. Macdougall, of Penrith, which had been in operation for upwards of twelve years at Carlisle, viz., of immediately carrying off all excreta by underground drainage, with arrangements for ventilation into furnace chimneys, and which at some suitable place or places had its liquid sewage, free from putrefaction, pumped up by steam-power, and, suitably mingled with carbolic acid, applied in rotation by means of long moveable channels or troughs to the adjacent fields. This irrigation had proved highly successful. The indefinite expansion of the plan to suit every case seemed to present no other difficulty than such as enterprise might in every case successfully grapple with. It was submitted that the best method of removing the sewage of large towns was by underground drainage (commanding a constant supply of water) leading to underground tanks, suitable in capacity and number, arranged at equal distances from each other, and forming a circle outside the town; each tank being supplied with ventilation into the furnace chimney of a suitable steam-engine, the double use of which should be to work a revolving washer within the connected tank, and to project the well mixed and deodorised sewage to its next destination through mains either at once to the neighbouring fields, or onwards to other tanks and steam-engines similarly arranged, at points further away, wherever such fertiliser may be needed. Such tanks, even in some cases without steam-engines, might be placed on natural or artificial eminences, from which, as in the working of a water-supply, the contents might be distributed by gravitation through service-pipes and

their accompanying arrangement of taps, to any place where the sewage might be wanted.

Mr. SYMINGTON read a paper descriptive of the method of dealing with sewage proposed by Mr. Strang, of Glasgow. The method suited to the existing water-closet system, and would be the means of extending that system on a simple plan to poor and crowded localities, replacing the offensive and unhealthy arrangements common in such parts; and it secured all the valuable ingredients of the sewage in a concentrated form for agricultural purposes. A patent sewage-filter formed the essential feature of the scheme. This filter was so constructed that the urine and solid parts were entirely retained, and the water allowed to flow off free from all contaminating matter. The filter consisted of a cast-iron box, divided horizontally into two compartments by a perforated bottom or grating. In the upper portion of the box above the grating was placed a bed of common ashes. The whole discharge from the soil-pipe entered the lower division, where the urine and solids were retained, while the water passed upwards through the filter, and flowed off into the drain in a perfectly innocuous state. The contents of the lower part of the box might be disposed of in one or other of two ways. By providing a moveable covered ash-box to stand under the filter, the house-ashes and other kitchen-refuse could be deposited there, and when it had received the contents of the filter, the whole could be easily removed by the scavenger, thus doing away with the ordinary ash-pits, dust-bins, etc.; or the filter could be emptied into a close cart and the contents removed in their natural state, as was being done by the cleansing department of the City of Glasgow. This apparatus had been examined and approved of by many scientific and practical men. As to expense, it was urged that, when properly organised, the cost attending the management of this system would not be greater than at present incurred by the emptying and removal of the ordinary ash-pits, etc., which would then be done away with altogether.

Mr. W. T. MCGOWEN, Town Clerk of Bradford, had a paper entitled "The Sewage of Manufacturing Towns; what shall we do with it?" The writer came to the conclusion that, although sewage-irrigation might be resorted to advantageously in the case of small towns where circumstances allowed the proceeding to be successfully and inoffensively carried out, there were sound reasons for holding the system to be impracticable for large manufacturing towns if they were to undertake the whole operation themselves; and that if the sewage of these places were to be applied to the purposes of irrigation, it could only be done in some such way as had been suggested—by the Government making main outfalls to sea sands with a view to their reclamation; and that, meantime, the local authorities would have to direct their attention to the best means of purifying the sewage in the vicinity of the stream to which the water belonged, by mechanical or chemical means, or both.

Dr. F. J. MOUAT had spent thirty years of his life in India, and he considered that the first question to be determined was how to get rid of the sewage in a manner best consistent with the public health. This having been determined, the engineer and the agriculturist could be appealed to. He approved of Moule's dry-earth system, but there were certain defects connected with even this system, and in particular, the chances of disease being propagated by certain forms of organic life.

Mr. W. H. MICHAEL (London) complained that gentlemen read papers which showed that they were totally unacquainted with the first questions essential to the success of irrigation. The author of the first paper had said that a sewage-irrigation farm was a bog, and that it would be detrimental to health. He could never have been at a sewage-irrigation farm properly conducted. The Edinburgh meadows were managed in total contrariety to the very first principles of the proper sewage-irrigation farm. The solid constituents of manure were the worthless part of it, and the first thing in dealing with irrigation was to separate the whole of these, as was successfully done by the admirable method adopted by Mr. Baldwin Latham in his new machine. But any process that tended only to separate the solid constituents of sewage must be put aside as utterly worthless. Those who wanted in the interests of the public health to remove the difficulties in the way of dealing with sewage were not wedded to any one system; but when the subject was discussed, gentlemen advocated their own measures, looking at it as some means of making profitable manure at so much per head of population. The value of the whole of the manure, he maintained, lay in the fluid portion; and it was this fluid portion, the soap-suds, and slops, and the urine, that formed the difficulty, and any system which did not deal with this fluid failed to achieve the primary essential to be adopted in treating sewage. He did not advocate any principle; but having been engaged for many years in seeing irrigation at work, he thought it did promise not only to remove any source of nuisance, but to be extremely beneficial in producing food—because to talk only of rye-grass being produced was an absurdity. So far as he could see

at the present time, irrigation was the only process that answered the necessary conditions, of taking that which it was requisite should be taken from the excreta, and it could be applied to land without creating the slightest amount of nuisance even to persons living in the immediate vicinity. There was no cause of disease which had been shown to have arisen from sewage-irrigation, and the latest experience showed that on sewage-irrigation farms so large a percentage as 10 per cent. could be returned for the money invested by local authorities in the creation of that which relieved them entirely from the nuisance, and which must prove a benefit in every sense to the ratepayers.

Mr. CONYERS MORELL maintained that the proper place to deal with all refuse was at its original source, where it should be rendered inoffensive. He described a plan for dealing with refuse invented by himself, and undertook to fix closets in the town and remove the refuse for nothing.—Mr. R. RAWLISON, C.B., said that for modern communities, gathered together in towns, there were several things that had to be done to secure the public health. The question had to be discussed, for instance, how to remove the slops from the houses. Sewers and drains were necessary to dry the subsoil. There were a great many places where a vast proportion of the mortality was due to the damp and wet subsoil, and therefore there must be sewers and drains. A mathematician could scarcely calculate the addition to the diameter that would be required to carry away the effete water. This being granted, and the sewers laid upon a proper foundation, there was no cost of conveyance. Water would flow to any distance. It was said that the circumstances under which effete matter might pass along the drains corrupted the atmosphere of the houses; but if that were so the drains did so very unnecessarily. Every drain ought to be cut off by a ventilating shaft opening up to the fresh air, so that any gas generated should not pass into the dwelling-house. It was said that dry earth disinfected immediately. If it did, he would say that water stopped putrefaction for a limited time—for a safe time to enable it to flow beyond the precincts of the town; and if that were so, with a properly arranged water-closet there was no trouble—there was simply the pulling of a handle to get the water-supply, and the offensive matter passed away. With an earth-closet, there must be separate intervention at least once a week, but, if it were to be kept perfectly clean, at least once a day. If there were two or three earth-closets in a house, how could the servants be expected to manipulate them in a cleanly manner on all occasions? There would be 365 manipulations a year, if they were daily, and if weekly 52. The value of the manure was twelve shillings per head of the population, and would any one accept that remuneration in respect of the manipulations in his house. The dry-earth system might do for detached dwellings, for large establishments, for gaols, for barracks, for any place where persons were entirely under command, where there was no objection to bear the expense of the separate manipulation, and where the gardeners could be found. He took it for granted that the sewage must be removed, either in the dry or in the wet state. If in the dry state, it was removed necessarily by mechanical means, or by human agency. If in the wet state, sewers and drains having been made under proper conditions, and properly ventilated, the sewage removed itself to any point that was desirable; and where necessary, steam-power might be called into use. With regard to irrigation, he would only say that sewage might be applied to land with perfect success without causing the smallest nuisance, and that probably, according to circumstances, there would be a great income. The conclusions to which he was brought were these—that no human means, so far as was at present known, of treating sewage by chemicals did more than remove one-eighth of the salts of sewage from the effluent water; and that the brightest and best clarified sewage was then in the very best possible condition to be put on the land for the purposes of irrigation. Mr. Blackburn, who had a sewage-farm at Aldershot, would find one acre of ground for any of the patent manure manufacturers, and he would give them his sewage to manipulate—and it was the richest that could be got, there being sixteen instead of eight grains of ammonia to the gallon—if the water were returned to him when they had done with it. He could only say that if such manufacturers by the A B C process could make the manure worth £3 or £4, or any higher amount per ton, they would do what all the chemists with whom he had been in contact told him was impossible. For such counties as Yorkshire and Lancashire the question was very important, because they might expect legislation on the subject. It had been intimated over and over again that Parliament should teach the people what to do, and it had also been said that the Rivers Pollution Commissioners should give some direction. It was, however, he thought, the duty of the Commissioners to inquire, to give the best information, and then let the towns provide a remedy.—Dr. MACMILLAN and Mr. R. CRAVEN offered some remarks.

Mr. P. OVENDEN, Secretary to the Native Guano Company, maintained that the manufacture of manure pursued by the company was

efficient, and alleged that irrigation led to nuisances in the districts where it was carried on.

Mr. C. CHADWICK maintained that the cheapest mode of removal was by water, which arrested decomposition, and carried the sewage away most completely. As to earth-closets in the Tropics, he had no experience of India, but as to the West Indies he had been consulted upon the means of providing deodorants to get rid of very troublesome insects. Decomposition began ordinarily in three or four days, and if proper attention were given to sewage, it would be got rid of in a day. Excreta ought to be in the field, not in mechanical suspension, but in chemical combination. He regretted that in Leeds for thirty or forty years the place should have remained as it was, with a death-rate augmented. There was a very large pecuniary loss to the town occasioned by lost labour and the effects of premature debility, owing to ignorance of sanitary science.

Dr. BAYLIS advocated the establishment of the water-closet system. In Birkenhead, that system was being carried out vigorously and with the best results.

Mr. HOWARD, M.P., corroborated Mr. Michael and Mr. Rawlinson as to the perfect success of the irrigation process. At Bedford, the plans adopted had answered their purpose well, and no nuisance was caused. As a rule, it would be found that arrangements which for efficiency depended upon people attending to them were not such a perfect success as self-acting arrangements.

Mr. Councillor MARSDEN was very much disappointed with what the Association could do for towns that were anxiously considering their difficulties, if all the benefit to be received was represented by the papers read, there being nothing precise and certain in what was recommended. He advised that a system should be taken into consideration by which the different elements of sewage should be kept and dealt with separately.

Mr. C. CHADWICK said that in France and Belgium and other continental cities the system of separation had been tried, and it had universally failed. The death-rates approached the death-rates of Leeds, when they might have been reduced by one-third.

Mr. MARSDEN said that the system was in work successfully in New York.

Mr. P. H. HOLLAND said that the public health question was largely affected by economy; and, although there might be fifty ways in which excreta might be dealt with, they were too expensive. The only good plan yet possible was to remove the filthy matter quickly by water-carriage. He felt that five shillings a ton ought in reality to be the cost of the A B C manure; and he contended that it was of very little use to the agriculturist.

Mr. Councillor MATHERS said that water had been more recommended than any other system; but no one yet could say that this or that was the best scheme, because the determination of this would depend upon the position of towns. He thought the A B C system the best hitherto: it certainly dealt with the sewage better than any other system that had been made known to the Town Council of Leeds, and the manure had turned out well in the hands of several farmers.

M. A. LEIGHTON did not oppose irrigation, but criticised some points, and spoke of charcoal as the most effective deodorant.

Mr. DE RENZY, Commissioner in the Punjab, described the method of removing excreta mixed with earth from gaols in his district, and stated that it worked successfully. The health of the prisoners was exceedingly good, and this proved that excreta could be dealt with at a short distance from habitations if applied properly. The produce was consumed in the gaols, and parasitic disease did not exist.

Mr. S. WATERHOUSE, M.P., confirmed the experience of the last speaker. There was an absence of entozoa amongst the prisoners at the West Riding Prison, Wakefield, notwithstanding the fact that produce raised with manure from the gaol was consumed regularly.

Mr. W. HOPE gave details as to the system of irrigation pursued on his farm of 121 acres at Romford, maintaining that his experience demonstrated irrigation to be a most successful method of utilising sewage. The quantity of sewage coming from a town with 8000 inhabitants was too great for use, and a portion was merely purified. In order to use sewage he should like an acre for every twenty persons, but to purify it a very much smaller area was necessary. The portion not used became inorganic, and therefore innocuous. The commercial success of his undertaking enabled him to pay £600 a year to the town of Romford. He ridiculed the theories as to the generation of entozoa in animals fed on irrigation lands, and said that the horse-pond was the great source of such diseases. The manure obtained by the A B C process he pronounced almost valueless.

Mr. WEBSTER, Q.C., held that there could be no question that the removal of sewage by the water system was the most economical: but there were no doubt places, such as Birmingham and Leeds, where the

irrigation system involved enormous difficulties as to the extent and distance of land, and therefore such places must consider whether there was any other practical mode of dealing with sewage. He recommended those who were anxious upon this question of public health not to indulge in extreme opinions. There could be no question that the water system was the best for removal, and that the irrigation system succeeded most completely, but surely some chemical system might be found.

Mr. MCGOWEN asked the members of the association to pause before they advocated irrigation as a remedy for every place.

Mr. RAWSON, in reply, said that the manure produced by the company cost from 30s. to 35s. per ton, and they had no difficulty in selling at £3 : 10 per ton all that they had.

Mr. SYMINGTON said that, by the process which he had explained, not only the solid portion was collected, but also the fluid.

The PRESIDENT, in closing the discussion, said that he had been sorry to hear from a member of the Leeds Corporation that he had learned nothing, and he hoped that that gentlemen would see that his means for arriving at a conclusion were very much increased by the discussion of that day. He wished, in the interest of the community at large, to urge that irrigation should be employed extensively, and in all places where it could possibly be adopted. What was the use of a Royal Commission, of the labours of a British Association, and of the Rivers Pollution Commissioners, in all cases coming to a conclusion in favour of irrigation, if they, who could not possibly go into the subject minutely to the same extent, were not to attend to the recommendations made, and say that irrigation was under the greater number of circumstances the best mode to adopt. The evidence from Mr. Blackburn's farm at Aldershot, of which he knew something, and a number of others, as at Croydon, and Mr. Hope's valuable farm at Romford, ought to induce them to say that irrigation was the best means to employ. With regard to the A B C process, he was very anxious not to say anything unfair; but he was compelled to say that its supporters said more than they could possibly prove. They said they got £3 : 10 per ton for the manure. But would they prove that it was worth this? Such chemists as he had spoken to said it was not. The expensive process which they followed could not possibly produce a manure at such a price as that manure was worth. They had not yet proved the value of it, or that the farmers would continue its use. With regard to the effluent water, which they said they were quite willing that the irrigators should have, was this effluent water sufficiently purified? It was, then, seen that sewage must be got rid of immediately, that water was the readiest means of transporting it, and that when properly disposed of on land it really did no damage whatever to surrounding persons; and all the evidence was, he thought, in favour of irrigation. He hoped the people of Leeds would look into the matter. They must no longer delay, with a thousand middens—the death-rate told them of the work that had to be done—and of the A B C process they must satisfy themselves either as to its goodness or its badness. If good, let them adopt it entirely; but if bad, then at once they must set to work to get rid of the sewage, and put it on the land around!

Friday, October 8th.

THE HABITS OF THE LABOURING CLASSES IN THE RURAL DISTRICTS.—Dr. ACLAND (Oxford) read a paper on The Sanitary Care of Villages and Cottages. He said that in well-ordered modern towns the poor had the cleansing and scavenging of the surroundings of their homes done for them. In a village or an isolated cottage, the labourer, often ill-fed, always hard-worked, must either perform this duty himself or it was left undone. The condition of the closet-accommodation in some villages and cottages was virtually inconsistent with a sense of domestic order, and was often productive of most injurious effects on the health of the family. The water was poisoned. Fevers are originated, and permanent ill-health was engendered through recurring bowel attacks. A generally untidy and miserable state of the surroundings became the habit of the family. The children grew up with these associations, having no other home-standard of decency. Many facts to show the extreme gravity of this matter in our rural districts—grave from its effects on the health of individuals—more grave, from the effect on the moral nature by engendering indifference, and on the intellectual powers by breeding ignorance and consequent false opinions on common matters. The remedy seemed to be, that, *mutatis mutandis*, the same sanitary care should be bestowed on a cottage in the country as on a house in a town. In the case of a well-ordered town the community provided water for its members, and removed their refuse for them. Not so in a village probably, in many districts, every cottage, or every other cottage, has its well, and, there being of course no sewers, its own cesspool. The expense and the risk from want of or-

ganisation were both multiplied. It might be said that our scattered populations were not worth the care, or that, if worth the care, then the supervision would in practice be too costly; so that the care of hamlets and villages was either impracticable or visionary. Issue might be joined on both these objections. The rural populations cast into the towns either a strong, decent, manly, people, or an enfeebled progeny, brought up unwisely. The immigration of the rural into the urban population was noticed on the Continent also, and was, in fact, a necessary law of modern civilisation, depending on varying causes. The case of the villages was, therefore, apart from special humanity towards the individuals, truly a national question. The great measure of last session, which undertook to harmonise into one whole all existing powers bearing on the public health, and which assigned to one minister the duty of consolidating and improving the law, wherever improvement and consolidation are needed, virtually decided the question as to what executive is to guide. With respect to the purely rural districts, the great powers of the Public Health Acts resided with vestries and guardians. In many cases, therefore, they were indirectly in the hands of the very class of persons who required guidance and help. Herein lay a great part of the strength of the Local Government Board. It enlisted in the cause of public health, understood in the widest sense, every ratepayer who voted on matters of parish organisation, and the medical men of the poor. The cottages in rural districts should be scavenged by the community, and not by the occupier. There were two ways in which this could be done: one, in villages where regular sewers and water-supply can be provided and maintained; another, in isolated cottages, where, from expense, these methods were practically inapplicable. In Broad Clyst the former has been lately tried. In Stanton Harcourt, in Oxfordshire, the latter plan had been put in operation on the dry earth system, by Colonel Harcourt, the son and successor to the venerable and scientific Canon Harcourt, owner of Nuneham. An inspector, paid by Colonel Harcourt, went weekly to the cottages on the estate to examine and report on the condition of the closets, and if they were in a bad state he removes the manure as a fine, because then the owners lost it from their gardens. The first of these methods could not pay interest on the outlay, and could only be done by persons who had capital at their command. Neither the parish nor the union could be called on to contribute to a purely local improvement, except on the principle that a great landowner must have good houses for those who till his land, the outlay being calculated as for the whole of his property; or on that principle which made the whole country pay some apparently metropolitan charges because they are part of the Imperial expenditure. On the whole, there was no doubt that an arrangement could be made in every rural district, whereby the poor labourer might have the necessary surroundings of his home kept in order for him, like his fellow artisan in the town. It would conduce to his health and energy, and it would be both just and politic, since all who believe in the existence of national health and national morality feel that the agricultural labourers deserve the utmost care of the nation.

Mr. P. H. HOLLAND had a paper on the same subject. He took precisely the same views as the Rev. Charles Kingsley, who read a paper on the condition of dwellings at the meeting of the Association in 1858.

A long and important discussion followed.

Saturday, October 7th.

SANITARY QUESTIONS.—Mr. E. CHADWICK, C.B., read a paper on the Sanitary Influences of Town Pavement. The public health was very materially influenced by the good or the defective manner in which streets were paved. Amongst the evils arising from bad pavement, he cited the escape of gases, the baneful effects of vibration on the system, caused by unevenness; the loosening of the joints of pipes, and the affording of direct means for the propagation of disease. In places where self-cleansing house-drains and sewers had been brought into good action, and where the death-rates had been reduced, but where some amount of typhoid and foul-air diseases yet lurked, these had been very much confined to those streets where the surface was unpaved and badly cleansed, and the subsoil sodden with foul matter. The Val de Travers pavement had realised more than was expected in the amendment of town pavements. It was to be wished, however, that the material were more abundant, that it might be obtained cheaper. It was to be maintained as a duty of the local authorities to provide such paving and cleanly surface conditions in the poorer districts, that there would be no mud for the children to roll in or to make mud pies of. It was for the local authorities, and in their default—the default commonly of low landlords—it was for the central authority so far to make the population as clean as might be done by cleanly surrounding pavement. Of

course a special economy was available for those districts where there was little quick carriage or horse traffic, and where the same peculiarly hard road surface was therefore not needed. Justice was not done to the Val de Travers pavement by carrying it out in isolated patches. With the new available materials, the professors of sanitary science might put these questions to urban populations:—Will you obey the command, "Wash and be clean"? will you pave so as to enable you to do so? will you pay for good paving and cleansing, to save the direct expense of filth in clothes and extra cost of washing? will you pay for good paving, to save more than half the expense of horses and carriages and the cost of transit? will you pay, in good paving and cleansing, to reduce the greater expense of the filth diseases? The time, he predicted, would come when a local administration would be tested, especially in the lower districts, by the smell of the place and by the look of the people inhabiting it.

Dr. BISCHOF, of the Andersonian University, Glasgow, read a paper on the Purification of Water and Sewage by Sponge Iron. The powers of metallic iron to purify impure water had been known for a long time. By sponge iron, he meant iron which had been produced in reverberatory furnaces by reducing an oxide without fusion. The surface was naturally greater than that of iron in any other form, and it was to be expected that its purifying action must be proportionately increased. Sponge iron could be made at a moderate cost in almost unlimited quantities from burnt ores after the copper had been extracted by the so-called chlorisation process. Water which was not thoroughly bad, but of doubtful character, might be thoroughly purified by filtering through sponge iron one foot thick, at such a rate that one cubic foot of water passed through every cubic foot of sponge iron every five minutes. Sewage might, by filtration through sponge iron, be so purified as to exhibit all the appearance of the purest drinking water. In his opinion, the action of sponge iron was twofold—chemical and mechanical. To prevent a clogging of the iron it was indispensable that the filters should be so constructed as to allow a reversion of the current of water every twenty-four hours for a few minutes. Any suspended impurity should be separated by filtration through sand or other known means before filtering through sponge iron.

Mr. T. J. DYKE sent a paper On the modes of dealing with Outbreaks of Pestilent Fevers, sanctioned by the Health Authorities of Merthyr Tydvil.

Dr. FERGUS (Glasgow) read a paper on the Production of Disease by Excremental Pollution. The reappearance of diphtheria as a disease in this country, was probably owing to our carelessness in the disposal of excreta. Typhoid fever, also (killing annually from 15,000 to 18,000), was produced by either contaminated air or water, the results of excremental pollution. He exhibited soil pipes from water-closets which were corroded by sewer gas, and which had caused typhoid fever. The principal grounds for believing that this state of the pipes arose from sewer gas, he said, were that the perforations were generally in the upper surface of the pipes, and from within; also, that in ventilated pipes the corrosive action was much slower than in pipes where the gas was not allowed to escape at the top. This state of pipes was not easily detected, as plumbers looked for liquid leakage, which would not take place, as the perforations were on the upper surface. In one case, a plumber had renewed the water-closet, but failed to detect the state of the pipes. Typhoid fever being in the house, he (Dr. Fergus) had insisted from the smell that the pipes from the closet must be corroded. He showed that cholera and diarrhoea was caused by the same carelessness in the disposal of excreta, that the decomposition took place even in the best constructed sewers, and that the result was highly detrimental to health. In large towns, the sewers were a perfect laboratory for the manufacture of sewer gas, and this gas was continually entering the houses from water-closets and sinks. He objected to irrigation, especially where the sewage was pumped—the fluid would be pumped up, but the gas would be left. Having expressed his belief in the germ-theory of disease, he said that the only true sanitary solution of the question was to provide that there should be no decomposition of excreta, that the progress of science rendered this easy, that all excreta should, either by chemical or other action, be rendered non-putrescible, and that no excreta should be allowed to enter sewers, watercourses, or rivers.

Mr. W. H. MICHAEL, referring to a statement made by Dr. Fergus, that at Croydon, in the house of Dr. Carpenter, gas had made its appearance, and that therefore decomposition took place even there in the sewers, said the system at Croydon must be judged of as carried on at its best. They must take the sewers as properly constructed and properly ventilated, and in such a way that the gas was escaping (if of necessity there were any gas, which he did not allow), and was transmitted into the air after passing through charcoal. He wanted to go back to a subject which the readers of papers persistently overlooked.

The difficulty was not how to get rid of the solid human excreta, nor even of the fluid excreta; but the great difficulty was the large amount of house-refuse which was sent into the drains. This house-refuse was acknowledged to be the difficulty, and that which, if putrescent, caused the whole of the mischief. This fluid must be dealt with; it must be taken away; it must get into the drains; and, if not dealt with, it would inevitably become mischievous and propagate disease. At Croydon, the solid constituents of the sewage were at once extracted; the works were properly constructed, and the sewage was at once put fresh upon the land, that being the initial condition of success. He maintained that the agricultural and sanitary results of irrigation were now established to be irrefutably successful.

Dr. FERGUS admitted that the system of irrigation at Croydon was perfect, but decomposition did take place.

Mr. MICHAEL objected, in vigorous terms, to general principles being argued upon exceptional cases.

Mr. E. CHADWICK said, Dr. Carpenter had informed him that the escape of gas in his house was owing to a defect of the sewer-pipe; and in every case where there had been typhoid fever in Croydon, it had arisen from a defect of the drainage. The decomposed gases came from the deposit in the drain, and if the drain had been properly constituted the deposit would have been swept away. The result of the irrigation that was carried on at Croydon was that the death-rate had been reduced from 28, and even as high as 38 in the thousand, to 16 and 17 per thousand, and it had even been as low as 14. As to the corrosion of pipes, the remedy was to employ such materials as would not corrode—earthenware or glass, for instance. Glass was made use of at Maestricht for the pipes.

Mr. B. LATHAM, the engineer of the works at Croydon, explained the operations carried on in the town to utilise the sewage. The plan was to remove as far as possible the sewage in its perfectly fresh state, the sewers having the requisite inclination to carry the matter with sufficient rapidity to the outfall, and before six hours were over the water was passed over the land and passed off again perfectly pure. From a sanitary and an economical point of view, the experiments at Croydon had established the success of irrigation. The best plan of dealing with sewage-gas was to introduce ventilators, accompanied by charcoal trays.

Mr. P. H. HOLLAND would have drawn the contrary conclusions from the facts put forth by Dr. Fergus. If it were true that all the foul matter might be washed out of the sewers, yet in practice it would be found that no work was perfect, and therefore there should be proper provision made, and soil-pipes should be ventilated.

Mr. RAWLINSON, C.E., spoke energetically in support of irrigation, and stated that the sewage could be rendered innocuous by irrigation on a much smaller extent of land than was required to utilise it thoroughly in farming.

The CHAIRMAN, in closing the discussion, commented on several points. He did not want it to go forth that in the Val de Travers pavement, without qualification, there was the material desired; and to show this he cited several defects that required consideration. He could not tolerate the notion that ventilation of sewers was not productive of decided good; and with regard to irrigation, he instanced the case of Birmingham, to show that complete utilisation was not necessary to get rid of sewage.

Monday, October 9th.

THE HEALTH OF OPERATIVES IN FACTORIES AND WORKSHOPS.—In the absence of Mr. Godwin, the chair was taken by Mr. RAWLINSON, C.E. The special question for discussion was, "What are the best means of promoting the Health of Operatives in Factories and Workshops?"

The first paper was read by Dr. J. H. STALLARD, who said the question for discussion was narrowed down to what took place in the workshop. He maintained that the death-rate and the kind of disease existing proved that the air in many cases was impure. A sufficient supply of air was capable of reducing the deaths resulting from pulmonary disease; and this fact he illustrated by a reference to improvements in barracks to secure ventilation. Having contrasted the conditions under which the town artisan and the agricultural labourer pursued their callings, he contended that man was made to live in the open air, and not in a box. People who were employed in towns were obliged to be fed more expensively than they would be if isolated in cottages in the country districts. There was no doubt that a more healthy race could be produced by a less amount of expensive food than could be produced by the very best food, in large aggregations in towns and large establishments. The real stamina of the country came from the agricultural element, and that was due principally to the fact that

the labourers worked wholly in the open air. Factories and workshops should be so constructed as to assimilate the condition, as near as possible, to that of the open air, with provision only for protection against rain and violent draughts. This was all that was really required. All ventilation proceeded under the supposition that a certain amount of air was sufficient, whereas the true supply required was only to be obtained by living in the air. He exhibited a diagram of an improved method of ventilating hospitals, public buildings, and dwelling-houses; and said that if it were wanted to place workshops in free contact with the open air, the principle of numerous small openings must be adopted, and the laws of diffusion and connexion must be relied on for a sufficient and complete interchange. That was, apartments must be protected from the direct pressure of the wind, and yet a large surface must be provided with which the communication with the outer air should be free. The laws of diffusion and connection were sufficient to ensure interchange even in the stillest atmosphere, if only they had sufficient opportunity for acting; and the problem was thus reduced to the question as to the largest surface of room-sides, which might be perforated by innumerable small openings, so placed as to be free from any outside pressure of the wind. It would be expensive and difficult, and useless, to perforate the floor; but if the ceiling were perforated and protected from rain, and exposed nowhere to the direct pressure of the wind, the work-room would be placed in free, complete, and immediate contact with the outside air, and the principle of slow diffusion would have full play. No great volume of cold air could possibly be driven down on any side of the apartment, whilst the freest exit was provided for the exhalations from the lungs and body, and for any unwholesome products of the manufacture. There was no disturbance in the atmosphere of the room sufficient to interfere with the natural rising of the vitiated products to the ceiling; and in the plan he had proposed, there was nothing to prevent the escape of those products into the air-chamber, from which they were at once carried away by the horizontal current passing through. The arrangement was simple. Every room should be provided with a double ceiling, the space between being in free communication with the outer air on all sides. The top ceiling was either the floor of the room above, or the roof; the lower ceiling was made of finely perforated zinc, or oiled paper. The air-chamber should be large enough to admit of being swept out from time to time, and the sides might be made of perforated bricks of various colours and shapes. This plan did not interfere with the employment of opposite windows and ordinary means of warming rooms. The sole object was to maintain the principle of living in the open air, under all conditions, whether in winter or summer, day or night. The principle, in his judgment, was as necessary in a bed-room as in a drawing-room, and as necessary in a factory as in a hospital. It had been ignored by architects since the Roman era; but he would observe that the courts of the Pompeian house were but a more open arrangement than the one proposed. He believed that the best means of improving the health of operatives in factories and workshops would be to place them in direct communication with the open air by the plan proposed.

The REV. B. LAMPORT (London) said the principle and theory put forward by Dr. Stallard were correct, but he argued that the variations of temperature, especially at night, were such that the plan would be attended with danger in some cases.

Mr. P. H. HOLLAND held that all the benefits sought by Dr. Stallard could be got without the sacrifices proposed. As the best means of ventilating, he recommended warming the air with the waste heat before it is given off.

Mr. LEIGHTON (Liverpool) said the simplest and most effective system of heating and ventilation which he had ever seen was in a school-room at Glasgow. The whole of the exhausted air was taken away by the draught caused by a fire on the lower floor, the school being on the second floor, and the air being conveyed to the lower room in a tube from the ceiling. The supply of fresh air was by means of a perforated pipe, which pipe conveyed the air to a boiler heated by the fire, and there the air was warmed and conveyed back to the school-room.

Mr. BENNETT (Liverpool) said that the system described by the last speaker was insufficient for carrying out ventilation on a large scale, in order that that rapidity of change might be secured which was necessary. He was not quite sure that the method suggested by Dr. Stallard could be applicable in all cases; but the difference in the supply of air, he feared, did make the great difference between the health of the agriculturalist and the health of the town man.

Dr. STEWART (London) said that, by providing small perforated plates for the diffusion of the air, its introduction might be secured with very great facility.

Mr. RAWLINSON, C.E., recommended the suggestions of Dr. Stallard to the serious consideration of all persons having anything to do with men crowded either into workshops or into houses. There was no

artificial remedy, there was no fine-drawn remedy of flues or valves, or other means of that class that would give fresh air in the abundance that appeared to be necessary for health. He had been sent out by the Government to the army in the Crimea, where there was certainly room for an experiment upon the grandest scale. Our troops in the Crimea had suffered in the three months during the dreadful winter of 1854-5, at the rate of 700 per 1,000, or 70 per cent. There was starvation of various kinds—from want of necessary provisions, and from actual exposure to the elements. In the first instance, a number of huts were sent out from England, at very great cost, in lieu of tents; but these wooden houses had no sooner been inhabited than they became fever-dens and pests of the very worst kind. No instructions were given to provide isolation of each hut from the subsoil, and to provide ventilation. The side walls were eight feet high, and the roof was covered with patent felt, which was waterproof; but, unfortunately, it was air-proof too; and there being no arrangement for any ventilation at the floor, and the huts being arranged for twenty-five men, one-half of the occupants had fever. A most striking condition of affairs was found out in comparing the position of the 79th with that of the 42nd Regiment. Lord Clyde had gone with him for the first inspection, and he asked to be told the difference between the two regiments, there being very little fever amongst the 42nd, and much in the 79th. Upon investigation, he found that the encampment was on a steep mountain side, the greater part being oolitic limestone and dry, but there was a broad band of clay underneath. The 79th Regiment was on this band of clay, and the persons erecting the huts had excavated a level place into the bank of the hill-side, and consequently at the back it was three to five feet in height, sloping down at the sides; and, no provision being made to keep the earth from the sides of the huts, they were like inverted bell-receivers, with the men inside and the damp soaking in under the floor. The 42nd, on the other hand, were on the rock, and they had been compelled to raise a false floor for the huts. He advised the shifting of the regiment, and, from the time that it was shifted, the new type of disease ceased, and only the men had to recover who were originally down. The huts, however, on this band of clay were not taken down. The quarter-master forgot that they were empty. The 32nd Regiment came from India and was quartered in them, and when they had been there fourteen days there were thirty-two cases of cholera. The huts were still kept there, and, a brigade of artillery having been sent into them, within thirteen or fourteen days there were thirty or forty dead with cholera. As to day and night atmosphere, people in this country were not so much afraid of ventilation as those on the Continent. On the Continent—in France, in Germany, in Italy—there was nothing of which people were so much afraid as open windows; and the common remark if an open window were seen at night was, "There is some fool of an Englishman living in that house." There was something of the bugbear in what was said of the difference of temperature between night and day. If patients could be kept out of a direct draught, and well clothed with the bed-clothes, no harm need be apprehended. As Miss Nightingale said, what could we have but night air; and how could we injure patients by night air? There was either the atmosphere around, or an artificial atmosphere of a most abominable character. Travellers out in the East had a scorching sun on the sandy plains of Arabia, and the largest rivers were frozen over at midnight; but it was never heard that travellers there suffered from the variation of temperature; and he himself had been in a country where, during the day, the temperature in the sun exceeded 120 degrees. He had to march, with his coat off, and was perspiring from every pore. He had no shelter at night but a thin piece of cotton, and yet he saw one inch of ice on the river at night. He had always been considered a very delicate man; and although he did not say that patients could be submitted to a difference of temperature such as that, yet the human constitution would wonderfully adapt itself to circumstances if it had fresh air. Pure, uncontaminated air must be let in and out in profusion, or we could not have that health which was necessary.

Dr. STALLARD, in replying, said his system did not in the slightest degree interfere with warming a room or building. The proposal was the result of long deliberation, but it had only been matured within the last two weeks, and it had not been practically tested. He had the promise, however, that it should be fairly submitted to test. There was no danger whatever from the night air in any moderately well-placed building; provided that, for instance, in hospitals, the patient was covered up sufficiently. One medical man treated fever very successfully by taking the windows out of his building altogether; and if that was the case where the rain might beat in, what might not be expected from a system such as he had detailed?

Dr. EDDISON (Leeds) said that, in any manufacturing town, as was the case in Leeds, the air was purer at night than during the day.

Mr. G. H. L. RICKARDS read a paper on the Advantages of the

Factory Legislation that has taken place from time to time. He placed before the Section some of the more important facts connected with the working of the Factory Acts, and he also glanced at the extension of the principle to workshops. The benefits of the Factory Acts to the working classes he cited as follows:—1. Improved physical education; 2. Entire freedom from some forms of disease; 3. Increased protection from accidents; 4. Protection from excessive work; 5. Improved sanitary condition of factories; and 6. The education of all children under thirteen years of age. By the Act passed two months ago, the whole of the workshops of the country had been placed under the jurisdiction of the factory inspectors. In 1867, when it was necessary to add a large number of various trades to those already under the provisions of the Factory Acts, an Act was also passed placing all the workshops under the supervision of the factory inspectors. Their chief duties would be to prevent overwork, to see to the sanitary condition of the workpeople, and to attend to the education of all children under thirteen years of age. In this way, the whole industrial classes obtained the advantage of the supervision provided by the Legislature through the exertions of the factory inspectors.

Mr. E. CHADWICK, Dr. STEWART, and Mr. FILLITER (who had taken the place of Mr. Rawlinson in the chair) took part in the discussion on this paper, and the advantages of having medical inspection of factories were commended.

THE WASTE OF WATER.—Mr. P. H. HOLLAND read a paper on a cheap mode of preventing waste of water when continuously supplied. The waste of water, he said, chiefly arose from some consumers allowing many times as much water to run away as they used, with the effect commonly of making the average quantity supplied exceed three or four times (often much more) the average quantity used. The remedy proposed was to supply each house with as much water as would be fairly used, and not much more. Five gallons per individual, or twenty-five gallons per house, was considerably more than was likely to be used *per diem*; but on washing days, twice that quantity might be needed. This quantity might be supplied through a mere pin hole, discharging at the rate of two gallons an hour, and might be conveyed through a pipe a tenth of an inch in diameter, running very slowly, and therefore with very little friction. To avoid the inconvenience of having to wait for such a slow discharge, a small receptacle, large enough to hold as much as would be wanted at once, would be needed. The advantages of economising water were commented upon.

Mr. RAWLINSON, C.E., said that they could not have fine-drawn theories about water-supply. There must be water in abundance, in spite of that which theory suggested.

Mr. E. CHADWICK considered that in this case much might be learned by inquiries from persons outside the profession. He thought receptacles for the storage of water were liable to objection on account of the water losing its freshness in them.

Mr. B. LATHAM also thought the storing of water for dietetic purposes an error; and, as a means of preventing waste of water, he recommended Hall's system, to be seen at the Sanitary Exhibition.

Mr. BENNETT said that if there were a town in which, if practicable, Mr. Holland's plan could be adopted with advantage, it was Liverpool. He considered it one of the suggestions that might be worked up by engineers.

Mr. FILLITER, in closing the discussion, said that he knew no reason why any family should be allowed to use hundreds of gallons more than was needed. He did not know why water should be treated upon a different principle from bread or anything else, because in town water was a manufactured article, and a very costly article too. That the constant supply system must be adopted not only in London and Liverpool but in every large town, no one was more convinced than he was. He asked why the meter system might not be introduced under proper regulations. It was said that this system would lead people to use as little water as they could help, and thus encourage dirtiness; but it might easily be so managed that every house should pay a minimum rate, say 5s. or 10s., and should be entitled to pass through its pipe a minimum quantity, say 10,000 or 20,000 gallons. If a man consumed more, then he should pay an extra rate for the excess. The difficulty was as to the construction of the meter. But they had only to give encouragement to manufacturers to have these meters put into excellent condition. The meters were now low in price, and he thought that they would be both lower and more correct soon. Five gallons a day per head he thought too small a quantity, and his own experience of this matter suggested seven or eight gallons per head. He should let people have an ample supply of water for all reasonable purposes, and he would only exclude rigorously that abominable waste which took place in all large towns.

Tuesday, October 10th.

The Chair was taken by Dr. F. J. MOUAT.

DEGENERACY OF RACE IN TOWNS.—Dr. STEWART (London) on behalf of the author (Dr. H. W. RUMSEY) read a paper On the Progressive Degeneracy of Race in the Town Populations of Britain. He quoted evidence from leading journals in support of the assertion that the average physical type of Englishmen had degenerated of late years, that broad chests and powerful limbs were no longer common among labourers and artisans, and that medical examiners of recruits rejected a larger proportion every year; while those admitted into the ranks, especially of militia regiments, were very inferior in height, bone, and muscle, to their elder comrades. The author also referred to the researches of Dr. Beddoe, respecting the stature and bulk of men in these islands, and to the army recruiting returns, which concurred in showing that the rejection of recruits on account of bodily unfitness had increased from six to ten per cent. during the last thirty years; and that this degeneracy was fairly attributable, in a great degree, to the growing concentration of the working-classes in towns, to the depressing circumstances of town life, and to the large number of those engaged in indoor employment. He classed the principal influences at work in this deterioration under three heads—food and drink, labour and employment, and residence and dwellings. With regard to food, although wages had risen greatly during the last thirty years, the price of food had also increased. The cost of wholesome meat had almost doubled, and more diseased meat was sold to the poor. Vegetables were also dearer and scarcer. Ignorance of cookery and domestic economy was becoming more absolute and hopeless, as the number of women employed in manufactories increased. He cited the absence of milk in the diet of children as a main cause of sickness and constitutional debility. Measures for preventing the adulteration of food were, he said, imperatively called for. The effects of intemperance and alcoholism were cumulative; and so long as intoxicating drinks were consumed, the progeny of the drunken would be generally more feeble, vicious, and liable to disease of body and mind than their parents. The main cause of drunkenness was, he said, the house-accommodation of the poor. With regard to the effects of indoor employment, Dr. Morgan, of Manchester, had recorded his experience of the low physical condition, the bloodless, slender, and distorted forms of factory-workers in crowded populations; and he observed that this deterioration was proportioned to the length of time during which they or their ancestors had been exposed to these injurious influences. He recommended military drill as a condition of State support to elementary schools. The conditions of dwelling in our great centres of commerce and manufacture he believed to be the most destructive of all influences now at work in producing a lower type of Englishmen. The conclusions which he drew were, that comprehensive yet cautious measures were necessary for the improved accommodation of the working-classes of our great towns over larger areas of habitation; that, as for the overcrowding of persons in a house, so also for the overcrowding of dwellings on a given area, there should be a limit to density of population fixed by law, at all events in the building of dwelling-houses on fresh ground as well as in building them on ground previously occupied; and that, for the success of such measures, the establishment of a superior administrative authority, with adequate power, was as essential as it was for the execution of measures intended to prevent the adulteration and secure the good quality of food, or of those which protected labour from unhealthy conditions known to sap the vigour of the race.

Mr. J. I. IKIN agreed with Dr. Rumsey that in the large towns the lower classes of the population were falling off; but he did not think that was the case among the middle and upper classes.

Mr. E. CHADWICK asked whether the degeneracy amongst line soldiers and militia recruits was not to be accounted for by this, that as wages rose the class of men who presented themselves sank in position? He knew that this did account for it in some districts.

Mr. IKIN said that, no doubt, when trade was good, they unfortunately had very poor specimens.

THE ROYAL SANITARY COMMISSION.—Dr. STEWART presented the report of the Joint Committee of the British Medical and Social Science Associations on the report of the Royal Sanitary Commission.

[This Report was published in the BRITISH MEDICAL JOURNAL for August 19th.]

Mr. HASTINGS called attention to a letter forwarded by Mr. Corrance, M.P., relative to this question, and to a draft of propositions which he proposed to have embodied in legislation, and suggested that they should be laid before the Joint Committee. Mr. Hastings also proposed the adoption of the following resolution:—

“That this department approves generally of the report of the Joint Committee on the report of the Royal Sanitary Commission, to which,

for its valuable labours, much gratitude is due; reaffirms the principles embodied in the resolutions adopted at the Birmingham Congress in 1868; and expresses its regret that several of the leading recommendations of the Royal Commission are at variance with those principles by which, in the opinion of this department, the Council and Joint Committee should be guided in any representation they may address to Her Majesty's Government and the Imperial Parliament.”

Mr. E. CHADWICK seconded the resolution, which, after considerable discussion, had taken place on the report (the speakers being Mr. WEBSTER, Q.C., Mr. NORTH, Dr. MARTIN, Mr. JENKINS, Dr. P. H. HOLLAND, and Dr. STEWART), was adopted unanimously.

A paper, by Mr. J. Lascelles, of Manchester, on Sanitary Law Reform, was not read owing to want of time, but it was understood that the communication would be printed in the Transactions of the Association.

VENTILATION OF SEWERS AND SHIPS.—A paper bearing this title was read by Dr. J. SEATON. The principle was said to be equally applicable to houses and all kinds of buildings. It consisted as regarded sewers, of the connection of a sewer with an ordinary furnace, placed outside or inside a house, the fire being only fed by air passing through a pipe from the sewer.

In the discussion, Mr. R. SYMINGTON (Glasgow), Dr. SYSON, Mr. E. CHADWICK, Mr. BENNETT, and Mr. FILLITER took part. Mr. FILLITER said that it was his experience that where there was a current of water in a self-cleansing sewer there was a current of air in the same direction; and he pointed out that the great difficulty to be contended with in ventilation was when the sewers became surcharged with water, and there was no room left for the gases, which made their escape by breaking through the traps.

COTTAGE HOMES.—Mr. W. G. HABERSHON, F.R.S., read a paper on Cottage Homes, illustrative of the manner in which the Central Cottage Improvement Society of London had laboured in providing improved dwellings for the working classes. The object of the Society had been to assimilate the cottages as nearly as possible to cubical form, and to take out everything unnecessary, so as, in reducing the size, to reduce the cost also. Plans and models were exhibited, showing the different developments of the leading idea. A pair of cottages with three bedrooms cost from £200 to £225—a single cottage £100. A triple cottage containing separate dwellings respectively of three, two, and one bedrooms, under one roof, cost £300 under ordinary circumstances, and was convertible to village school, cottages, hospital, or single superior dwelling. Cottages suitable to miners or for towns, in groups of three or more, had been suggested by the Society to cost less than £100 each cottage. The general principles to be observed in building good cottages were enumerated.

SCHOOLS.—Mr. E. CHADWICK read a paper on The Sanitary construction of Schools. Schools, as at present constructed, were the centres of children's epidemics. An excess of 50,000 deaths annually in England and Wales in the school stages of life, medical officers had agreed with him, was largely due to the massing of unwashed children together in ill-warmed and ill-ventilated schools, and to keeping them during long hours together under those conditions. The increase of these masses, without regard to those conditions, was an augmentation of preventable disease and premature mortality. Bad ventilation was augmented by bad warming. He advocated, in preference to other methods, a return to the Roman plan of warming rooms by hypocaust floors; or an adoption of the Chinese method of floor-warming, which travellers declared the most comfortable of any they had ever experienced. It was also the most economical. As one mode of effecting the object, he had proposed a form of tile with labelled or lock joints (with a species of supports) to be made of selenite, or Portland concrete, or pottery. By these appliances, hollow floors might be constructed at an expense no greater than that of common floors. Experience showed that when the children could be kept warm, doors and windows might be more freely opened. Every school should have the means of washing with tepid water children who came dirty.

Several other papers—the contributors of which were Mr. J. D. Morrison, Dr. J. T. Arlidge, and Dr. C. Slagg—were held as read. Dr. Arlidge had a paper on the Health of Operatives in Factories and Workshops. The paper was based on statistics derived from the outpatient practice of the North Staffordshire Infirmary, Stoke-on-Trent.

SANITARY CONDITION OF LEEDS.—Dr. ROBINSON, the Medical Officer of Health for Leeds, read a paper on the Sanitary Condition of Leeds. He described the organisation of the town in regard to registration, and the mode of obtaining returns of the mortality. The Sanitary Committee of the Town Council in discharging its duty as prescribed by the Sanitary and Nuisances Removal Acts had, for the purpose of securing systematic inspection, cottage house-to-house visitation, and the adoption of general hygienic proceedings, divided the borough

into fifteen divisions, to each of which an inspector was assigned, whose duty it was to ascertain and report daily in writing whatever nuisances he might find in his district to the chief inspector of nuisances, under whose control and supervision the several inspectors were placed. These men also reported particulars of zymotic cases on printed forms to the officer of health, and performed a number of duties under his direction. In eight of the fifteen districts nearly the whole time of the inspectors was devoted to sanitary work. In these eight divisions, which include the central part of the town, the area traversed averaged 1,000 acres per man, the population equal to each being about 20,000. In the seven remaining suburban divisions the men devoted only one day per week to sanitary duty, with one exception, where two days were set apart for that purpose. The area of each subdivision averaged about 1,800 acres, and the population in each numbered about 5,000. From January 1867, to September 30th of the current year, 51,131 notices and letters were sent out, 351 summonses issued, and penalties for sanitary offences amounting in the aggregate to £288:14:6 inflicted (exclusive of smoke penalties). Through the help of this preventive staff diseases were often traced to their causes, and timely remedies were applied to arrest their progress. In scores of instances, typhoid fever had been traced to either defective drains, or excrement-polluted soil and water; and the removal of the discovered evils had been followed by suppression of the disease. During the cholera epidemic of 1866 this malady never extended to the population of Leeds, although introduced into one of the courts by a gang of railway workmen, who came direct from an infected house in Liverpool; prompt conjoint action by the Leeds Town Council and the Board of Guardians (consisting in perfect isolation of the sick and segregation of the infected from the rest of the inhabitants of the town, etc.) being at once taken on the outbreak of the disease. Then, during the epidemic of relapsing fever last year, that disease never became so widely diffused in Leeds in relation to the population as in many other towns, although introduced seventeen times; the measures adopted being early removal of the sick from the healthy, accompanied by disinfection and cleansing of infected houses, clothing, etc.; and, up to the present period of this year, with smallpox widely diffused through the country, there had been only nineteen deaths from the disease in Leeds, although since January it had been introduced seventeen times. Beds and woollen garments, etc., which were not destroyed, were disinfected in the Corporation's own apparatus. The merit of calling public attention to the value of dry heat as a disinfectant, as practised years ago by Dr. Henry, of Manchester, was due to Dr. Shann, of York, who read a paper on the subject in this section in the year 1864. In addition to the work just described as being done, the Leeds Town Council had obtained powers of its own to deal with faulty property, compensating the owners thereof for loss. Beginning in the heart of the town, the Corporation had already decided to destroy one whole block of buildings, consisting of sixty houses, and covering a space of 2,505 square yards. The Council were about to be further asked by the Sanitary Committee to adopt a similar scheme for clearing away two blocks of streets and courts, where in one instance the death-rate had averaged during the last five years 50.3 per 1,000 *per annum*, and in the other during the same period 68.2 per 1,000 *per annum*, embracing in the first case twelve courts, and involving the destruction of 163 houses, covering about 8,640 square yards, and in the second the demolition of twenty-eight houses. The Sanitary Committee, in deciding upon this wholesale demolition of property, had not been guided by the death-rate of the locality alone, but had been influenced by other reasons, viz., that the localities in question had been the principal seats of every epidemic that had visited the town, and further that the faulty arrangement of the houses as to construction, ventilation, out-office accommodation, surroundings, etc., was such as to preclude any other remedy than total demolition. The rate of mortality of Leeds was so often misquoted as increasing in intensity year by year that it was necessary to show that in this respect also improvement had taken place. The actual death-rate of the last five years, counting the three-quarters of the current year just expired, had only averaged 27.1 per 1,000 *per annum*, compared with 31.3 as the average of the preceding five years. The death-rate of the current year, from January 1st up to last Saturday night, was 26.7 per 1,000 *per annum*; so that Leeds, in its diminished mortality, compared favourably with the past. Leeds, therefore, with its magnificent waterworks, in course of construction; the improved becks; undertakings for demolition of noisome courts and pestilence-breeding houses; its recent decision to abolish barbarous middens; its sanitary organisation and persistent administration of the Sanitary and Nuisances Removal Acts, accompanied with a diminished death-rate, might fairly be said to be making material progress in sanitary improvement, and this in the face of enormous difficulties, such as viciously constructed houses, interested associations organised for the purpose of stemming

the stream of sanitary reform, and a Chancery injunction causing sewage-logged houses, and necessitating cesspools for all new buildings. Since Dr. Robinson's connection with the Leeds Corporation no chief magistrate had taken a livelier interest than the present in the sanitary welfare of the people, and the chairman of the Sanitary Committee devoted nearly all his time and abilities day after day to the amelioration of the evils which called for removal. The display of this zeal and assiduity on the part of those placed in positions of trust and responsibility he took as indicating a determination on the part of her rulers that, as Leeds was one of the first towns in the kingdom to inaugurate a system of preparing reports upon the sanitary condition of massed populations, so now, by a practical solution of various sanitary problems, she shall again take front rank and lead other towns in the "way of life."

Dr. STALLARD, in commenting on the paper, advocated the registration of infectious diseases, and pointed out that two-thirds of the cases brought under the notice of Dr. Robinson occurred in houses which were built next to the middenstead. He denounced the back-to-back system of building houses, especially as it rendered it absolutely essential that the middenstead should be built, as it were, in and among the houses, and he recommended that for the future no midden should be erected in contact with the walls of a house. He insisted most strongly that the sewer should be ventilated, and he urged that vacant spots should be preserved, or created if they did not already exist, in the crowded parts of the town, on which in times of epidemic sufferers might be treated in hospitals, and at other times children might play.

Mr. E. CHADWICK approved of maps being kept to shew the spots affected by epidemics. He commended for application the code of regulations on the duties of medical officers issued by Lord Ashley, Dr. T. Southwood Smith, and himself in 1851.

Mr. SYSON (Salford) indicated what is being done in Salford to provide for the health of the town. One plan he suggested for imitation—every passage to communicate with the street at each end, and every home to have a separate convenience.

Mr. P. H. HOLLAND said that when people were displaced from their dwellings there was the evil to be guarded against of the remaining buildings being overcrowded. Why should not the owners of demolished houses be repaid in other houses suitable for the same class of population? As houses could be put up at £80, it did not appear impossible to do this without much loss. It would be worth while for a Corporation to make the experiment. Might not employers of labour take up the question and provide dwellings out of their capital? The employer might always have his houses let, and he would be able to bring down the excessive rent of other houses.

Dr. FERGUS (Glasgow) referred to the large number of deaths amongst children under five years of age, and said that, although for a large proportion of such cases medical attendance was provided, the people displayed manifest carelessness in Leeds.

Dr. STEWART was gratified to hear the report of Dr. Robinson. The mode adopted in Bristol with regard to the inspectors was a particularly good one. There were four chief inspectors, each with five men under him, and controlled by him. Every morning they had a meeting with the Medical Officer of Health. The sanitary inspectors should all be controlled by the Medical Officer of Health and responsible to him, and they should cease to have police duties.

Mr. W. BOTLY (Salisbury) stated that by the system of drainage brought into operation in that town the death-rate had fallen from 27 to 16 per 1000. Property had increased very much in value.

Mr. Councillor T. MOSLEY had been a supporter of the reforms now being carried out by Dr. Robinson for many years, and he wished the Association to understand that the people of Leeds had more knowledge of these sanitary matters than the members supposed. Dr. Robinson had been simply reiterating what he (Mr. Mosley) had done year after year.

Mr. FENWICK (Leeds) said that the Council had done a great deal of late for the improvement of the town, and within the last four years had spent £120,000 in widening streets and opening up new thoroughfares. They were now about to enter upon a great work of clearing away the overcrowded dwellings of the poorer classes in the heart of the town. There was one thing, however, which the Town Council might do with great advantage, and that was, whilst sweeping away in the overcrowded districts, to take a little more care to preserve better ventilation in the new buildings being erected for the working classes. There could not be proper ventilation if they went on building up a town and extending its suburbs by absorbing all the space for dwellings. If through ventilation could be got, so much the better. He had always condemned the principle of back-to-back houses; and he thought that each house ought to have a convenience.

Dr. ROBINSON replied, and mentioned that the scheme of Dr. Stallard had his entire accord.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Tuesday, the 31st day of October, 1871, at One o'clock *precisely*, to elect a Secretary, and for other important business.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary* (pro tem.)
13, Newhall Street, Birmingham, October 17th, 1871.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the Session will be held at the York House, Bath, on Thursday evening, October 26th, at seven o'clock: CROSBY LEONARD, Esq., President.

R. S. FOWLER, Bath, } *Honorary Secretaries.*
E. C. BOARD, Clifton, }
6, Belmont, Bath, October 1871.

CUMBERLAND AND WESTMORLAND BRANCH.

THE autumnal meeting of the above Branch will be held at the King's Arms Hotel, Wigton, on Wednesday, October 25th, at half-past twelve o'clock. The President, Dr. ELLIOT of Carlisle, will occupy the Chair.

Gentlemen intending to read papers or cases, are requested to communicate with the Secretary at their earliest convenience.

HENRY BARNES, M.D., *Honorary Secretary.*
Carlisle, October 3rd, 1871.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of this Society will be held at the White Hart Inn, Reigate, on Thursday, October 26th. The Chair will be taken by Dr. HOLMAN, at 4 P.M.

Dinner at 6 P.M. Charge 5s., exclusive of wine.

Papers, etc., are promised by Dr. Holman, Dr. Phillips, Dr. Walters, Mr. St. A. Hawken, etc.

HENRY T. LANCHESTER, M.D., *Honorary Secretary.*
Croydon, October 13th, 1871.

SHROPSHIRE SCIENTIFIC BRANCH.

THE annual meeting of the members of the above Branch will be held in the Museum, Shrewsbury, on Friday, October 27th, at 2 o'clock: Dr. J. W. MOORHOUSE in the Chair.

Several papers have been promised; and some photographs and interesting preparations will be exhibited.

Gentlemen intending to contribute, are requested to communicate with the Honorary Secretary.

The dinner will take place at the Lion Hotel at 4.30. Members intending to dine or introduce friends, are requested to send in their names not later than the 24th instant.

SAMUEL WOOD, F.R.C.S., *Honorary Secretary.*
Shrewsbury, October 10th, 1871.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE annual meeting of the Section will be held on Friday, October 27th, at the Birmingham and Midland Institute. The Chair will be taken at 3 P.M.

BALTHAZAR W. FOSTER, M.D., } *Honorary Secretaries.*
T. VINCENT JACKSON, }
Birmingham, October 18th, 1871.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ORDINARY MEETING.

THE next Ordinary Meeting of this Branch will be held on Tuesday, November 7th, at the Town Hall, Cardiff, at 1.30 P.M. The Council will meet at 12.30 P.M.

The Dinner will take place at 5.30 P.M.; and members may introduce professional friends to the meeting and dinner.

Members intending to read papers or notes of cases are requested to communicate the titles thereof as soon as possible to one of the Honorary Secretaries.

All members who purpose joining the dinner, will oblige by communicating their intentions to one of the Honorary Secretaries before the 31st instant.

ANDREW DAVIES, } *Honorary Secretaries.*
ALFRED SHEEN, M.D., }
October 4th, 1871.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 13TH, 1871.

WILLIAM W. GULL, M.D., D.C.L., President, in the Chair.

Idiopathic Pericarditis.—Dr. BÄUMLER read a paper on Partial and General Idiopathic Pericarditis, in which he endeavoured to prove that the white or milky spot on the surface of the heart frequently met with at *post mortem* examinations has a clinical history of very transient acute pericarditis. He adduced in support of this proposition two cases, in which an acute illness, coming on with dyspnoea, with pain behind the sternum, radiating upwards to the larynx, the left shoulder, and towards the left ear, and with slight febrile disturbance, was accompanied by a characteristic pericardial friction-sound, lasting, like the other symptoms, only for two or three days. In a third case, where the onset had been more gradual, the friction-sound was heard over a larger area; and there was also some distension of the pericardium by fluid; yet the whole attack was mild and lasted only a fortnight. Such intermediate forms link the very slight cases to the more serious ones, which more generally come under observation. Cases of idiopathic pericarditis being of rare occurrence, Dr. Bäumlér appended the history of three other cases of this kind which had come under his observation. The three patients were little girls from eight to ten years of age, and the pericarditis had come on in so insidious a manner that they had walked about with the pericardium full of effusion. One of them died; the two others recovered, one entirely, the other with valvular disease remaining. With regard to treatment, Dr. Bäumlér particularly recommended the application of ice to the cardiac region, especially for its influence in reducing the number of the heart's contractions and in relieving pain.—The PRESIDENT, in suggesting some points in the paper for discussion, alluded to the doubts which had been expressed by some of the greatest observers, as to whether pericarditis *per se* caused pain, and this opened up the question whether the cases before the meeting were instances of pericarditis. Amongst the fallacies of the stethoscope is that of the to-and-fro murmur. It would be interesting again, he continued, to discuss, what are the idiopathic conditions which set up pericarditis.—Dr. BÄUMLER, in answer to Dr. Douglas Powell, said he employed mustard and linseed-meal empirically to relieve pain, and ice to reduce the rapid action of the heart, and as an antiphlogistic.—Dr. POWELL alluded to friction-murmurs coming on in acute fevers and going off in a few hours, the occurrence of which, he supposed, might be due to the dryness of the pericardium.

Erythematous Lupus.—Mr. NUNN read a paper on Lupus Erythematosus. This disease, known also as superficial lupus, was believed by Mr. Nunn to be essentially an inflammatory atrophy of the cutis, limiting itself to that structure, and thus distinguished from lupus exedens, which was capable apparently of destroying indiscriminately every structure. Two cases of lupus erythematosus were reported, in which the family history afforded no clue to the nature of the disease; and, in contrast, one case of lupus exedens, in which an hereditary syphilitic taint was with almost complete certainty to be traced. The first two cases had been treated for years before coming under Mr. Nunn's care with mercury, iodine, arsenic, etc. The first patient, a male, aged 34, had (October 1870) suffered during thirty-two years, the second during twenty-one years, with lupus erythematosus of the cheek. The bromo-iodine water of the Woodhall Spa, in doses of a wineglassful three times a day, was given, and a table spoonful of lemon-juice in a tumblerful of milk every morning. In the first case, the gums being spongy, a solution of chloride of zinc (one grain to the ounce of water) was ordered to be applied to them. This case was to all appearance cured at the end of six months. The second patient was still continuing the treatment with advantage, having only commenced it in May last. The case of lupus exedens had been in the Middlesex Hospital under the care of the late Mr. Moore, and was now an inmate of the Hospital for Incurables at Putney.—Dr. ALTHAUS pointed out the resemblance of the Woodhall and Kreuznach waters, and, in the course of some further remarks, expressed his opinion that, in strumous affections, iodine is too freely prescribed.

Melanotic Tumour of the Eye.—Mr. G. LAWSON related the particulars of a case of large melanotic tumour of the eye, which had burst through the sclerotic and had extended into the orbit. He first excised the globe, and then freely applied the chloride of zinc paste for the purpose of destroying all the tissues within the orbital cavity, and thus effectually getting rid of all the cancer-germs with which those structures are in such cases generally infiltrated. The operation was performed in July of this year, and the patient was now progressing favourably to

wards recovery. All the tissues within the orbit sloughed, and large portions of the bony cavity exfoliated. Mr. Lawson remarked that, when the diagnosis of melanotic tumour within the eye is made at a very early stage of the disease, the simple removal of the eye is frequently sufficient. He quoted the case of a patient in whom he had been able to recognise the tumour by the ophthalmoscope when it was scarcely of the size of a pea. He removed the eye, and now nearly three years have elapsed, and there has been no recurrence of the disease in the orbit. —Mr. DE MORGAN expressed the opinion that the caustic might be applied with advantage, even in the early stage of the disease after removal of the eyeball. In a case alluded to by the author of the paper, he believed life might have been prolonged had this been done. He had observed epileptiform convulsions occur immediately after the application of the caustic on more than one occasion. In reply to Dr. Buzzard, he stated, however, that they did not recur. —Mr. LAWSON remarked that his patient had presented similar cerebral symptoms after the operation. —The PRESIDENT, in alluding to the advantages of early removal, referred to a case in which a melanotic affection of the eye had been removed nine years ago, and in which the disease had not returned until eighteen months ago. He wished that cancer always attacked the eye, as it could then be seen and removed early. —A long and interesting discussion was here awakened by a remark of the President on the local origin of cancer, and an expression of disbelief in the generally accepted meaning of the term constitution. The question of a swollen gland arresting disease was discussed. It was pointed out by Mr. De Morgan that cancer spreads from gland to gland as from the original growth to a gland. In scarcely an instance, he said, does it happen that the part which ought to be most prone to disease, on the constitutional theory of cancer, becomes affected in recurrences, as, for example, in the case of the mamma. —Mr. LAWSON further pointed out that family history was rare in cancer, as shown in the Reports of the Registrars of the Middlesex Hospital. —Mr. ARNOTT, however, expressed his belief that the recurrence of cancer in the remaining mamma, although very rare, was more frequent than thought to be by Mr. De Morgan. —Mr. Henry Lee, Mr. Nunn, and others, also joined in this discussion, which closed the proceedings of the meeting.

CORRESPONDENCE.

MIDDLESEX AND UNIVERSITY COLLEGE HOSPITALS.

SIR,—With reference to an article in another medical journal of October 14th, headed "University College Hospital", I beg leave to state that students from University College are only admitted to the medical and surgical practice of the Middlesex Hospital on exactly the same terms, with regard both to fees and privileges, as other occasional students who may enter for hospital practice, no preference whatever being given to the students from University College over such other occasional students with respect to clinical appointments, for which they are only eligible in the event of no general pupil of Middlesex Hospital Medical College offering himself.

The notice in the prospectus of University College, of which mention is made, refers to matters of private arrangement between the authorities and students of University College itself, with which the staff of the Middlesex Hospital are in no way concerned, and of which they had not even been made cognisant.

With regard to the advantages which the writer of the article intimates this hospital would derive from the supposed agreement, by being thereby enabled to fill up its clinical appointments, I may be permitted to state that for these appointments the large field for practical study afforded by the Middlesex Hospital has never yet failed to secure an ample supply of eligible candidates.

I am, etc.,

W. CAYLEY, M.D.,

Dean of the Middlesex Hospital Medical College.

Oct. 16th, 1871.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

NATURAL SCIENCE FELLOWSHIP. —Mr. Walter William Fisher, B.A., Postmaster of Merton College, has been elected to the vacant Natural Science Fellowship at Corpus Christi College, the examiners for which (Dr. Odling and Mr. A. Vernon Harcourt) made honourable mention of Mr. Christopher Childs, of Merton College. Mr. Fisher was placed in the first class in Natural Science in Trinity Term, 1870, and Mr. Childs gained a similar distinction in Michaelmas Term, 1870.

UNIVERSITY OF CAMBRIDGE.

EXAMINERS.—Mr. C. Trotter, of Trinity College, and Mr. W. P. Hiern, of St. John's College, have been appointed examiners for the first M.B. examination; Mr. John Wood and Dr. Bradbury for the second M.B. examination; and Dr. J. W. Ogle and Dr. H. Davies for the third M.B. examination. Mr. C. Lesturgeon, and Mr. G. W. Callender, F.R.S., have been appointed examiners for the degree of Master in Surgery; and Dr. Barclay has been appointed Assessor to the Regius Professor of Physic.

Dr. MICHAEL FOSTER has been elected to a Fellowship at Trinity College. Dr. Foster was recently appointed Prelector in Physiology at the College.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At an extraordinary meeting of the College, on Monday, October 16th, the following was admitted a Fellow:

Waring, Edward John, M.D.St. And., Clifton Gardens, Maida Vale

The following gentlemen, having conformed to the by-laws and regulations, and passed the required examinations, were granted Licences to practise Physic, including therein the practice of Medicine, Surgery, and Midwifery.

Biddle, Cornelius, M.R.C.S., Queen's Road, Dalston
 Davies, Henry, M.R.C.S., Pentrepoth, Morriston, Swansea
 Eager, Wilson, M.R.C.S., Bethlehem Hospital
 Edmonds, Frederic H., M.R.C.S., University College Hospital
 Hobley, Simon Halford, M.R.C.S., Queen's Crescent, Haverstock Hill
 Newington, Frank E., M.R.C.S., Evering Villas, Amhurst Road, Hackney
 Scully, John, M.R.C.S., Middlesex Hospital
 Stamford, William, M.R.C.S., Tunbridge
 Thomas, John Howell, London Hospital
 Wall, William Barrow, University College Hospital
 West, John G. U., M.R.C.S., University College Hospital
 Wilby, John Burdett, M.R.C.S., Leicester

The following candidates, having passed in Medicine and Midwifery, will receive the College Licence on their obtaining qualifications in Surgery recognised by the College.

Bland, George, St. Bartholomew's Hospital
 Harries, Thomas Davies, Guy's Hospital

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, October 12th, 1871.

Masterman, George Frederick, Croydon

The following gentlemen also on the same day passed their first professional examination.

Bowkett, William David, London Hospital
 Grogono, Walter Atkins, London Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

AMERSHAM UNION, Bucks.—Medical Officer for the Chesham District.
 CHARING CROSS HOSPITAL—Assistant Physician.
 COUNTY WICKLOW INFIRMARY—Apothecary.
 DEVON COUNTY LUNATIC ASYLUM—Assistant Medical Officer.
 DORCHESTER UNION—Medical Officers for the Dorchester District and the Workhouse.
 ENNIS UNION, co. Clare—Medical Officer for the Newmarket-on-Fergus Dispensary District.
 EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road—Surgeon.
 GENERAL HOSPITAL, Nottingham—Resident Surgeon-Apothecary; Assistant House-Surgeon.
 GORT UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ardahan Dispensary District.
 GREAT NORTHERN HOSPITAL, Caledonian Road—House-Surgeon.
 INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, Margaret Street, Cavendish Square—Visiting Physician.
 LONDON FEVER HOSPITAL—Physician.
 LOUDOUN, Ayrshire—Parochial Medical Officer.
 MALE LOCK HOSPITAL, Dean Street, Soho—Resident House-Surgeon.
 METROPOLITAN DISPENSARY, Fore Street—Surgeon.
 NORTH UIST, Inverness-shire—Parochial Medical Officer.
 OMAGH UNION, co. Tyrone—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Eastern Division of the Omagh Dispensary District.
 PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—Two House-Surgeons.
 ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Surgeon.
 ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon.
 ST. GEORGE'S DISPENSARY, Mount Street, Grosvenor Square—Physician-Accoucheur.
 SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Assistant House-Surgeon.
 SWAFFHAM UNION, Norfolk—Medical Officer for the Saham Toney District.
 TYRIE, Aberdeenshire—Parochial Medical Officer.

WALSALL UNION, Staffordshire—Medical Officer for the Workhouse.
 WESTHAMPTON UNION, Sussex—Medical Officer for the Rumboldswyke District.
 WEYMOUTH UNION, Dorset—Medical Officer and Public Vaccinator for the Melcombe Regis District.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 WEDNESDAY... St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
 FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
 SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Adjourned discussion on Mr. Gay's paper on "Crural Venosity". Communications by Mr. Spencer: 1. Traumatic Dislocations of the Crystalline Lens; 2. Congenital Displacement of both Crystalline Lenses; 3. A Convenient Method of Applying Cold to Inflamed Parts. Mr. John Pennefather, "On the Physiology of Sound, with Illustrations."
 TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. J. W. Haward, "On Ether and Chloroform as Anæsthetics"; Mr. F. Le Gros Clark, "Case of large Biliary Concretion in the Ileum."
 FRIDAY.—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Mr. T. Charters White, "On the Microscopical Structure of the so-called 'Nerve' of a Tooth."—Clinical Society of London, 8.30 P.M. Dr. C. T. Williams, "Cases illustrating the Contraction of Cavities in Phthisis"; Dr. John Murray, "On a Case of Paracentesis Thoracis"; Dr. Anstie, "The continuation of a Case previously reported"; and other papers.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

DR. SHAPTER (Exeter), DR. HITCHMAN (Mickleover), and DR. INGLEBY MACKENZIE (Sidmouth), shall receive early proofs.

OWING to pressure on our space, many letters and communications are postponed.

DR. DRUMMOND (Oldham).—With great pleasure.

DR. CROSSBY (Nice).—Many thanks.

DR. NANKIVELL (Torquay).—Many thanks. Is the point mentioned one of any real importance? We are disposed at present to concur with the view of the Committee of the Charity Organisation Society; but should be glad to be informed of the objections to it, and on what they are based.

MR. R. C.—Thanks for your note, which came, however, too late for use.

PHYSIOGNOMY OF DISEASE.

SIR,—Can you, or any of your correspondents, inform me where I can find any diagrams, portraits, etc., illustrating the "physiognomy of disease." A few were published by Dr. Corfe in the *Medical Times and Gazette* for 1867, but I have not met with any since. I am, etc., C. J. EVANS.

Northampton, October 5th, 1871.

MR. R. W. PARKER (London).—It shall appear as early as possible.

WASP-STING.

SIR,—Some three weeks since, a man came to me suffering acute pain in the left thumb; he had been recently stung by a wasp under the nail. Concluding that the poison was of an alkaloid nature, I immediately applied some strong hydrochloric acid, with very great benefit; and on introducing some more, by means of a needle, into the minute opening, the pain was completely relieved and the sting cured. I am, etc., COOPER H. CRAWFORD, M.D.

Stafford, October 11th, 1871.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

WE are greatly indebted to Dr. Gibb and Dr. Page (Newcastle-upon-Tyne) for the favour of the documents which they have forwarded.

DR. DOBELL AND THE BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW.
 SIR,—Although I never interfere with the privilege of reviewers to be as fair or as unfair as they please in their representations, it is, I believe, quite in order to correct an actual misstatement of facts. May I, therefore, ask you to allow me a few lines in which to call attention to an instance of this in the review of my "Reports on the Progress of Medicine, 1870," published in the current number of the *British and Foreign Medico-Chirurgical Review*.

After pluming himself upon "our usual course of honest criticism," the reviewer says: "We cannot let pass one breach of promise in the announcement of the character of the work, and of which no notice is taken in the present preface; viz., the non-fulfilment in some instances of the condition that the Reports should be written by distinguished men resident in the countries which they represent. It may be, readers have not lost much by some of the reports on the progress of medicine in foreign lands being allotted to gentlemen resident in England; but the promise made, implied that Dr. Dobell considered it a recommendation of his undertaking, that reports should come from physicians resident in their native countries, and presumably better acquainted with the literature, teaching, and practice there in vogue, than non-residents could be. So far, therefore, it is to be regretted that Dr. Dobell made an engagement without means to fulfil it."

Now, sir, to show the absurd misstatements in this extraordinary passage, it will be only necessary to enumerate the contents of my volume to which it refers.

Contents of vol. ii, 1870.

America.—Report by Dr. Carroll of New York.
 Australia.—Fragmentary Report, composed entirely of Materials furnished by Drs. Halford, Bird, and Thompson, of Melbourne.
 California.—Report by Dr. Logan of Sacramento.
 China.—Report by Dr. Porter Smith of Hankow.
 France.—Report by Professor Villemin of Paris.
 Germany.—Report by Dr. Althaus of London.
 Iceland.—Report by Dr. Hjaltalin of Reykjavik.
 India.—Report by Mr. Macnamara of Calcutta.
 Italy.—Report by Dr. Sammut of Naples.
 Java and Madura.—Report by Dr. Wylie of Batavia.
 Newfoundland.—Reports by Dr. Anderson of Brigus and Dr. Crowdy of St. John's.
 New Zealand.—Reports by Dr. Kemp of Wellington and Dr. Tassell of Auckland.
 Portugal.—Report by Dr. Brandt of Oporto.
 Prince Edward Island.—Report by Dr. Hobkirk of Charlotte's Town.
 Shetland.—Report by Dr. Saxby of Baltasound.
 Turkey.—Report by Dr. Sarell of Constantinople.
 United Kingdom.—Reports by two gentlemen resident in Ireland, two in Scotland, and nine in England.
 General Report on Mechanical Appliances, etc., in all parts of the World. By Mr. Heather Bigg of London.

It will be seen that in the whole volume, the only exception to the rule that the reports should be written by men "resident in the countries which they represent," is the case of Dr. Althaus; and of his report, the reviewer is obliged to admit that "The notice of Germany, although not written by a physician resident in Germany, according to the strict letter of Dobell's advertisement, comes from the very competent pen of Dr. Althaus, who is well versed and interested in the literature of the fatherland."

I think, sir, I need not say more to expose the worthlessness of such reviews as the one in question, which is by no means an isolated example. It is certainly time that the editor of the *British and Foreign Medico-Chirurgical Review* selected better tools with which to do his important work.

October 1871.

I am, etc., HORACE DOBELL, M.D.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Brighton Herald, Sussex, Surrey, Kent, and Hampshire Advertiser, Oct. 14th; The Wolverhampton Chronicle, Oct. 18th; The Altrincham and Bowden Guardian, Oct. 14th;

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. W. B. Cheadle, London; Dr. J. C. Hall, Sheffield; Mr. Simon, Blackheath; Mr. T. Charters White, London; Dr. T. Clifford Allbutt, Leeds; Dr. William Roberts, Manchester; Dr. J. D. Heaton, Leeds; Dr. Smart, Penge; Mr. George Lawson, London; Mr. R. W. Parker, London; Miss Morgan, M.D., London; Mr. S. G. Sloman, jun., Farnham; Dr. J. Hughlings Jackson, London; Dr. A. P. Stewart, London; Dr. R. W. Crighton, Tavistock; The Secretary of the West Kent Medico-Chirurgical Society; Dr. Robert Grieve, London; Mr. Henry Harden, St. Mawes, Cornwall; Dr. Lanchester, Croydon; Dr. Cayley, London; Dr. Page, Newcastle-upon-Tyne; Dr. Gibb, Newcastle-upon-Tyne; Dr. Robert Farquharson, Vienna; Dr. E. L. Fox, Clifton, Bristol; Mr. T. H. Bartleet, Birmingham; Dr. J. W. Ogle, London; Dr. Alfred Meadows, London; M.R.C.S.; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Mapother, Dublin; The Secretary of the Royal Medical and Chirurgical Society; Dr. Thomas Skinner, Liverpool; An Associate; Dr. Lush, Weymouth; Dr. Will, Aberdeen; The Secretary of the Royal College of Physicians; Mr. Lascelles, Manchester; Mr. R. W. O. Withers, Shrewsbury; Dr. Royton, Oldham; Dr. Shapter, Exeter; Mr. Benson Baker, London; Dr. Maunsell, Dublin; M.D.; Mr. Foster White, St. Bartholomew's Hospital; Dr. Steele, Guy's Hospital; Mr. Whitfield, St. Thomas's Hospital; A Member; Dr. Philipson, Newcastle-upon-Tyne; Dr. A. Fleming, Birmingham; Dr. J. W. Burman, Wakefield; Dr. Crossby, Nice; Dr. Nankivell, Torquay; Mr. S. H. Carter, Bristol; Dr. Felce, London; Mr. Brown, Coventry; The Secretary of the Clinical Society; Mr. H. E. Armstrong, Newcastle-upon-Tyne; Dr. B. W. Foster, Birmingham; Mr. M. C. Soutter, London; etc.

NOTES

ON

THE INSTITUTIONS FOR THE RELIEF OF THE SICK, WOUNDED, AND DISABLED, OF THE ROYAL NAVY.*

By WILLIAM R. E. SMART, M.D., C.B.,
Inspector-General, R.N.

DURING our visit to Plymouth, we may take a double interest, as Englishmen and as medical men, in the grand objects of architectural and engineering skill for the construction, conservation, and protection of the naval arm of our national defences.

Amid so great an assemblage of notable works, we shall find, as medical men, that there are many devoted to our own calling worthy of inspection. The parent institution of this kind is the Naval Hospital at Plymouth, which reflects the highest credit on the Admiralty. It is but a small indication of that widely spread care for the wants of the sick and wounded of the navy, that has done very much to remove the bad sanitary conditions that prevailed to the end of the last century.

It is the object of this paper, Mr. President and gentlemen, to bring to your notice the more prominent facts in the growth of the naval medical system, and to show the successive steps by which its present condition has been reached.

Our dockyards being for the care of the materials of our navy, and our hospitals for the care of the men, it became necessary that these should be twin-institutions; but it was not until 1744 that an Order in Council provided for the construction of the hospitals at Haslar and Stonehouse, near the great dockyards, on the ground of economy in money and men. Sir Gilbert Blane writes thus: "The sick and wounded of the navy were first received into Haslar Hospital in the year 1754, and it was completed about two years afterwards. Plymouth Hospital began first to be occupied in 1760, but was not completed till 1764." Previously to these dates, the sick and wounded were landed at the seaports, boarded in lodging-houses, and treated by civilians. The naval medical charges were thrown as much as possible on the Chest of Chatham. The surgeons who attended the wounded, and the people who lodged and boarded them while under treatment, were, before the Commonwealth, paid out of the chest. Until the year 1763, there was no other source of out-pensions. Until 1796, the surgeons afloat were paid, out of its funds, twopence per man per month, to provide medicines and instruments; and until 1812, the chaplains received from it fourpence a man per month ("by the ancient custom of the service"), as the main part of their emoluments; the funds being derived from stoppages out of the pay of the seamen and officers.

The Chest was an early benefit society, or brotherhood, like other trade guilds and corporations. It was the parent of our naval medical department, pension office, spiritual aid, and system of education for navigating officers. It was, indeed, a venerable institution, founded on the principle of self-help, by those gallant and charitable spirits, who stayed to play out their game of bowls in the little amphitheatre under the Hoe, before they embarked, with light hearts, to combat the great Armada, whose sails then whitened the horizon.

In the year 1654-5, a period of war, the income of the Chest was £4512 : 10 : 11½, and its expenditure was £4531 : 18 : 10½, out of which were paid pensions to wounded men, relief to widows, the charges for the wounded of the navy, aid to the inmates of Sir John Hawkins's alms-houses at Rochester, a gift to a teacher of navigation to all comers at Chatham, and the salaries of the surgeons at Chatham, Woolwich, and Deptford.

In the year 1802, the income had reached £80,000, and the deposits in the Consols amounted to £281,500, undergoing yearly increase, while the demand on the Chest for pensions was decreasing. There were only 8094 pensioners, of whom it was said many were not necessitous, receiving aid according to this scale:

| | | | | |
|---------------------------------|-----|----|---|---------|
| For the loss of both eyes | £12 | 0 | 0 | a year. |
| " one eye | 4 | 0 | 0 | " |
| " one eye (if sunk) | 6 | 0 | 0 | " |
| " a leg, above the knee | 8 | 0 | 0 | " |
| " a leg, below the knee | 6 | 13 | 4 | " |
| " an arm, above the elbow | 8 | 0 | 0 | " |
| " an arm, below the elbow..... | 6 | 13 | 4 | " |

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

For compound fractures, and contusions of leg and foot, arm or hand, so as very much to impair their use

| | | | | |
|-----------------------------|---|---|---|---|
| For ulcerated legs | 4 | 0 | 0 | " |
| For a fractured skull | 4 | 0 | 0 | " |
| For a double rupture | 6 | 0 | 0 | " |
| For a single rupture | 4 | 0 | 0 | " |

This scale of pensions seems to have undergone very slight improvement indeed through a century and a half; the pensions were very much the same in 1654 as in 1802, and all pensions from the Chest at Chatham ceased on the recipients becoming inmates or out-pensioners of Greenwich Hospital.

In the year 1814, the Chest Fund of £1,355,400, together with its estates, was amalgamated with the funds of Greenwich Hospital.

It had been useful in its day; but it seems to have retarded, of late, rather than to have advanced, the interests of the sick and wounded, hurt and maimed, by its vicarious performance, on a smaller scale than was just, of those duties which the State was slow to accept so long as they were adopted by this offspring from the service itself. So long as it existed, all these important matters were regulated by standards of ancient date, and practices that were introduced to meet the wants of the service in the days of the Stuarts remained unaltered at the beginning of this century; although the very reason for its existence had ceased in 1763, when the State undertook to grant out-pensions of Greenwich Hospital.

This good work of the men who fought the Spanish Armada stood alone as the helper of the maimed and disabled seamen of the navy over a century, until the battle of La Hogue filled the streets of London with maimed men, and aroused the compassion of Queen Mary. At her dying request, the palace of Greenwich was devoted to their use as an hospital; and funds for its maintenance were raised by patriotic gifts and bequests, by a tax on the wages of all seamen, by confiscations, by percentages on prize-money and freight-money, and by unclaimed prize-money.

In 1704, it was opened to receive 100 inmates; and in 1814, after the great naval wars, it accommodated 2710 men, but about the year 1850 a decline commenced in its numbers. In 1865, it was in part cleared of its inmates; and in 1869 it was closed as a naval hospital. During a hundred and sixty-five years, it was styled the haven for maimed and worn-out sailors; and I believe that it most fully merited that reputation. The reasons for the decline in number of its inmates was the decrease of pensioners, and the improved rates and conditions of the out-pension list; but, notwithstanding these causes, there will ever be a residue of worn-out friendless men, to whom such a retreat would be an inestimable boon.

The State has taken possession of Greenwich Hospital, and its income of nearly £150,000 a-year, with which it supports the Greenwich schools, improves the pensions for twenty-one years' service, after the men have reached fifty-five years of age; and in this way the fund of £2,814,000 belonging to the seamen has become a subsidy to the State.

As medical officer of the hospital, I examined into the nature of the diseases of its inmates; and I carried this back to the year 1850, being the period of its decline, representing only a minor proportion of the good it had done. I found that, in its last twenty years, Greenwich Hospital provided a last home for 4224 inmates, whose mean of age at the time of death amounted to 70 years:

| | |
|---|------|
| With a percentage of deaths above 60 years..... | 85.5 |
| " " " 70 " | 64.5 |
| " " " 80 " | 23.0 |
| " " " 90 " | 1.32 |

These facts exhibit well that it was the special home for the aged sailor; and I think it may be inferred from them that life was prolonged by the care and comforts provided in the hospital. The man without home and family found a home there, and this was done at no cost to the State. Since the abolition of this friendless seaman's home, a commission has sat on Chelsea Hospital, the analogous institution for the army, but which is maintained by an annual Parliamentary grant, and not on its independent funds and properties. That commission has given reasons why Chelsea should be maintained at the public cost, in order to provide a home for about 600 aged soldiers; and the question arises, ought not Greenwich to have been spared for similar reasons? *a fortiori*, that for its maintenance no annual vote was required.

As a substitute for this last home of the aged sailor, permission has been granted for the admission of sick pensioners into the naval hospitals at the out-ports; but for this boon the pensioner must surrender his entire pensions, whether for long service, or wounds, or both, and if he have a wife and family dependent on him, they will share among them the sum of two shillings a week, paid while he is in hospital. It is only in extremity that the pensioner is driven into a naval hospital,

where shelter is offered him in lieu of his ancient right to it at Greenwich Hospital. Some greater consideration might surely be extended to himself, and those dependent on him, when illness casts him down, as the contrast of his forlorn case is very great with that of a half-pay or retired officer, who, being ill, can gain admission to a naval hospital, at the relatively small charge of from tenpence to three shillings a day, according to his rank and the length of his stay in hospital. To the officer's family it is pecuniarily a benefit, but to the pensioner's it is a sacrifice, for the bread-winner to go where he has the best chance of restoration to health. Virtually, the late changes have brought back the condition of the worn-out and disabled seaman to what it was under the old Chatham Chest—i.e., under a system of out-door relief, without adequate residentiary advantages as an alternative.

From this review of the history of institutions that are now things of the past, we may take a survey of our existing naval hospitals, of which so fine an example is now near at hand for our inspection.

It is learnt from Evelyn's correspondence, that, in 1666, the propriety of building an infirmary at Chatham was pressed by him, under the patronage of the king himself, the country being at war with the Dutch; but, from causes unknown, the question became dormant until 1741. In the meantime, there had been several wars, during which the practice of the Chatham Chest was continued, of landing the sick and wounded at the naval ports, and placing them under civilian charge. The evils of that system were great and manifest, and they were set forth in a memorial from the Admiralty to his Majesty in Council, dated 15th September, 1744, which makes reference to a previous memorial of 26th October, 1741, the country being then at war with France and Spain. It states: "The want of royal hospitals is the cause that the lodging, diet, and nursing of sick men is performed by contract, a method liable to such abuses as are often fatal to the health of the seamen, notwithstanding all the care taken to prevent it. But, when the folly of the poor men is considered, intoxicating themselves with strong liquors in the height of their distempers, the great numbers that are swept away by such intemperance, and the desertion of great numbers who recover, both compassion to them, and the interest of your Majesty's service, require the putting a speedy stop to an evil of such pernicious consequence, which can no ways be effectually done but by building hospitals," as had been urged before by Mr. Evelyn. This representation led to the building of the hospitals at Haslar and Plymouth: the former receiving patients in 1754, and the latter in 1760, before their completion.

In point of time, there is so little difference, that it is strange to find two plans so distinct carried out almost together. It proves that the Admiralty were open to new ideas; and, in fact, in matters of hospital construction and management, the Board has always shewn readiness to adopt the most modern ideas and improvements. Thus, it happens that our naval hospitals present early examples of three plans of construction; viz., palatial, block, and pavilion.

The palatial system is of square or elongated quadrangles, with open interior courts. The prototype of this is King Charles the Second's palace at Greenwich, forming the north-western building of the hospital, repeated in Queen Anne's quarter, both facing the river. This was the design of Inigo Jones, which Wren improved on greatly in the two larger buildings at their rear, named after King William and Queen Mary. Haslar was built after the plan of the parts intended by Inigo Jones for a palace, and not after that of those planned by Wren as a hospital. Haslar forms continuously three sides of a square, open behind; the receding parallel sides are alike, being elongated quadrangles, with closed courts, ill adapted for complete ventilation; and the main wards are situated in these wings. The front, which connects the wings, contains a central colonnaded vestibule, having offices on each hand, and behind them open courts of smaller dimensions than those in the sides; above the ground floor it is made up of wards. It was designed for 1800 patients, with 600 cubic feet for each; but, on modern principles, it ought never to receive more than half that number.

The block system of cubic self-contained buildings, connected by an external colonnade, is well represented at Stonehouse by a central square, surrounded by ten large blocks containing wards on three floors, with four interspersed ground-floor buildings for stores, offices, kitchen, bath-rooms, etc., and one grand block, containing chapel, dispensary, museum, junior officers' quarters, etc. Each block contains six wards, on three flats, the flights of stairs occupying an angle of the block ending on landings into which the doorways of the wards open, and on which the water-closets are placed. Each ward has its open fireplace for warmth and ventilation, and also a small stove for the nurses' use in preparing the medical comforts for the patients.

The military hospital, on the opposite side of the creek, is also of detached blocks in a single row, connected by a colonnade in front of the blocks; and the Naval Hospital, Chatham, is on a similar plan.

Sir Gilbert Blane, in his *Observations on the Diseases of Seamen*, 1799, page 176, relates that "M. Tenon, a French physician, who, by his King's order, had made a comparative review of most of the hospitals in Europe, with a view to the reformation of those in Paris, and visited this one in 1787, gives the preference to it over all others, in regard to the judicious construction and distribution of the buildings." This is a high testimony to its merits, which appears to have been deserved.

In the pavilion system, the wards are arranged in distinct blocks also, but communications are kept up between them on the several floors by corridors that form a connecting screen from base to roof, and thus thorough ventilation around the blocks is prevented. It is applicable only to hospitals in single rows or terraces; but when these are placed near each other, all the demerits of the palatial quadrangular system, as far as concerns ventilation, are reproduced.

Woolwich Marine Infirmary is constructed on this plan, with two main wings retreating, to form the angles and ends, and four smaller intermediate blocks, connected by screens containing the corridors. The military hospitals at Woolwich Common and at Netley are merely repetitions of the parts of that infirmary which is now occupied as military officers' quarters. They have an advantage in the wards having windows on both sides and at one end: the windows reach to the ceiling, and have a swing-sash at the top for ventilation; and each ward is, in fact, a distinct hospital, opening into a corridor running the entire length, and communicating with all the wards on the floor.

The last new hospital, St. Thomas's, London, combines all the advantages of both the block and the pavilion systems, and appears to leave no room for further improvement in nosocomial construction.

There is no recent statistical information concerning the naval hospitals; but, in the volume referred to, Sir G. Blane, who was a commissioner for the sick and wounded, with official records at hand, has given the gross statistics of Haslar and Stonehouse, from 1755 to 1797, including forty-four years, which he apportions nineteen years to war, and twenty-five to peace time, and compares the results, which may be presented thus:

| Hospitals. | Entire of 44 years. | | War periods, 19 years. | | Peace periods, 24 years. | |
|-----------------|---------------------|---------|---------------------------|---------|-----------------------------|---------|
| | Admissions. | Deaths. | Admissions. | Deaths. | Admissions. | Deaths. |
| Haslar | 177,390 | 9429 | 121,936 | 7268 | 56,454 | 2161 |
| Stonehouse | 111,634 | 5424 | 74,780 | 3661 | 36,854 | 1763 |
| Totals..... | 289,024 | 14,853 | 196,724 | 10,929 | 93,300 | 3924 |

These numbers yield ratios of mortality per thousand admissions, as follows:

Ratios of Deaths to 1000 Admissions.

| Hospitals. | Entire period. | War. | Peace. | Difference. |
|---------------|----------------|-------|--------|-------------|
| Haslar..... | 53.15 | 59.60 | 38.28 | 21.33 |
| Stonehouse .. | 48.59 | 48.95 | 47.84 | 1.11 |

A very remarkable feature of this is the great difference of results between the war and peace periods. It is at Haslar 21.32, and at Stonehouse 1.11 per thousand; the former presenting an extreme variation, and the latter scarcely any variation from the mean of the entire period. We may conclude that there must have been some very special, if not eccentric causes at work to produce results so different as these. The difference at Haslar is as incredible in its excess as that of Stonehouse is in its deficiency; and, being unable to explain either, I imagine there must be somewhere an error in the numbers—for, if these be true, Haslar was as superior to Stonehouse in time of peace as Stonehouse was to it in war. It is to be regretted that we have no hospital statistics of this century to guide opinion on such essential points.

Although these ratios are inordinate to modern eyes, yet they stand very favourably in relation to their own time. Blane quotes from *Mémoires sur les Hôpitaux de Paris*, 1788, numbers and proportions that give the following ratios of deaths per thousand to admissions at the great European hospitals.

| | | |
|--|------------|----------|
| Edinburgh, Royal Infirmary..... | 40 | per 1000 |
| Vienna, General Hospital..... | 75.8 to 80 | „ |
| Rome, Santo Spirito | 98 | „ |
| Rouen, Hôtel-Dieu | 100 | „ |
| Paris, Hôtel-Dieu | 222 | „ |
| To which, as physician to it, he adds: | | |
| London, St. Thomas's | 74 | „ |

The lowest of these civil hospital returns, except that from Edinburgh, is 15 per thousand above the war ratio of Haslar, and 25 per thousand above that of Stonehouse.

In a Parliamentary paper, dated July 20, 1869, being the Report of

a Civil Commission appointed to inquire into the condition and organisation of the naval hospitals, we have the latest authorised official statement concerning them. From it we may quote as follows, in proof of the manner in which these establishments are conducted by naval medical officers.

"Speaking in general terms, we would say that the management of the large naval hospitals is in all respects admirably adapted to secure the comfort and well-being of the patients. They (the establishments) represent the perfection of intelligent hospital construction and administration, but are unattainable in our London hospitals. It would be, in our opinion, much to be regretted that any change should be made which would tend to cripple these noble institutions: nor would it be becoming for us, as officers of the metropolitan charities, to write any report upon the naval hospitals, without recording distinctly our opinion that their medical arrangements are, in all respects, admirable, and such as voluntary foundations would willingly copy, if their circumstances permitted."

This unbiassed judgment as to the present condition of the naval hospitals testifies as strongly to the wisdom displayed in their original construction, as it does to the continued watchfulness to avail of every new resource of medical science, by which these institutions are rendered worthy of such high encomiums. But, however complete our hospitals may be in themselves, these advantages may be always neutralised by overcrowding of the patients. Sir Gilbert Blane was pleased with the great diminution of mortality in his day, when 800 cubic feet of space was the maximum allowed to each patient. Advanced hygienic knowledge now allots 1000 cubic feet as the minimum in our military hospitals, and some civil hospitals increase this even to 1600 feet. In future wars the capabilities of hospitals will be rated by a modern standard; and it will be found that our existing naval hospital accommodation will not exceed that for 2000 men. At the beginning of this century, our naval force averaged 120,000, and for it the naval hospitals at Haslar, Stonehouse, Chatham, Yarmouth, Deal, and Paignton, were unequal to the duties. Sick and wounded seamen and marines were then received for treatment at the London hospitals and at Greenwich Hospital; and an Admiralty official, styled "Superintendent of Town Hospitals", was charged to visit these hospitals at least thrice a-week, to look to the supplies of clothing and necessaries, to visit out-patients for the same purpose, and to see that cured men were sent back to their ships.

With these facts before us, it may be doubted that, in the event of a European war, our hospital accommodation would suffice. Such a war will employ a large channel fleet or fleets. Yarmouth, the Doggerbank, the Nore, and the Downs, will be once more the roadsteads in use. Our naval hospital accommodation for these is reduced to Melville Hospital at Chatham for 300 men; and, should such a war occur, Greenwich Hospital, which is easily accessible by steamers, might be utilised consistently with its original purpose as the great hospital for the East Coast fleet: otherwise, the London hospitals might be again occupied, as in the days of Charles II, by the sick and wounded of the fleet.

The health of the navy has undergone steady improvement during this century; in fact, the commencement of it may be dated from several years earlier than that; for, when Blane wrote in 1799, he alludes to a recent reduction of the medical staff at the hospitals as the result of that improvement. He states, on the authority of Dr. Lind, "that, when the grand fleet arrived at Portsmouth in 1779, a tenth part of all the men were sent to hospital, and that the diseases were mostly fevers." On his own authority, he made comparison of the war periods with France, 1778-82 and 1793-98, each inclusive of five years, and he described how that at Haslar and Stonehouse there had been admitted 27,000 more patients during the former than during the latter period. He considered the causes to have been, chiefly, less impressment and its evil of infection of epidemics of fever, improvement in the discipline of ships, the liberal use of lemon-juice, increased encouragement to surgeons, and the enforcement of medical regulations.

Since that era, the prevention of diseases among seamen has not been neglected; medical influence has continued its exertions with immense advantage to the sea service. Peculiar hurts, wounds, and accidents, from which landmen are exempt, must remain for ever the special casualties of seamen; but even these may be deprived of much of their fatality. Scurvy and typhus have been banished from navy returns; but there still remain with undue prominence the reports of yellow fever, syphilis, rheumatism, and phthisis, which are, however, being reduced, under hygienic measures, more nearly to general ratios; and when that has been effected, the seaman's life, always hazardous, will be acceptable on account of its superior healthiness.

A Parliamentary abstract of the health of the navy, 1869-70, affords, in a statistical summary of the last fourteen years, as valuable a standard

for future comparisons as Sir Gilbert Blane's *Observations* have done. If this good work were so extended as to include the fourteen years' ratios of all the diseases in the nosological returns, classified for the several stations, the navy would possess beacons and guarantees for the guidance of its medical officers, wherever placed, superior to those of most public services.

The abstract exhibits the mean ratios to 1000 of force, for the whole navy, as follows.

| | | |
|------------------------------|------|---------------|
| Admissions to sick list..... | 1409 | per 1000 men. |
| Invalided from service..... | 34.2 | " |
| Died in service, total | 14.0 | " |
| " from disease ... | 10.4 | " |
| " by casualties ... | 3.6 | " |

To this mortality of fourteen per thousand, I think there should be added at least an eighth of the invalids, as men suffering from diseases sure to terminate fatally within a near period, whose names do not appear in any later navy return; and, on the other hand, to arrive near the amount of death by disease, it is necessary to abate those by violence, amounting to one-fourth of total mortality, which will make the approximate death-rate by disease fifteen in the thousand of force among males between 15 and 45 years of age.

The Report of the Registrar-General for England for 1864, will admit of comparison with its standard of mortality at home, framed on the annual reports from 1850 to 1861. It subdivides the ages from 15 to 45, and affords the following interesting results per thousand of population.

Annual Male Mortality of England to 1000 living.

| Ages. | Mean of death-rate. | Localities. | | Mean by violence. | Principal Causes. |
|----------------|---------------------|-------------|------|-------------------|--------------------------------|
| | | Min. | Max. | | |
| 15 to 20 | 6.69 | 4 | 8 | 0.86 | Exanthems, phthisis. |
| 20 to 25 | 8.83 | 5 | 12 | 0.96 | Phthisis, typhine. |
| 25 to 35 | 9.57 | 5 | 20 | 1.00 | Phthisis, fevers. |
| 35 to 45 | 12.48 | 5 | 18 | 1.15 | Phthisis, monorganic diseases. |

As the nosological returns of the navy are graduated to ten yearly periods of age, a similar table to this would show an interesting comparison of the chances of death to Englishmen as civilians at home, and as naval seamen, it being borne in mind that the latter are selected men. In this table, the deaths by violence have to be deducted from the mean ratios; the minima are the means of healthy country districts, and the maxima are those of unhealthy towns. In London the mean male mortality between 35 and 45 is 16.29 per thousand, and 3.03 of that mortality, little less than a fifth of the whole, takes place in the great hospitals. This is, perhaps, not far from the average mortality of the whole navy of Britain. The great difference of localities at home is similar to that of the foreign stations, of which some are healthy and others unhealthy, and the causes of mortality vary greatly among them. At home, mortality is always related to the density of the population, which may also apply to classes of ships, but it cannot do so to stations.

From the latest Report on the Health of the Navy, we learn that the most sickly stations of our fleet are China, West Indies, and Brazil.

Mean Ratios to 1000 Force, for the Year ending June 30, 1870.

| | Cases. | Invaliding. | Death. |
|----------------------------------|--------|-------------|--------|
| General average | 1,224 | 32.2 | 10.3 |
| China | 1,646 | 60.4 | 24.2 |
| North American and West Indies.. | 1,559 | 34.2 | 23.1 |
| Brazil..... | 1,075 | 32.8 | 18.7 |

The causes may be assumed from the high ratios of remittent fever, dysentery, and phthisis, on the China station; of yellow fever, phthisis, and heart-disease, in the West Indies and on the Brazil station.

The class of vessels which suffer most are the small gun-vessels, which, it may be presumed, are the worst ventilated, and lie longest in rivers and tidal waters, and are the least disciplined; and, still more than these, the receiving ships stationary at Port Royal, Jamaica, and in the harbour of Janeiro—the former of which is a convalescent and the latter a hospital hulk, both receiving invalids and others waiting passage. It is satisfactory to learn, that the substitution of iron for wood in our fleet has been productive of improvement in health: as the above report shows, for the ironclads, ratios of 1266.6 sickness, 32.1 invalidings, 8.2 deaths, against 1224 sickness, 32.2 invalidings, 10.3 deaths, the general averages of the service in the year 1869-70.

In the nosological returns from iron-clad ships, there is a slight increase of admissions, which may indicate increased care of slight cases, with perhaps an increase of injuries, where such unusually heavy weights are dealt with, yet there is a minute decrease of invalidings

for the serious maladies, and a remarkable decrease of the death-rate. As the mean ratios of sickness in them on the less healthy stations are the general averages of the stations, and as the mean ratios of death on those in China and the West Indies are also under the general averages, it may be confidently expected that, when all the sanitary conditions of these vessels are known and attended to, the change from wood to iron in the construction of ships will be found of signal benefit to the health of the navy. Superior means of cleansing and ventilating decks, holds, and the bilges, and the interspaces of the ribs and those under the engine-rooms, are already advanced improvements, from which high results may be reckoned on in ironclads; and as those means are perfected, so we may calculate on a reduced rate of sickness and a diminished mortality from yellow and remittent fevers, dysentery, and bronchopneumonia, to which may be assigned three-fourths of the present large amount of phthisis.

I have dwelt on professional matters that will be more acceptable at a naval port, where we breathe the sea-air and look at ships, than they would be elsewhere. I have endeavoured to show :

1. How the charitable views and exertions of those who defended the country at sea in the days of Queen Elizabeth have influenced the medical affairs of the navy; and how the principles established, and the system adopted by them, have been revived, after apparent disuse, as a national instead of a class means of dealing with the residuum of the crews of our fleets: the accumulated funds, by defalcations of pay, etc., by voluntary offerings, endowments, bequests, and Parliamentary grants, being now availed of by the State, to supplement its own pensions, in providing for its maimed, disabled, and worn-out seamen and marines, when aged.

2. That the absolute necessities of the country in war led to the construction of the naval hospitals; and that, although their institution was postponed eighty years after their necessity was recognised, yet, like the fable of Minerva springing armed from the brain of Jove, they were designed on principles that have stood the test of time, and are still considered perfect models of their kind, fulfilling to the utmost their intent and functions.

3. That from the era in the internal economy of the navy, when, as Blane remarked, "impressment began to be less rigidly enforced, and to be deprived of some of its horrors, lemon-juice to be liberally allowed to ships at sea, surgeons to receive encouragement, and medical regulations to be enforced," a very constant progress of improvement in the health of the navy has gone on, until its medical statistics, gathered from every portion of the coasts of the world, exhibit mortality rates not far behind those of the general population of the British Isles.

My task is ended; and, in thanking you, Mr. President and gentlemen, for the attention with which you have listened to these notes on a branch of public medicine, I trust that this visit to Plymouth will, if possible, increase your professional interest in what concerns the health and vigour of that glorious service the British navy.

THE CIRCULATION IN THE ACARDIAC FŒTUS.

By JOHN W. OGLE, M.D., F.R.C.P.,
Physician to St. George's Hospital.

THE question as to what rôle the capillaries or small blood-vessels play in furthering the circulation of the blood, has been often raised, and has lately been brought before the profession in a correspondence between Dr. G. Johnson and his "Reviewer" in the *British and Foreign Medico-Chirurgical Review*.^{*} The subject must be allowed, for every reason, to be an interesting one; and I cannot but regard it as being somewhat strange that its discussion, after having advanced to a certain point, should apparently have been allowed to foreclose without any allusion on either side to certain observations which have been made by several writers in past years, and which would seem to constitute a necessary link in any chain of discussion on so important a subject. I desire in this communication to refer the reader to one or two facts which must be recognised in anything like a complete survey of data forming a basis for such discussion.

In support of the proposition that the arteries alone suffice by their contraction to carry on the circulation, the reviewer of Dr. Johnson had quoted the case of an acardiac foetus which Sir B. Brodie in 1809 described in the *Philosophical Transactions*, and which had been alluded to erroneously by Mr. Palmer, in his notes on the works of Hunter, as having lived some time after birth. It proved, however,

that Brodie had described the foetus as having been born dead; and this important statement, which Mr. Palmer had overlooked, had not been referred to by the reviewer. Consequently the supposed instance of viability of such a monster turned out to be not a fact.

Still the foetus without a heart had lived *until* birth, and had originally been supposed by Brodie to have furnished an example of the circulation having been carried on apart from the influence of a heart—*i. e.*, of any *vis à tergo*. This supposition, however, was subsequently set aside by the statement of Dr. Young, that, whenever an acardiac foetus exists, there is always a second foetus, well developed and possessing a heart, as an attendant; and this dictum was strengthened by Sir Astley Cooper, who not only described in the *Guy's Hospital Reports*, vol. i, 1836, a case of an acardiac foetus which was a twin, the other foetus having a heart; but went further, and showed the means or channel of communication between the two foetuses, proving by injection and dissection that the heart of the perfect foetus drives the blood through the vessels of the acardiac one by means of direct anastomosis between the arteries and veins of the two foetuses at the junction of the umbilical cord with the placenta. Appended to this communication by Sir Astley Cooper was a declaration by Brodie acquiescing in Young's statement, accepting Cooper's explanation, and correcting the mistake which he had himself previously made in supposing the circulation in the acardiac foetus to be independent of the heart.

The above facts are those (if I read it aright) concerning this question of the independence of the circulation, which have been elicited by the discussion between Dr. Johnson and his reviewer. Taking an interest in the subject, and being led by the discussion to follow it out to some extent, I found that other facts also exist connected with it, which should not be lost sight of, and which, as I before said, have been brought forward by those engaged in the subject in past years. Of these, I propose to give a short summary, by way of adding something towards the interest and completion of the discussion.

In the first place, I would allude to a paper on *Acephalous Foetuses*^{*} in the first volume of the *Guy's Hospital Reports*, 1836, p. 218, by Dr. Hodgkin. This was, in fact, a letter to Sir A. Cooper, and contains the history and description of several monstrous productions, and also an abstract of what had hitherto been written on the subject by English and foreign writers, including Brodie's case before alluded to. In this paper, Hodgkin specially dwells on "the mode of circulation through the bodies". He refers to the fact, previously alluded to by Breschet, that in almost all cases of acephalous foetuses the heart has been wanting; and he observes that, in a large majority of cases, the acephalous foetus has been accompanied by one or more perfect children—stating that the "inquiry immediately presents itself, how far the circulation in the monster was connected with that of the perfect child, and depended upon it;" and to this idea, started by Young, he had alluded in his Thesis in 1823.† He refers to the fact that Dr. John Clarke (and quotes the case) was the only author who had previously demonstrated the vascular connexion of the two placentæ. (See *Phil. Trans.*, 1793, p. 154, "A Description of an Extraordinary Production of Human Generation.")‡ He then notices the views held by various authors as to the maintenance of the circulation in the foetus in the absence of a heart, observing that Mery and Lecat referred it to the direct impulse of the mother's heart; that Ponjol and Winslow concluded there was no circulation—the first thinking he found no other vessels than veins both in the foetus and umbilical cord, whilst the latter found only arteries. Monro and Tiedemann both consider that the circulation is maintained by the impulse given to the blood by the vessels themselves, although they do not agree as to the course taken by the blood, Tiedemann considering that the blood is conveyed from placenta to foetus by the umbilical arteries; and in this view Breschet coincides, endeavouring to support it by analogy with the circulation in fishes and mollusca.

Dr. Hodgkin then gives in detail, which it would be too long to recapitulate, the views held by those who have described this kind of malformation, as to the distribution of vessels and the course of the fluids in the foetal mass. Appended to the above paper by Hodgkin is an account of the structures of the placenta and imperfect foetus by Sir A. Cooper,§ which was referred to in the recent controversy in this JOURNAL, and to which I have alluded already. In this account, as before said, Cooper demonstrates the mode of support and circulation of the

^{*} He points out that the term "acephalous" comprehends not only those instances where the head is wanting, but also those in which this and every still more considerable degree of deficiency may be met with.

† This Thesis I have had no opportunity of seeing.

‡ The mother was a patient in the General Lying-in Hospital in Store Street, London.

§ The placenta and foetuses had been sent by Hodgkin to Cooper for examination.

^{*} See Dr. Johnson's article on the Physiology and Pathology of the Circulation in the number of the JOURNAL for May 20th; and correspondence in the numbers for June 3rd and 10th.

second or imperfect foetus, which receives through its own umbilical artery from that of the perfect foetus the current which, after entering the aorta and circulating through arteries and veins, returns by the umbilical vein of the imperfect into that of the perfect foetus. Following the description by Sir A. Cooper is the letter of Sir B. Brodie before referred to, in which he expressed satisfaction with the arguments of Dr. Young. In the same year (1836) was published, in the tenth volume (p. 204) of the *Dublin Journal of Medical Science*, an account which Dr. Houston had given to the Medical Section of the British Association at Bristol of a human foetus without brain, heart, or lungs; with observations on the nature and cause of the circulation in such monsters. In this he refers to a paper which he had previously read before the Surgical Society of Ireland in connexion with the case, and minutely describes the dissection of the specimens; and, after adducing and examining the views of other physiologists on the circulating organs in the monster, such as Tiedemann, Brodie, Breschet, Monro (alluding to the case of Dr. Clarke), he characterises as untenable the view of Astley Cooper that the blood is driven by the heart of the perfect foetus from the vessels of the perfect into those of the imperfect foetus, and back again; and seeks to establish, by arguments drawn from dissection, that the blood passes into the imperfect foetus in a normal way—*i. e.*, by the umbilical vein, and back by the umbilical artery; but that in the foetus itself the arteries and veins change functions, so to say, the circulation being inverted—the blood entering by the veins, and returning by the arteries. He repudiates any supposed influence of the heart of the perfect foetus on the circulation in the imperfect one, and attributes to the placenta an inherent power of drawing in and ejecting again the blood which traverses its vessels; and suggests that, by means of this and like properties in the foetus itself, the circulation may be carried on between them without any other influence whatever. Subsequently Dr. Marshall Hall wrote a paper in the *Edinburgh Monthly Journal*, 1843, in which, adopting Dr. Young's idea, he rebutted at length the conclusions both of Sir A. Cooper and of Dr. Houston. He objected to Cooper's view that the blood is carried from the perfect into the imperfect foetus through the umbilical artery by means of anastomosis between the arteries of the two beings, as constituting an inversion of the order and course of the circulation in the cord; and to Houston's view, as being an inversion of the circulation in the foetus, and because it leaves us without a power to which the circulation of the blood in the imperfect foetus can be referred. As a proof that the action of the heart of one foetus *does* extend to the umbilical cord of a second foetus, Dr. M. Hall quotes a highly interesting case from Lallemand of the birth of twin foetuses. After division of the umbilical cord of the first-born and ligature of the foetal extremity, it was found that from the end connected with the placenta an unusual amount of blood was pumped out in jerks or pulsations—"lancé par saccade". This led to the suspicion that another foetus was in the uterus—as proved, indeed, to be the case.

Dr. Hall asserts that there is no proof whatever of the capillaries possessing any intrinsic power of moving or circulating the blood, but that the influence of the heart may and does extend to and through the capillary vessels; moreover, that the heart's influence in the case of a second perfect foetus extends not only along the cord and through the placental circulation, but through a second series of capillaries in the body of the imperfect foetus, illustrating this extended heart's influence by what occurs in the case of fishes—the blood being distributed first through the capillaries of the lungs, then through capillaries of various organs of the body, and lastly again through those of the portal circulation; also by experiments, which he relates, on the fin of the eel. He observes: "My view of the subject is this. I suppose the heart of the perfect foetus to propel the blood to the imperfect foetus, as Dr. Young suggested; but not immediately from its umbilical artery into that of the other, according to the view of Sir Astley Cooper, but through the capillaries of the placenta into the umbilical vein, and through the umbilical vein and a series of capillaries to the aorta; and not, according to the views of Dr. Houston, in an inverted direction. There may appear to be some difficulty in conceiving how an anastomosis between the umbilical artery of the perfect foetus with that of the imperfect can exist without arresting or impeding the flow of blood towards the placenta in the latter. The fact is to be explained, I believe, on the principle of lateral action. As a stream of air or of water, passing by other air or water, carries with it the adjacent particles of the latter; and as a stream of air or water, passing rapidly along one tube immediately by the orifice of another tube containing a similar fluid, either at rest or flowing with less rapidity in the same direction, draws the fluid from the latter; so the blood propelled with energy along the umbilical artery of the perfect foetus, immediately by a branch anastomosing with that of the imperfect one, will draw by lateral action the blood contained in the latter into its own rapid cur-

rent. The blood in the artery of the imperfect foetus is thus drawn by the blood propelled in that of the perfect foetus towards and into the placenta. This effect will also be proportionate to the greater velocity of the blood propelled by the heart of the perfect foetus. Thus, then, in reality, and on two different principles, the blood is propelled to, and attracted from, the imperfect foetus, by the power and action of the heart of the perfect one, and along the customary channels."

As a rejoinder to the above, it would seem that Dr. Houston read a second communication on the same physiological question before the British Association in August 1843 (*Dublin Journal*, Jan. 1844); and this in its turn was followed by further observations by Dr. M. Hall, in which he again sums up his views as follows. "According to my view of the blood in the acardiac foetus, the blood is propelled by the heart of the perfect foetus through *both* placenta, along *both* umbilical veins, into *both* foetuses, with *equal* velocity. The *difference* between the two cases is observed in the umbilical *arteries*, and in these only; for, whilst the blood is propelled rapidly along that of the perfect foetus by means of the *immediate* action of the heart, it is propelled slowly along that of the acardiac foetus by the action of the same heart, diminished in its energy by having already propelled the blood through the vessels of the placenta, of the cord, and of the foetus, just enumerated. In these arteries, the blood of the perfect foetus comes into contact with that of the acardiac foetus through the medium of anastomosis. At this point, the rapid current of the former attracts the slow current of the latter, by 'lateral action',* precisely in proportion to the degree of the difference of their velocity."

I should say also that Dr. M. Hall alludes to the opinions of Dr. Graves (*System of Clinical Medicine*, 1843, pp. 82, 485) and Dr. Carpenter, both of whom thought the views of Dr. Young and Sir A. Cooper regarding the circulation in the acardiac foetus to be erroneous. Dr. Graves had quoted the acardiac foetal circulation as illustrative of the possibility of derangement of vital action of any part or organ, and the production of congestion and inflammation independently of the action of the heart or of the general circulation—a view opposed by Müller, but entertained by several German physiologists, who attributed to the blood an automatic movement or power of propulsion. He had also, in treating of inflammation and the motor powers which cause and regulate the circulation, etc., dwelt at length on the attracting and propulsive power of the small vessels, strengthening his position by arguments derived from the known action of minute vessels in certain lower animals and in plants, in furthering the movement of fluids; quoting also from a paper written in 1842 by Dr. Holland of Sheffield, on the Forces by which the Blood is circulated in Capillary Vessels. Dr. Carpenter, in his work on *Physiology*, had also accepted and propagated the view that in even the highest animals a capillary power exists, which is sufficiently strong to maintain the circulation by itself when the power of the central organ is diminished.

In Dr. Carpenter's recent edition (1869) of the *Principles of Physiology*, edited by Mr. Power, allusion is made at p. 300 to the paper above quoted, by Dr. Houston, and to the controversy between him and Dr. M. Hall. It is considered that in Dr. Houston's case it seemed impossible for the heart of the twin foetus to have occasioned the movement of blood in the imperfect one; and that some cause present in the latter must have been sufficient for the propulsion of blood through its vessels. It is also thought that Dr. Houston's reply to Dr. M. Hall, above alluded to, was satisfactory.

Such, then, are the additional observations which I find bearing on the discussion of a capillary circulation, so far as it is supported or not by the conditions of circulation in an acardiac foetus. I have ventured to seek a place for them in the pages of the JOURNAL, thinking they would be considered as possessing some interest at the present time.

P.S.—Since writing the above, my attention has been drawn to a communication (which I had overlooked) of Dr. Dickinson to the *Medico-Chirurgical Transactions*, containing a description of a foetus born without heart, brain, or liver. In this, it appears, he concludes to adopt the view suggested by Dr. Young and worked out by Sir A. Cooper, as regards the dependence of the circulation in the acardiac foetus on the heart of the healthy twin, and observes as follows. "The umbilical vein of the healthy child receives a large communicating vessel from the corresponding channel in the cord of the monster. This must be looked upon as a main trunk, which receives branches in two directions—from the placenta on one side, from the cord of the monstrosity on the other. The contrariety only remains until the two streams are mingled in their common channel. The blood passing from the placenta by the venous radicles would be mixed with the blood coming from the monster by its umbilical vein, and both together

* Dr. M. Hall has a small chapter in which he adduces other instances of the influence of this principle of lateral action of the blood-circulation in the economy.

would be conveyed by the communicating vessel into the umbilical vein of the healthy child. A similar explanation would, of course, hold good as regards the arteries."

A propos of foetal circulation, Dr. Stokes, of Dublin, recently mentioned to me that he had tried once to find out what he could hear with the stethoscope on examining the abdomen of a pregnant cat. The cat was within a few days of her bringing forth, and the experiment was made with care and repeated several times. The cat had four, or perhaps five, kittens; but nothing was heard but the well-defined sound of a *single* foetal heart. In answer to my question, whether he had detected twins in the human subject by the stethoscope, Dr. Stokes observed that he had never examined a case of twins or triplets. He remarked, "It is said that twins have been detected by auscultation. I suppose it was by the different intensity of sounds in different portions of the hypogastrium."

THE CLIMATE OF SIDMOUTH, WITH RESULTS OF METEOROLOGICAL OBSERVATIONS

FROM 1865 TO 1870.*

By J. INGLEBY MACKENZIE, M.B. Cantab.,

Physician to the Sidmouth Dispensary; Fellow of the British and Scottish Meteorological Societies.

THE temperature of the body in health, and the deductions to be obtained from variations from the normal temperature in different diseases and in various stages of the same malady, have been an object of research to many of our profession both at home and on the Continent. It does not appear that the profession, as a rule, have made observations on the air of the room in which such temperature has been taken, or of the external atmosphere at the same period—a circumstance which undoubtedly would make a considerable difference in the temperature indicated.

The temperature, the moisture or dryness of the air in which we are existing, must have great influence on our human economy. The depression caused by a "muggy" day; the brightness which is proverbially the concomitant of sunshine, without entering more into detail—a matter of but little difficulty—are ready evidences of this fact. So also the climate in which we live—whether the air be dry or moist, the temperature equable, or extremely cold or hot—ought to be a study equally deserving our attention with the phases of disease which are in no small measure dependent on changes of temperature, etc. The Registrar-General's weekly returns, with which are now published the temperatures, afford most palpable proofs of increase and decrease of disease with the alterations in the temperature of the air.

Having called attention to these points, before I proceed to the subject of this paper—the climate of Sidmouth—I must remark that the public, and I fear sometimes the profession likewise, look rather dubiously on remarks on climate made by a member of our profession, as if it were impossible but they should be, from interested motives, put in too favourable a light. Fortunately, I am enabled to place in juxtaposition, in confirmation of my own observations on the climate of Sidmouth, some observations taken by a most careful observer, not liable to any bias, which coincide entirely with mine; and, in addition to this, I am able to state that the instruments and their positions have been examined and approved by Mr. Glaisher.

The works on climate of Sir J. Clark and Dr. Scoresby Jackson, though most admirable as wholes, cannot but fail of necessity, from the magnitude of the ground they cover, to be sometimes in error. The account of Sidmouth in the former is founded on observations taken one mile out of Sidmouth for a period of less than one year only. The account in the latter is obtained from some other publication. Here let me suggest the publication of a "Dictionary of Climate", with short descriptions written by observers conversant with the localities of which they write, which would doubtless be valuable in time as a work of reference.

Sidmouth lies in the eastern part of Devon, almost centrally in the district bounded by the Axe and Exe. It lies at the centre of the segment of a circle which forms the great bay bounded on the west by Berry Head and on the east by Portland Bill. Its latitude is 50 deg. 43 min. 40 sec. N., longitude 3 deg. 13 min. 3 sec. W. The town of Sidmouth lies in a winding land-locked valley trending downwards towards the sea, bounded on each side by lofty hills 500 feet in altitude, and closed in on the northern side by another range of hills. It is exposed, therefore, to the south only. It is stated, and apparently on

as yet uncontroverted authority, that the bay, at the head of which Sidmouth is situated, was hollowed out by the action of the Gulf Stream, dividing at the Land's End; part passing to the westward; the eastern portion working up and forming the bay. And it has been argued from this hypothesis, that this is one of the reasons for the warm winter-temperature of Sidmouth. Observations on the temperature of the sea have been but rarely taken on this coast; though, by the exertions of Mr. N. Whitley, they have been taken in some parts of Cornwall; and the Scottish Meteorological Society are actively pursuing the same object, not only on the North British coasts, but also in Sweden and Iceland. The general impression is, that the sea is susceptible of less change of temperature than the land; and, if so, we may fairly argue that land lying close to the sea is liable to enjoy a climate more equable than that further distant. And, if the temperature of the adjacent sea be elevated, as suggested in the above hypothesis, doubtless it will affect the neighbouring land. That the climate of Sidmouth was not unknown to previous generations, the fact of its having been the chosen resort of H.R.H. the late Duke of Kent, and that it was here some of Her Majesty the Queen's earliest days were spent, is sufficient evidence.

The points to be observed in the climate of Sidmouth are: *a.* The equability of its temperature; *b.* Its comparative dryness—though possessing a moist atmosphere—in relation to the other parts of the county; *c.* The rapidity with which the soil dries after rain, thereby rendering exercise available for the invalid on almost every day in the year.

a. The Equability of its Temperature.—The avoidance of the extreme of heat or cold is what is generally understood by equability of temperature, or, in other words, where the difference between the highest reading of the thermometer and the lowest is smallest in the day, month, or year.

The average daily range of temperature during the years 1865-1870 inclusive was only 13.4 deg.; that of the summer months being 15.1 deg.; of the winter, 11.8 deg. In the years 1856-1863 (omitting 1862), the same averages (by Mr. Heineken's observation) were severally of mean daily range, for seven years, 9.8 deg.: summer months, 11.1 deg.; winter months, 8.2 deg. Hence during the winter months the temperature does not vary above from 8.2 to 11.8 deg., or in the summer from 11.1 to 15.1 deg., during the twenty-four hours.

The extent of the variation of the thermometer in each month in the year, between the extreme highest and extreme lowest, is only 30.6 deg.

The coldest days in 1870 were the 23rd, 24th, 25th, and 31st days of December. In a list of fifty-one places given by Mr. Glaisher in his Quarterly Report, on which the temperature was specially observed, it was found to be as low as 1 deg. at Taunton (that is, thirty-one degrees below freezing-point); 9.8 deg. at Greenwich (or twenty-two degrees below that point). The thermometer at Sidmouth never indicated a lower temperature than 19.4 deg., or twelve degrees below freezing-point, being ten degrees warmer than Greenwich, and eighteen warmer than Taunton.

The extreme range in the course of the year, during the six years (1865-70) to which reference has been made, is 55.6 deg.; that is, calculating the extreme from the hottest day in summer to the coldest day in winter during the whole of that period.

In proof of the equability of the climate, I have drawn up a table giving in columns the mean temperatures respectively of Sidmouth and Greenwich in each month during these years, showing thereby that, though the annual mean temperatures do not vary by more than half a degree, the temperature in each winter month at Sidmouth is warmer than that of London by from one to four degrees nearly; and, on the other hand, the temperatures of the summer months are proportionally cooler. The same has been proved above in reference to the extreme of cold, and might be also of the extreme of heat.

b. Its Comparative Dryness.—Devonshire is supposed to be, or has the credit of being, one of the wettest counties in England. According to an average for the year 1869, calculated by Mr. Pengelly of Torquay from the data in Symons' *Rainfall*, and published in the *Transactions* of the Devonshire Association for the Advancement of Science, it stands only seventeenth in degree of wetness or quantity of rainfall (or sixteen counties were wetter than Devonshire in 1869). The same gentleman, in another part of his paper, states: "During four years, Prince's Town was the wettest station in the county, and Sidmouth and St. George's Clyst the driest." Again: "The mean daily rate of rainfall on wet days during the four years (referred to) was .41 inch at Sheepstor, where it was greatest, and .18 inch at Sidmouth and Broadhembury, where it was least." From the same table it may be gathered that, of forty-two rain-gauge stations in Devonshire in 1869, the quantity of rain which was registered at Sidmouth was less than at any other station, with one exception, in Devonshire, the mean an-

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August, 1871.

nual rainfall for four years being the lowest in Devonshire, St. George's Clyst having the same average.

I append a table of my own rainfall observations for six years, giving the quantity of rainfall and the number of rainy days in each month during that period, the result of which tallies exactly with Mr. Pengelly's, giving an annual rainfall of 31.68 inches, one hundred and seventy rainy days, and a fall of .18 inch on each rainy day.

Closely following the subject of rainfall is that of the relative humidity of the climate. Dr. Parkes states (*Practical Hygiene*, 3rd edition, p. 465) that "the most agreeable amount of humidity is between 70 and 80, saturation = 100. In chronic lung-diseases, however, a very moist air tends to allay cough. The evaporation from the lungs produced by a dry atmosphere appears to irritate them. Warmth and great humidity are borne as a whole better than cold and great humidity."

The great desideratum in a climate to suit persons suffering from phthisis is a moist atmosphere of a certain character—i.e., not too moist, for that is depressing and relaxing; nor too dry, for that is irritating to the mucous membrane of the air-passages; but, as near as possible, a mean betwixt these two extremes.

It appears from observations taken that the mean relative humidity for six years is 81; the mean relative humidity of the winter months, 82; of the summer months, 78. I cannot conclude this part of the subject better than by quoting from Dr. Shapter's work on the *Climate of South Devon*, 2nd edit., p. 128.

"From its size and climate, Sidmouth affords an agreeable residence to persons who have lived long in warm latitudes; it is well adapted to those labouring under affections of the liver, and during the autumn, winter, and spring seasons, for the consumptive invalid; it is probable that during the spring months it is the best place on the coast for those liable to pulmonary complaints. It has been asserted that Sidmouth is peculiarly injurious to persons labouring under menorrhagia. The experience of the local practitioners does not bear out this opinion; on the contrary, they deem it beneficial in those cases, as well as in dysmenorrhoea. It is also serviceable in cases where undue wear and tear of mind is followed by mental depression and nervous irritability. Calculus and typhus are unknown, and it is remarkably free from epidemics." These remarks of Dr. Shapter need not be taken even *cum grano salis*, which might be the case were they written by a local physician, though, in an experience of eleven years, I can confirm them in their entirety. That the climate is relaxing I strongly deny. I am quite ignorant of epidemics existing; and as to the palliative effect of the climate in phthisical cases, I could (would time permit) produce notes of numerous instances in which, if the malady were not cured by the climate, it lay dormant in some cases as long as twelve to fourteen years. To my mind, the mistake committed by many practitioners in sending their phthisical cases to warm climates is the sending them *too late*; it is in the stage of phthisical cachexia, before the mischief has developed itself too prominently by physical signs, that these climates are of use, not in the later stages, when the patient is only sent off to pass the last few days, or perhaps weeks, of his life at a distance from his home, his friends, and connections. And here there is the advantage of an English residence over a foreign one; it is more within reach of home; the houses are built to exclude cold, not (as I know to my cost in the so-called sunny south) built so as to be cool in the summer; it is within a few hours of anxious friends; it entails no sea-voyage; it has no temptations to sight-seeing; a cozy English fireside is obtainable, and there is hardly a degree of difference in the temperature. I have received letters from Nice when the snow has been reported as lying there, whilst consumptive invalids have been sunning themselves on the beach at Sidmouth. I fear I shall be accused of approaching the realms of poetry and romance, but I am prepared with data on which to ground my statements.

c. *The Rapidity with which the Soil dries after Rain.*—The town itself is built on a diluvial deposit of gravel overlying the red sandstone. To the geologist, the different strata rising up from the sea to the layer of flints on the summit of the hills afford an interesting study; the soil is of a porous character, dries most readily, so much so that in ten minutes after the heaviest rains, the esplanade, a raised walk facing the sea, is available for pedestrians.

I trust I have in some measure proved the facts with which I started. I might have added tables on the direction of the winds, showing the greater prevalence of winds from the seaward points of the compass, giving warmer feeling to the air in winter and a cooler one in summer; or referred to the quantity of ozone in the atmosphere, especially with sea-borne winds; the quality of the water; the lowness of the rate of mortality; the absence of phthisis and asthma amongst the natives of the locality; the entire freedom from epidemics; but I refrain, having already exceeded my limits.

I can only repeat that, I trust my statements may be taken not as a local matter, but as a mite thrown into the treasury of the British Medical Association on the score of the meteorology of Sidmouth.

The Tables referred to were too voluminous for insertion.

CLINICAL OBSERVATIONS ON THE DIAGNOSIS OF THE GENERAL PARALYSIS OF THE INSANE.*

By JOHN HITCHMAN, M.D.,

Superintendent-Physician of the Derby County Asylum.

GENTLEMEN,—It was not from the feeling that I should be able to convey any additional knowledge on the subject of "general paralysis" (or, as it has been named by an able Dutch physician, Dr. Salmon, "general paresis") of the insane, to gentlemen whose attention in practice has been especially directed to this malady, or to those who have made themselves acquainted with the writings of Calmeil, of Rodriguez, Baillarger, Meschede, Conolly, Griesinger, and others, on this grave disease, that I yielded to the solicitation of your Secretary, and consented to make some remarks on this subject, but because, as a matter of fact, I have often found, in consultation with the busy general practitioner, that he is less familiar with this disease than with others, and that a prognosis has often been given which would have been withheld had the true nature of the disease been understood.

It occurred to me that, without entering into a minute description of all the characteristics of the malady, which would occupy too large an amount of your time—without pretending to reveal what had been hid from other observers in this special path of practice, or attempting to evolve a new theory upon an obscure disease, but by simply illustrating the more prominent and diagnostic symptoms of the affection in the persons of two or three patients, I might occupy profitably a few minutes of this meeting. As I have previously stated, the malady has not received much of the attention of the general practitioner; and the aspect of the patient in the early stages of the disease is often so hopeful—the appetite, the sleep, the general appearance of the patient are often so good, and the body so well nourished, that, within my frequent observation, the medical attendant has held out to the patient's friends the most sanguine expectations of recovery; while to the experienced eye, the sufferer has evidently been smitten with an incurable disease—i.e., incurable as far as our present knowledge extends; not more hopeless, indeed, is acute miliary tuberculosis, than is the general paresis, or paralysis, of the insane.

The late Dr. Conolly, in his lectures on this malady before the College of Physicians in 1849, said: "It is extraordinary that scarcely a trace, if even a trace, of a description of a paralysis so distinct and peculiar in its character should be found until we come to the writings of physicians yet living." Delacy in 1822, and Calmeil in 1826, appear to have been the first to give us a full and lucid description of this malady. It appears to have been more frequent in France than in this country. It is said to be exceedingly rare in Italy. Guislain informs us that it is seldom observed in an asylum at Aversa containing three hundred and sixty beds, although intemperance is a frequent cause of insanity in that region; and he found no example in an asylum at Genoa containing two hundred and seventy beds. It has, I believe, increased considerably in this country; increased with the increasing wealth, luxury, social ambition, and display of the present time, although not unknown in a remote age. There are some who recognise the portrait of this malady in the description by Ulysses, as given by the illustrious Shakespeare in the play of *Troilus and Cressida* (Act 2nd, Scene 3rd):—

"Things small as nothing, for request's sake only.
He makes important; possessed he is with greatness
And speaks not to himself, but with a pride
That quarrels at self-breath; imagin'd worth
Holds in his blood such hot and swol'n discourse,
That 'twixt his mental and his active parts,
Kingdom'd Achilles in commotion rages,
And batters down himself! What should I say?
He is so plaguy proud, that the death-tokens of it
Cry—No recovery."

"Possessed he is with greatness", certainly reminds one of the disease; and the cry "No recovery" is a striking sentence. The whole condition constitutes a good seed-bed for the development of general paralysis; but the portrait is incomplete, for there is wanting the physical disorder which, in association with swollen and exaggerated ideas of personal

* Delivered at the Annual Meeting of the Midland Branch.

grandeur and importance, is characteristic and pathognomonic of the malady. There is insensate pride blended with stubbornness and anger in Achilles; yet this is not the disease; for the patients suffering from general paralysis are, as a rule, pleased and exultant in the sense of their greatness, their grandeur, or wealth, and they speak with smiling satisfaction, rather than "rage with commotion." The description of the poet indicates the kind of man who is likely to fall a victim to the disease; but it refers not to the general muscular debility, to the slow, pausing, confused hesitation of speech, which, in association with exalted ideas, as before stated, is the diagnostic criterion of the general paralysis of the insane.

The malady occurs very seldom in early adult life. It becomes more frequent after the age of thirty years; and my experience would cause me to specify the period of from forty to forty-five years of age, as that in which the malady most frequently develops itself. It affects all classes, like death itself—

"Æquo pulsat pede
Pauperum tabernas, regumque turres":

but, in the upper classes of society, it affects the male sex almost exclusively. In thirty years, I have never seen a lady suffering from this disease; and my friends, Drs. Conolly and Stilwell, both of whom were largely engaged in private lunacy practice, informed me, in 1848, that they had never met with one. Among the female poor, and the lower middle classes of society, such cases are occasionally brought under notice. Men of a sanguine temperament, with energetic circulation and quick sensibilities, are especially liable to this formidable affliction. The causes, or alleged causes, are numerous, as in other diseases; but to give these influences force, there is generally some special individual bias. The most energetic agencies in the production of the disease in the more opulent classes of society are, I believe, intense and prolonged mental activity, carried on under emotional excitement; sexual excesses; and especially if, under either of these circumstances, large quantities of wine and alcoholic stimulants be resorted to; among the working classes, heavy and prolonged labour, sustained by large quantities of ale or spirits, rather than by nutritious food and a due quantity of sleep. Dr. Maudsley, in his very able and graphic treatise on Insanity, published in Reynolds's *System of Medicine*, alleges that the two most marked cases of general paralysis he had ever seen occurred in "teetotalers", but in whom there was reason to suppose there had been, although marital, excessive and enervating sexual indulgences. So difficult is it to fulfil the apostolic precept to "be temperate in all things"; so very easy is it to adopt the Hudibrastic philosophy, and

"To compound for sins you are inclined to,
By damning those you have no mind to."

Dr. Conolly doubted the acting force of sexual excess in producing this malady, because he had so frequently met with this disease in "respectable married life." This good physician erred in overlooking the uxorious amative tendencies of some men; and his refined and sensitive nature caused him to shrink from inquiries in relation thereto. Subsequent research has shown that this fault or error is among the most frequent of the antecedents of the disease.

Men with large and active brains, strong hearts, great self-esteem, carrying on ambitious projects without available capital at all proportionate to their speculations, and, therefore, subject to frequent emotional excitement as to how claims may be met or staved off, frequently fall victims to general paralysis; as do, indeed, also more pure and gentle minds discharging prolonged duties under too acute a sense of responsibility, or who have been exposed to a great and sudden shock of the feelings by the unexpected death of a much loved wife or child, or from some such causes. High designs dashed suddenly to the ground, severe fatigue sustained by alcoholic stimulants, rather than by

"Tired Nature's sweet restorer,
Balmy sleep",

are frequent excitants, as illustrated by the number of cases which occurred among the soldiers in the Grand Army of Napoleon during the disastrous retreat from Moscow.

The phenomena of the disease are difficult to describe, but easy to detect. The guiding indication is to be found in the voice, and in the muscles of the tongue, lips, and face, which minister to this function. The tongue claims our especial and primary attention, as it is the first external bodily organ to exhibit the presence of the disease. Whenever the patient is excited from any cause, the tongue fails to execute the function of speech with its accustomed clearness and accuracy: it is not, at first, a stammer, but a pause—slight and transient, but still an obvious pause, as if the person were thinking of the word as he uttered it; and this faint pause is followed by a thick-muffled tone of speech, resembling that of an inebriated person; and an attempt at speech is occasionally preceded by a quivering movement about the mouth, lips, and adjoining facial muscles—a movement analogous to that which may be ob-

served when a person is struggling under strong emotion not to weep, or is about to weep. It is not a stammering or repetition of the syllables of words, but a lingering pause, and is more especially observable when the patient speaks words possessing a considerable number of consonants. In the very incipient stage of the disease, especially in the morning, or after meals, the patient may speak many sentences without the peculiarity being distinguished, save by one familiarised with the disease through all its stages, from the first faint flickering pause and muffled accent of speech to the last stage, when the poor sufferer can utter monosyllables only, or sounds of an altogether inarticulate character. In very rare cases this special characteristic voice is unassociated with ideas of personal grandeur, wealth, and power, and is accompanied by a somewhat melancholic expression of face, although, as a rule, on being questioned, the patient will assure you that "he is quite well", or "quite happy", or "all right": this state sometimes alternates with more exultant moods. It will generally be found that such patients inherit a strong bias to mental derangement. The case of T. G. before you illustrates clearly the diagnostic speech of general paresis, the absence of exaggerated ideas, and the presence of a special hereditary predisposition to insanity. His mother was of weak intellect, and was always in anxiety owing to the vices and caprices of her husband, who drank to excess, and died of pulmonary consumption. The grandfather, the uncle, and sister, of this patient were mentally deranged, and died in lunatic asylums. He has at various times received severe injuries about the head and face. He has still a scar above the left orbit produced by a fall from a horse; and he has lost the left eye by a blow from the lash of a whip. He has drunk to excess in past years; and, indeed, for so long as he had the pecuniary means of doing it. He has been insane seven or eight weeks. He first announced himself as "well off (though a pauper), had money in the bank, and was about to build". He burnt clothes to make up a fire; threatened violence to his own and other children; and his memory is greatly impaired. The exaggerated idea of his wealth has passed away, and he is now simply imbecile. His voice is very characteristic—more marked, indeed, than is usual in the early stages of the disease—and, therefore, I thought it more instructive and demonstrative of the special sign, which, in association with certain mental characteristics, is pathognomonic of a cerebral lesion of the gravest kind. This pause in speech develops itself early, and will always display itself if the patient be angered or excited from any cause: when he shows his tongue there will commonly be found a fibrillous tremor through the entire organ, or it will be protruded with a succession of quivering jerks. It is not, you will observe, drawn to one side, as in hemiplegia, but pushed forward in an agitated way, somewhat resembling the mode in which the fang of a reptile is displayed. As the disease advances the tongue cannot be kept in a protruded state, and in the last stages of the malady is often incapable of protrusion. The malady in T. G. has made rapid and unusual progress, as might be expected in a man who has been exposed to the malignant influences which appertain to hereditary transmission; to a (probably) drunken procreative act; to gestation in the womb of a mother agitated by a thousand fears; to poor and irregular nutrition in infancy; to defective intellectual training; and the daily example of drunkenness or depravity in his father, together with all the evils which appertain to mechanical blows about the head and organ of vision; and last, although not least, to intemperance on his own part. You will remember that the stolidity, or rather dulness, of T. G. is exceptional; that he appears before you as a strong example of the physical lingual characteristics—and, I might add, of the locomotion in this disease—but also as an example of those exceptions which crop up from time to time and destroy the symmetry and mar the dogmatic beauty of systemic treatises on disease. When the slow, pausing, lingering, slightly mumbled, voice to which you have been listening in T. G. is heard in association with insane ideas of a very exalted character—such as boundless wealth, thousands of acres of land, millions of gold; or with great pretensions to business; with ardent speculations; with busy restless action; with inflated ideas of personal importance, whether as to titles, position, and the like—then, in the startling language of Griesinger, your patient "may with almost absolute certainty be considered as lost". He may, under good treatment, survive two, or even three or more years; for on June 1st last I saw a gentleman who had been thus afflicted for four years and upwards, and who was then capable of walking considerable distances; but, as a rule, the patient sinks long before this into the most abject state of corporeal helplessness: the bladder and the rectum pour out their contents unheeded, and the sufferer is wholly dependent on others for the conveyance of food to his mouth, and for every other thing which requires muscular power directed by intelligent will. But I am forestalling, and by so doing am defeating the object of my observations—namely, to enable you to recognise this malady in its early stage, and thus to escape an error in prognosis, calculated to

cause intense disappointment to friends, and unjust suspicion of defective or wrong treatment on the part of those to whose medical care the patient may be confided.

It is impossible to describe the tones of a voice in words; it is almost as difficult to define the length of a pause, or give an idea of the amount of slowness in the flow of words, which would constitute a morbid sign; but in T. G. you have had the characteristic utterance in a clear and unmistakable and highly developed form, which may, perhaps, enable you to detect the disease in its more subtle and slighter manifestations. A very distinguished observer (Dr. Meschede) has said "that general paralysis constantly exists, and is evidenced beyond any doubt by the mental symptoms, without any perceptible defect of articulation or other lesion of motility". Now, this is true only in an ideal sense. It is as if you said it is impossible to have acute military tuberculosis without tubercles, or epilepsy without convulsions. The mind may conceive the existence of disease in such a nascent state and recognise the distinction, but it is not demonstrative; and, practically, neither disease can be affirmed to exist until its respective phenomena are displayed. I have stated already that in early morning and after meals, and, I might have added, for long periods of time, these lesions of motility sometimes disappear; but until they are evidenced the conscientious practitioner will refrain from giving a diagnosis. I introduce to you J. S. as a patient who has displayed them, but in whom they are now faint, but still to be distinguished by a careful and prolonged examination. General paralysis, or paresis, like other diseases, has its varying degrees of intensity and its shades of expression. The perfect case—the *chef d'œuvre* of this pathology—has all these previously described lesions of lingual motility, associated with the most exalted ideas of grandeur and power; but there are others, whose career is equally rapid towards death, which possess them in a more modified form. J. S. is one of these: contentment, self-satisfaction, placidity, a pleasing sense that everything is as it should be, take the place of the more exultant and grand notions; and the muscular tremor and vocal indistinctness are now, so to speak, microscopic, but still existent, and to be appreciated by careful examination, if not at one period, certainly at another, if carefully watched for. When I first saw him he boasted of his great age; alleged he "was 80 years old (he was 38)—older than his parents; had great wealth; and no one could do the work he did". At that time his voice was more indistinct than now, and the tongue and labial muscles were tremulous and jerking. It is an instructive case. He is the type or representative of those whose physical appearance, whose well-nourished systems, had deceived and misled their medical attendants in the cases to which I referred at the commencement of my remarks; and really, as he stood unquestioned before you, who would have suspected that he was the victim of a mortal malady! His bright eye, his ruddy cheek, his well-nourished body; his strong, burly, athletic look; and his countenance, radiant with smiles, suggested the healthy peasant rather than the invalid; and yet a minute examination revealed a group of morbid symptoms. During the past three weeks his pulse has been quick; once it has been as low as 72, and twice at 74; but on the 5th instant it was at 96, and these pulsations were registered at the same hour on each day. It has ranged from the above lower numbers to this the highest, the average for the time mentioned being about $84\frac{3}{10}$ per minute. His temperature has fluctuated considerably; but on the whole it has been rather above than under the mean normal standard, occasionally reaching 99.5 deg. Fahrenheit in the axilla; on the 23rd of May it was 99.8 deg., and on the 1st June 99.2; and these oscillations intimate, I think, the varying degrees of fulness of the capillary blood-vessels of the cortical substance of the brain, leading by their increasingly hypertrophied condition to the destruction of the nerve-tubes and cells of that structure.

In most cases of general paresis there is an increase of temperature as the disease advances to its fatal issue. One of the most marked cases of this disease which I have had under treatment during the past year died on the 24th May last; and in his there were in the last stages a very rapid pulse and a very high temperature, the former rising during the last week of life from 100 to 135 per minute, and the temperature in the axilla ranging from 98 to 103 deg., the latter being at 10 A.M.; on the five last days of his existence 101.4, 101.4, 101.2, 102.5, 103 deg. respectively.

I am indebted to Dr. Mickle, the assistant medical officer of the Derby County Asylum, for the thermometrical registrations, which have been taken by him twice daily with extreme accuracy in these and analogous cases. So long ago as 1839, Dr. John Davy pointed out the value of thermometrical observations in detecting latent pulmonary disease in the insane; and, from the knowledge derived from his papers, I was frequently in the habit of demonstrating to the clinical classes at Hanwell, in 1847-48, the elevation of temperature in adynamic forms of pulmonary tubercular disease—a disease often so masked by the cerebral disorder as to be latent from notice, until its presence was sus-

pected and looked for from the indications of the thermometer, there being no cough and no expectoration to excite attention. This instrument, by the researches of Wunderlich, and the experiments of Brown-Séquard and of Mr. Hutchinson on the temperature of parts after the section of nerves, promises to be of great diagnostic value in cerebral diseases, and is now extensively used in our best lunatic hospitals.

To revert to J. S.: he was pleased to speak of his excellent health; of his increase in weight; of the personal charms of his wife; his ideas on this subject resembling those tribes who regard obesity and size as the chief elements in beauty; and when he was speaking of these matters, you might have observed frequent twitchings in the orbicularis and other muscles near the mouth; and when uttering the words "pud-ding", "cowslip's wine", "stones-weight", and several others, there was the pause, or special voice-sound, in its incipient development, which was so marked a feature in the verbal utterances of T. G. His legs have not yet lost their co-ordinating power; but in T. G., you observed that the walk had become unsteady, the limbs were moved with apparent effort, and that decadence of power had commenced which will progress; the feet will be thrown out wider in the step; he will soon stagger in his gait, and retain his balance with such difficulty that, if called upon suddenly to turn round, he would fall. As the disease progresses, the ears participate in the general debility, and the head is very early incapacitated from movements requiring quick and complex movements of the muscles, as in writing or other such acts. A time comes when the patient is unable to walk: but this condition, as a rule, is not arrived at until after many months. The muscles do not waste as in ordinary paralysis; and this affection differs from paraplegia or hemiplegia in this particular, that, while these affections may remain, as it were, in *statu quo*, through long periods of time, there is in general paresis an irregular progressive diminution of power; it is irregularly progressive; yet, dating from month to month, the controlling power becomes less and less, and the strength sensibly diminished. Some observers think that the arm is affected at as early a stage as the lower extremities; but that the paralysis is more conspicuous in these, from the power required to sustain the weight of the body. After treating scores of cases, I am unable to acquiesce in this statement. Within a time, various in each individual, the muscular debility involves the whole system, accelerated much by epileptiform seizures, which occur at irregular intervals as the disease advances; deglutition even becomes difficult, and the patient runs great risk of choking; the power over the sphincters of the bladder and rectum is gone; bed-sores, despite of water-beds and every possible care, set in, and for weeks and months (unless apoplexy supervene) the patient lies a helpless, mindless, inarticulate being, and continues thus until death closes the piteous scene.

The only diseases with which general paralysis is likely to be confounded are locomotor ataxy and alcoholismus. Locomotor ataxy occurs at about the same period of life, and, like general paralysis, it is more frequent in males than in females; as in it the sufferers are often descended from insane parents, and the gait in each is deeply affected; yet, the ataxy is distinguished from general paralysis by the *absence* of mental alienation, and by the *presence* of lancinating evanescent neuralgic pains which precede or usher in ataxy; by the greater deficiency of co-ordinating power in the muscular movements, the arms of the ataxic patient being commonly thrown about to preserve the balance of the body in a far more marked and oscillating manner than is seen in cases of general paralysis; by the greater capacity to endure fatigue, and especially by the muscular power manifested by the ataxic patient when in bed, or so supported that individual limbs may act apart from that consentaneousness of action which is necessary to sustain the body erect while walking; in short, it is sharply defined from general paralysis by the absence of mental alienation, and the presence of neuralgic pains in its earlier stages.

In alcoholismus you have many symptoms in common, but the antecedent history, the odour of the breath, and the muscular tremulousness preceding for a considerable time the mental aberrations, will guide you to a safe diagnosis. It is well, however, to remember that alcoholismus sometimes leads to general paresis.

I stated at the commencement of my remarks, that it was not my intention to give a full portrait of the disease; to describe all the phenomena of its progress; to detail its treatment; or to elucidate its pathology; but simply to illustrate by living examples the special diagnostic marks which in the earlier stages will reveal to you a disease for which no remedy is known. My tale is told. It is a sad history; but, happily, through all the earlier stages, the patient is usually cheerful and serene; indeed, in no stage does he manifest a sense of suffering, and so long as he can articulate words at all, he speaks joyously, and, to use the graphic language of Conolly, "Of all fatal maladies it seems to be attended generally with the least sense of distress". Immediate sacrifices consequent on the cessation of all exertion are disre-

garded; increasing infirmities are forgotten or unheeded; utter helplessness ensues without the consciousness of it; and the mind, with interruptions of fitfulness, is usually lively and hopeful, and even joyous. To the exalted imagination of the patients their prospects are best; their wives are the handsomest; their affairs settled in the most satisfactory manner. Their health, they thank God, is restored; their accomplishments, they do not affect to conceal from you, are boundless. With faltering speech they declare that no public singer can rival them, and when they can no longer rise from a chair, or walk without help, they express an ambition to engage in athletic competitions, to run in a race, or fight in a ring, and thus sometimes, even to the last, or as long as speech remains, they are like happy children.

"Gay Hope still theirs by Fancy led."

OBSTETRIC MEMORANDA.

VERY EARLY PREGNANCY.

ELIZ. G., born in June 1857, was attended by me in the end of July 1869 for symptoms which were by her attributed to dyspepsia, and by her mother to the approach of the period of puberty. She suffered from morning sickness; her breasts were full, with dark coloured areolæ; and her abdomen was considerably enlarged, without any evidence of fluctuation. Although I failed to detect the foetal heart, I gave a presumptive diagnosis of pregnancy, which was incredulously received alike by the patient and by her mother. On January 10th, 1870, she again came under observation as the mother of a fine healthy-looking child, to which she gave birth on December 18th, 1869. Conception must have taken place in the previous March, when she wanted three and a half months of being twelve years of age. The mother was an epileptic, and six of her children had been subject to epileptiform attacks in childhood; but, with the exception of this girl, they had all "grown out of the fits". She was still occasionally subject to what were described as "nervous fits", and appeared to be of rather weakly intellect. She had never menstruated, and had no recollection as to when she began the intimacy which resulted in her precocious maternity and her paramour's introduction to the hard-labour department in the city gaol.

In this patient, conception occurred at an unusually early age for this country, where, so far as I am aware, the earliest case of delivery is that recorded by Mr. Robertson of Manchester as having occurred at the age of eleven. Probably one of the earliest authenticated cases of pregnancy is that reported by Dr. Curtis in the *Boston Medical and Surgical Journal* for 1863, the subject having given birth to a child at the age of ten years and eight months.

Chester, 1871.

WILLIAM HAINING, M.D.

MULTILOCULAR OVARIAN CYST: OVARIOTOMY: RECOVERY.

E. W., aged 33, married, had two children, the youngest 4 years old. She had never been pregnant since. Her labours and recoveries had been good. She had always enjoyed good health until May 1870, when she felt an enlargement in the left iliac fossa, unaccompanied by any pain; this gradually increased until it occupied the whole abdomen. When I first saw her, in March 1871, the swelling was very irregular, movable, and fluctuating in parts. Examination *per vaginam* showed that the uterus was drawn up, the os being almost out of reach of the finger; and a large mass was felt in the recto-vaginal pouch, pressing upon the rectum. Menstruation before the commencement of her illness had always been regular; but since that time had been constant, though scanty. Her motions were flattened, and were passed with considerable difficulty. During April and May, 1871, she was constantly troubled with violent attacks of vomiting, lasting sometimes for several days, and she was becoming very reduced and weak. On May 20th, the patient being under the influence of chloroform, the usual incision was made from the umbilicus to near the pubes, and the several structures were divided until the tumour was exposed. Several cysts were now tapped, but only a small quantity of fluid (not more than a few ounces) escaped. The incision was enlarged upwards for two inches, and several more cysts were tapped, but still the mass could not be removed. The incision had to be enlarged still more upwards, and then two larger cysts came into view; after these had been tapped, the mass was drawn forwards, and the pedicle (which was a long one) secured with whipcord well soaked in carbolic oil (1 to 5) and divided. The pedicle was secured lower down, cut off, and returned into the abdominal cavity, with a single whipcord ligature, both ends of which were

cut short off. A considerable quantity of blood and fluid was sponged out of the abdominal cavity, the omentum was drawn down and spread carefully over the intestines, and the wound brought together with six harelip pins. Carbolic oil of the strength mentioned above being applied over all, a broad flannel bandage kept the dressings in place. The only adhesions were a few slight ones to the rim of the pelvis; these were easily broken down with the hand. The patient took very little chloroform, and did not vomit once during the operation, which lasted in all thirty-five minutes. Immediately after the operation I gave her a suppository containing half a grain of morphia. Her pulse was 74, it having rarely been under 100 for two months previously. The tumour was composed of from twenty to twenty-five separate cysts, the contents of some being gelatinous, of others purulent, grumous, straw-coloured, limpid, etc. The mass when removed nearly filled a common wooden bucket.

For the second and third day after the operation, she was much troubled with tympanites, which was relieved by hot fomentations; she took nourishment well from the first, and was never once sick, nor even felt so. The needles were removed on the fifth day, the wound having entirely healed, and without the formation of a drop of pus. She took one grain of solid opium five hours after the operation, and had one-third of a grain of morphia injected into the arm until the tenth day. Catheter was used three times a day for nine days. Her pulse for the first five days ranged from 96 to 120; on the fifth day it suddenly went up to 140, and remained so for two days, after which it gradually fell again. She had at the same time an obstinate attack of diarrhoea, which no doubt accounted for the sudden rise in the pulse. On the tenth day she was carried to a couch to have her bed made, and was able to eat a piece of chicken. In less than three weeks she was able to sit up in bed by herself, and is now fast regaining her health and strength.

WILLIAM G. KEMP, L.R.C.P.Lond., M.R.C.S.Eng., etc.,
Wellington, New Zealand.

CLINICAL MEMORANDA.

CASE OF A CHILD SWALLOWING A LARGE NUMBER OF PLUM-STONES.

ON the evening of October 18th, I was called to see a little girl 2½ years old, who the day previous had swallowed a number of plum-stones. At my visit, I removed from her rectum by the finger 116 of these bodies. Previously to my seeing her she had passed three of them, and four escaped after my visit, making in all 123. The rectum was enormously distended; and there being almost no faecal matter, the sharp edges of the stones caused considerable bleeding and irritation during their removal. The next day the child was quite well.

Middlesbrough, Oct. 21st, 1871.

W. KETCHEN, M.D.

THE DURATION OF VACCINE PROPHYLAXIS.

How long does the prophylactic influence of vaccination extend? The following cases, which have recently occurred in my practice, bear upon the question.

CASE I.—S. J. A., aged 20, five years ago took cow-pox from milking infected cows. She had the eruption in her arms, chin, chest, and back. She showed me a cicatrix on the arm, and one beneath the chin; the latter resembling that produced by vaccination. On August 16th, 1871, I revaccinated this patient in three places, cross-cutting with a lancet. All three were successful.

CASE II.—On Aug. 25th, 1871, I was called to a child aged 5 years and 9 months, who had small-pox. On the arm were three good primary vaccination-marks, the operation having been done in infancy.

CASE III.—On July 20th, 1871, I attended H. G., an adult, suffering from small-pox. He told me he was successfully revaccinated in the early part of 1866. In both these cases the disease was modified.

From these cases I should limit the time of the prophylactic influence of vaccination to five years. In proof that revaccination does really possess a prophylactic power, though the time during which it exerts that power is finite, I may add that, during the present epidemic, I have successfully revaccinated at least 410 persons. Out of this number one only had small-pox subsequently. In this patient I saw the variolous eruption ten days after the operation. I had revaccinated him on account of his having been exposed to small-pox infection, and there can be little doubt that at the time of the operation he was already infected. The disease was modified. My experience as regards the prophylactic influence of revaccination is, I believe, shared by most

of my professional brethren in this town. During the present epidemic, I know of no instance of small-pox occurring in persons who had been successfully revaccinated three weeks before the appearance of the disease.

WILLIAM V. LUSH, M.D. Lond., F.R.C.S. (Exam.)
Weymouth, October, 1871.

NOTE ON EXCISION OF THE TEETH.

THIS operation may be practised with great success, provided the necessary precautions be observed. Its more general adoption was formerly much retarded, owing to their being neglected. Previously to 1826 the *modus operandi* was tedious and painful, the saw and file being the instruments made use of; but since that date the operation could be instantaneously performed by means of excision-forceps invented by Mr. Fay. Excision, in appropriate cases, possesses certain advantages over extraction. It admits of the immediate insertion of artificial teeth; and the stumps, retained in their sockets, help to maintain the natural form of the mouth and strength of the arch, and are useful for mastication. The single-fanged teeth are best adapted for the operation. Caries ought not to have extended beyond the body; and the roots and adjoining tissues should be healthy. If the pulp be not withdrawn with the excised portion, it must be subsequently removed, otherwise the fangs will probably ache and periostitis may supervene. I find that the most effectual method of eradicating it is the actual cautery, which gives but momentary pain. A heated platina wire answers the purpose very well, for, being pliable, it may be introduced even to the extremity of considerably curved fangs. A fine unheated drill may be used, but it causes more pain and can only be employed when the fangs are straight. When neither of these plans is applicable, an escharotic should be applied. Sometimes after a few years the fangs start from their sockets, but this does not happen in the majority of cases, and need not be urged as an objection to the operation, for the evil may be speedily remedied by a few passages of the file over the offending stump.

TULLIUS W. W. FAY, M.R.C.S.E., Dental Surgeon to the
Liverpool, October 19th, 1871. Liverpool Dental Hospital.

RUPTURE OF THE LEFT VENTRICLE OF THE HEART.*

THE patient died at the age of 59, after twenty-four hours' severe pain in the chest. The actual time at which the rupture took place was not known; but possibly it was caused by the act of raising the body from the recumbent posture. There was but little history of previous discomfort, save, perhaps, an unwillingness to make much exertion. The body generally was well nourished; the omentum was loaded with fat; the right pleura was adherent throughout. The pericardium contained a large clot and much serum. The heart was somewhat fatty externally; at the anterior part of the ventricle, near the apex, was a discoloured spot, much like an ecchymosis, and in the centre a small rupture a quarter of an inch in length. The surface of the ventricle inside corresponding to the seat of rupture was covered by layers of fibrine something like the interior of an aneurism, as if it were an effort of nature to stop the leak. The walls of the ventricle were almost wholly converted into fat, and tore like blotting-paper. Under the microscope, there were found to be an abundance of fat-cells and great deficiency of muscular fibre. The small opening and the layers of fibrine inside seemed to account for the duration of life after rupture, and thus a somewhat lingering death was the result, instead of the usual sudden death caused by rupture of the heart.

JAMES THOMPSON, M.D., Leamington.

* Read before the Birmingham and Midland Counties Branch.

POISONING BY CANTHARIDES.—The *Repertoire de Pharmacie* for September 1871 quotes from the *Bulletin Médical Militaire* a group of cases of poisoning by cantharides, drunk accidentally in alcoholic tincture. The principal symptoms were painful efforts at defecation and micturition, with expulsion of scanty and sanguinolent urine and red and glairy matters; swelling, heat, and pain of the penis, and tenesmus without erection or venereal desire; pallor, sweat, and expression of anguish, with general injection of the conjunctivæ; heat and sense of constriction of the throat, epigastralgia, and bilious vomiting; cerebral agitation and exaltation of sensibility. The treatment was by emetics, prolonged warm baths, camphorated opiate emulsions, decoctions of linseed, emollient oily enemata, opiate cataplasms. The patients all recovered. Some suffered from albuminuria, incontinence of urine, or even more or less pronounced paraplegia.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

KING'S COLLEGE HOSPITAL.

REMOVAL OF FUNGOID TUMOUR IN THE UPPER ARM: CLINICAL OBSERVATIONS.

By Sir WILLIAM FERGUSSON, Bart.

THE first operating day after the autumn holiday is generally a field-day in the hospitals of the metropolis. On Saturday week, October 14th, we were attracted to King's College Hospital by the announcement of the above case for operation by Sir W. Fergusson, among others of minor interest. The patient, J. M., aged 34, a sickly-looking man, showed great anxiety to have his tumour taken away, and with alacrity leaped on the operating-table. A large fungous mass, of about the size of a cocoa-nut, was situated near the shoulder. The knife was swept around it, and the bulk of it removed; but it required very careful dissection for ten or fifteen minutes to separate its connexion with the biceps and other structures about the joint. After a few arteries of no great magnitude had been tied, and others pinched, the wound was closed, and the patient removed to bed. Sir William Fergusson then made the following remarks.

This is a case, gentlemen, peculiar in a variety of aspects. This patient was born with certain tumours upon him; and at that time he was seen by some of the first men in the profession in England, who all doubted the propriety of interference, because they were uncertain as to the character of the tumours. There was one particularly near the left eye, and another under the clavicle, and both of such magnitude that the patient was looked upon as one not likely to live long. But the child lived to boyhood, and the boy grew up to manhood; and twelve years ago he came under my notice. I decided as to the character of both the tumours; and both were removed with facility, and without subsequent evil. He had then a number of molluscous tumours about him, but these were not meddled with. One of them, on his arm, however, increased so much in size that it was removed five months ago. It was of the size of a walnut. The disease returned in the cicatrix, and has in that brief time—since May last—grown to the size you saw. I had the privilege of seeing him last week, as I took a special interest in the case, and considered that the disease was likely to prove serious. It would have been a pity to have subjected him to amputation of the whole arm, because it was perfectly healthy save this fungoid tumour. It struck me that the tumour might be removed; and I gave that advice, and was prepared to operate. But I was also prepared to amputate if necessary—if the tumour involved the other tissues in the neighbourhood. I had doubt about it, and thought that it certainly did involve the biceps. I could scarcely think that it involved the brachial artery and nerves; if it did, amputation was the only resource. Now, on proceeding with the dissection, it did not give much promise at first; but the biceps muscle I recognised early in the operation, and saw that the tumour was attached to the outer and back part of it, and that I could save a large proportion of the muscle. I cut through its aponeurosis; and then a careful dissection enabled me to take out the larger portion of the tumour. It then became apparent that the deeper part of the tumour was to the outer side of the brachial artery and nerves, and so I proceeded with much more freedom. Looking at the health of the patient, I may say that the prospects are not specially good; but yet there is the arm now without an unsound tissue upon it, and without any structure of importance taken away. Even supposing this to be a malignant tumour, amputation itself would have afforded, perhaps, no better prospect than the partial removal which you have now seen.

MIDDLESEX HOSPITAL.

CASES OF CANCER TREATED BY CONDURANGO.

(Under the care of Mr. HULKE.)

Ulcerated Epithelioma of the Roof of the Mouth.—H. L., sixty-eight years of age, a short, thin, wiry-looking stable man, was admitted into Handel Ward on the 17th August, 1871, with an ulcerated tumour of the roof of the mouth. On admission, the tumour involved the entire left half of the roof of the mouth, implicating the hard palate and velum, and also the right half of the velum, extending in this direction as far as the right anterior faucial pillar. It had a nodular surface, and depended

from the alveolar border of the maxilla in curious wattle-like masses. The centre was irregularly eroded by ulceration. The floor of the ulcer was partially coated with tawny yellowish films, amongst which were nodules of growing tumour, and red clusters of granulations. No enlargement of the neighbouring lymphatic glands was discoverable, and there was no appearance of cachexia. On the contrary, the patient's aspect was that of sound health. The present affection commenced a year ago, as a small warty lump, in the situation of a wound caused by the pipe which he was smoking being driven against the roof of his mouth. The growth had been twice excised in another hospital. On admission, a weak gargle of myrrh, and a liberal diet, were ordered; and, on the 25th August, he began to take five ounces of decoction of condurango night and morning, and continued to do so till September 26th. During this time, the tumour continued to grow, and the ulceration to spread; they now extended into the fauces, and the left cheek bulged outwards. Deglutition became increasingly painful and difficult, and at times he had chokings; during the last fortnight, there had been several small hæmorrhages from the ulcer. He latterly rapidly lost weight and strength, and his expression on September 27th was sallow and cachectic.

Primary Cancer of the Penis, and Secondary Infection of the Lymphatic Glands in both Groins.—J. P., thirty-four years of age, a haggard, pain-worn man, was admitted into Handel Ward on the 15th August, 1871. The end of the penis where the glans had been was an unshapely tuberos mass, partly ulcerated, and partly granulating. A large ulcer reached from near the left anterior superior iliac spine, along the groin across the pubes, measuring seven by two and a half to three inches in its long and short diameters. In its outer half, growth preponderated over ulceration, and its floor was studded with cauliflower buttons and masses of small granulations, while at its pubic end the erosion was so deep that it seemed surprising that the peritoneal cavity was not opened. The edges of this ulcer were very irregular and sinuous, in parts undermined and overhanging, in other parts swollen and everted. Near the outer end of the ulcer were some small outlying buttons. The lymphatic glands in the right groin were enlarged and indurated. The discharge was very profuse, thin, ichorous, and nauseously foetid. No very clear history could be obtained from the patient; he said that the malady began as a wart on the penis. A solution of chloralum was used locally to destroy the horrible fœtor. On the 24th August, he began to take five ounces of decoction of condurango, night and morning, and continued to do so till the 16th September. The growth progressed steadily; the small outlying buttons in the left groin became large cauliflower masses. The ulcer spread largely in area and depth; and on the 16th September, it took on a sloughing action, and the patient died exhausted on the 19th.

Condurango was administered in two other cases; one of these was a case of ulcerated scirrhus in the female breast; the other an ulcerated epithelioma of the scrotum. Owing to the limited supply of the plant, its administration had to be discontinued in these two cases on the fifth day; the results so far were, however, similar to those in which a full trial had been made, the progress and character of the malady remaining unchanged in every way.

LEEDS GENERAL INFIRMARY.

ALTERNATING HEMIPLEGIA: WITH CLINICAL REMARKS.

By J. D. HEATON, M.D., F.R.C.P., Senior Physician to the Infirmary.

SARAH FROST, aged 27, married, was admitted June 22nd, 1871. There was no evidence of rheumatism or syphilis; no previous heart-symptoms nor head-affection, except occasional headache. She had enjoyed good health till three months before admission, when her left eye began to droop, and this increased till she lost all power over the levator palpebræ, the eye being habitually closed. She could see when the lid was raised by the finger; but gradually the sight also of the left eye failed; the right eye remained perfect in all respects. About a month after the commencement of these symptoms she had "a stroke" in the night, so that, on attempting to rise in the morning, besides having severe pain in the head, she found that she had lost the use of the right arm and leg, and she was also aphasic. She kept her bed for a month after this, under medical treatment, gradually recovering power, so that she could then walk feebly, and had partly regained her speech, but the right hand remained paralysed. During the last month she had made very little improvement.

Condition on Admission.—Her general health and appetite were moderately good. She was low-spirited, and cried and laughed hysterically when spoken to. She spoke with some effort and hesitation and indistinctness, being sometimes at a loss for words, but was quite intelligent. The left eye was permanently closed, the levator palpebræ muscle

being paralysed; the pupil was irregular, dilated, and non-contractile; the sense of sight in this eye was reduced to a perception of light and darkness; the eyeball was everted, and had very little motion; the right eye was perfect in all respects. The right side of the face was paralysed, the face being drawn to the left when in motion. The tongue turned to the right when protruded. The right arm was hemiplegic; she could feebly raise the fore-arm from the bed, but had scarcely any movement of the fingers. She had a feeble power in the right leg, so that she could limp across the floor. Tactile sensation was perfect in all parts. The cardiac sounds were normal.

The treatment consisted in the administration of iodide of potassium and faradisation of the affected muscles, which feebly answered to the stimulus of the electric currents. At the expiration of a month she left the Infirmary, by her own desire, without any improvement.

CLINICAL REMARKS.—In this case there are symptoms of disease located in the left hemisphere of the brain; viz., aphasia and right hemiplegia of the parts innervated by spinal nerves; and hemiplegia, also of the right side of the face, which receives its supply from cranial nerves. The facial hemiplegia usually keeps to the same side as that of the body, but not invariably so, for the "cross effect" of cerebral disease, although the constant rule as to parts supplied by spinal nerves, is subject to occasional exceptions (as it is also less explicable) in the face, which is sometimes paralysed on the side of the disease in the brain. Out of 38 cases of paralysis of the face connected with cerebral disease recorded by Burdach, 10 were on the same side as was the disease in the brain; 28 were on the opposite side. In this case, the motor portion of the fifth cerebral nerve and the ninth cerebral nerve on the right side have lost their power. It is not very easy to say whether the portio dura of the seventh nerve is also affected. The branches of this nerve inosculate with the motor branches of the fifth nerve on the side of the face, and probably some interchange of filaments is effected; but, as the orbicularis palpebrarum muscle, which is innervated by the portio dura, retains its power, this nerve is probably unaffected. But, in addition to these customary results of disease in the left hemisphere showing themselves in the right side of the body and face, there is also, in this case, loss of function of parts situated on the left side of the face, being the same side as that in which we conclude the disease of the brain to be located. The left eye is amaurotic; the sensory optic is paralysed, and so is the third nerve, the motor nerve of the eye; the left eyelid cannot be raised, and the ball of the eye has lost its motion; but the sixth cerebral nerve retains its functional activity, so that the external rectus muscle, to which it is distributed, draws the eye permanently outwards, being no longer counterbalanced by the other muscles in the orbit.

Such are the parts at present, and, it is to be feared, permanently, deprived of functional activity by the cerebral lesion. It is to be observed that the first overt symptoms occurred in the left eye, and these are permanent and have become more intense. Subsequently the more customary train of symptoms of left cerebral lesion were developed; viz., aphasia and right hemiplegia of both face and limbs. All these latter symptoms have been ameliorated, but not removed.

Alternating hemiplegia, as it is sometimes called, which is exemplified in this case, is not, I think, of very common occurrence. It might be attributed to coexisting lesions in both hemispheres; but I am inclined to think that in this case all the symptoms are the result of disease in the left hemisphere. The direct effect of such lesion on the left eye is quite anatomically probable; and the aphasia and the cross effect shown in the other symptoms are all in accordance with our every-day experience of the results of such lesion.

The remarkable feature in the case is the combination of direct and cross effects upon the nerves and the organs which they supply. But we know that the intracerebral continuations of several nerves have been anatomically traced into the hemisphere opposite to that of their superficial origin; and the actual intercommunication and connexion of structure and function in the finely tubular tissue of the white substance of the brain doubtless far surpasses anything that the eye of the anatomist can ever demonstrate.

It has been said that alternating hemiplegia occurs as the result of disease in the pons Varolii, and we could well understand how a lesion situated in this great central mass or commissure might distribute its effects to the right hand and to the left; but, in fact, the connection of alternating hemiplegia with disease of the pons is not constant, neither does it seem to be a theoretical necessity.

As to the exact nature of the change of structure in the brain, there is nothing to lead to any positive diagnosis. Embolism of an arterial branch is a not uncommon cause of cerebral disease occurring in persons who have not yet passed the prime of life; but there is no history of any previous cardiac mischief, and the heart's action is at present natural and free from valvular murmur. The symptoms are not those

of chronic meningeal inflammation of the base of the brain, nor would such affection explain the coexisting aphasia. There is no history nor present appearance of constitutional syphilis. Hemiplegia, apart from other apoplectic symptoms, does not often prove fatal in young persons, so that we rarely have the direct evidence afforded by *post mortem* examination of the exact nature of the coexisting lesion in the brain.

The results of treatment are entirely negative. In the absence of any evidence of active disease in the brain, a course of iodide of potassium and faradisation of the paralysed muscles constitute the treatment upon which I should most rely. These measures were practised, without any results, up to the time when our patient voluntarily left the infirmary. Although we have frequently very satisfactory results from the treatment of paralysis of various forms by faradisation, yet many cases prove insusceptible of benefit by this as by other modes of treatment; and the improvement experienced is often attributed to the direct effect of electrical treatment which may have been really due to the *vis medicatrix naturee*.

It may be worthy of note that considerable improvement had been effected in this particular case before her admission to the Infirmary. This we regard as spontaneous, the treatment meanwhile having been merely negative; whereas, had this patient come to the Infirmary soon after her seizure, and been then subjected to galvanism, the subsequent improvement would have been most probably attributed to such treatment.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

LOCOMOTOR ATAXY IN A YOUNG MAN AGED EIGHTEEN YEARS.

(Under the care of Dr. BRADBURY.)

M. C., of no occupation, was admitted May 31st, 1871. He stated that he was eighteen years old, but he did not look more than fourteen; there was no history of syphilis. His illness commenced three years ago with pain and great weakness in the small of his back, these symptoms being aggravated whenever he took cold. Nine months ago, he began to lose control over his legs. His gait was very characteristic of ataxy. If he walked, he staggered as if intoxicated. His legs were thrown out at random, and he brought his heels heavily to the ground. He could not walk when his eyes were closed, without falling on the floor. When he stood upright, with his feet together and his eyes blindfolded, he fell to the ground. There was slight convergent strabismus (which afterwards became more marked), and he complained of a mistiness before his eyes. The pupils were natural, and there was no injection of the conjunctiva. He was rather deaf in the left ear. He complained at times of frontal and occipital headache, and vertigo. He had been sick on five or six different occasions in a morning. He did not complain of numbness in his legs, and had not the sensation of walking on air-bags or sponges. He could feel a prick most distinctly, and could appreciate differences of temperature. The muscles of the legs had not wasted. When he was first admitted, there was some slight loss of power at the left arm, but this has now (October 11th) passed away. Some months ago, he was troubled with pains of short duration, which shot down his legs. They were not severe. There has been no loss of control over the sphincters, with the exception of slight dribbling of urine at one time. There is no spinal curvature. He acknowledges that he has practised masturbation to a great extent since he was nine years old. He is now troubled with spermatorrhoea. The nurse says that a brother who came to see him has a peculiar gait. His legs cannot be flexed or extended against his will. When his eyes are closed, and he is told to touch the tip of his nose with one of his forefingers, he touches his cheeks or the sides of his nose. When the soles of his feet are touched, there are marked reflex movements. There is no impairment of the mental faculties.

In some clinical remarks, Dr. Bradbury said that this case was interesting in several respects. In the first place, it was, in his judgment, an instance of locomotor ataxy occurring in a person under twenty years of age; and he was not aware of more than three such cases having been published. They are recorded by Professor Friedreich of Heidelberg; and the ages of the patients were 15, 16, and 18 respectively (Friedreich, *Ueber Degenerative Atrophie der Spinalen Hinterstränge*; Virchow's *Archiv für Pathologische Anatomie*, Nos. 26 and 27, 1863). The exciting cause of the ataxy was probably excessive onanism; but there is reason to believe that a predisposition to this neurosis existed in the patient, as his brother, and, it is stated, his mother also, are subject to a somewhat similar complaint. The peculiar pains characteristic of locomotor ataxy were not well marked in this case, the patient not having volunteered the statement that he had suffered from them. There was little, if any, diminution of tactile sensibility. The headache, vertigo, and sickness, were more symptomatic

of cerebellar ataxy; but Dr. Bradbury was of opinion, taking all the symptoms into consideration, that this was not the nature of the case. Various remedies have been tried in this case, including the iodides and bromides of potassium, phosphoric acid, nux vomica, cod-liver oil, nitrate of silver, iron in the forms of citrate and tincture of the perchloride, blisters to the neck, and blistering fluid to the prepuce. Some amendment seemed to result from a mixture of phosphoric acid and tincture of nux vomica given in combination with cod-liver oil. Whilst taking nitrate of silver in doses of a quarter of a grain twice daily, the patient became much worse.

REVIEWS AND NOTICES.

THE SCIENCE AND PRACTICE OF SURGERY. Illustrated by 470 Wood-engravings. By FREDERICK JAMES GANT, F.R.C.S., Surgeon to the Royal Free Hospital, etc. Pp. 1265. London: J. and A. Churchill. 1871.

A NEW work on this large scale, professing so to represent the science and practice of surgery as to give a full embodiment of all established changes in the pathology and treatment of injuries and surgical diseases, excites admiration of the ambition and perseverance of the author. The surgeon who undertakes the task at this time and in this country, in the face of several formidable rivals who have long occupied the field, must possess no small share of the *robur et æs triplex*. He challenges at the outset the decision whether such a work was wanted; and whether he has succeeded in supplying the want.

In the opening sentence of his preface, Mr. GANT says that "it is now many years since a new systematic work representing the science and practice of surgery has appeared in this country". If this mean only that Mr. Gant is the first surgeon who has for a number of years past appeared *de novo* as the author of a systematic work on surgery, it is a technically correct statement. It somewhat, however, ignores the fact that the authors of well-established works on the subject have from time to time within recent years prepared new editions, of which one is only just completed, and in each of which important additions and corrections have been made in order to bring the books up to the last results of surgical science. Does the present weighty tome approach the standard of perfection more closely than any other that now exists?

Mr. Gant claims for himself the great merit of having brought the importance of pathology in relation to surgery prominently before the notice of British surgeons. In an introductory chapter he says (page 5) that "the contrast between the continental and the English schools of surgery mainly turns on the more intimate incorporation of pathology with operative surgery"; and he remarks that, while this incorporation has been taught by the French, German, Italian, and American surgeons, it has been more slowly recognised in England—the only systematic surgical writers who have recognised it being John Bell (1801), Liston (1846), Fergusson (1852), and Skey (1858). He goes on to tell us that in 1864 he brought forward the guidance of pathology in surgical operations as a general principle; and, after some remarks on the subject, he proceeds to apply the principle by giving a general outline of the conditions favourable and unfavourable for operations. We cannot altogether agree with him as to the comparative merits of British and continental surgeons in their relative appreciation of the value of pathology as applied to surgery; nor is it possible to concede his claims of having been the first to summarise the general conditions on which the success of operations depends. As in his preface he acknowledges having consulted Mr. Erichsen's *Science and Art of Surgery*, and makes various quotations from it in the course of his work, he should not have forgotten that, in the several editions of this book which have appeared during the last eighteen years, the author has specially described the "Conditions influencing the Success of Operations", and has insisted most strongly on the fact that manual skill is not sufficient, but that attention to pathological conditions is indispensable to the success of operations.

Our author further enumerates certain of his "own pathological observations and surgical experiences" as being interspersed throughout the work. Among them, are "the pathological conditions of contused and lacerated wounds, of compound fractures, and of compound dislocations, which severally require amputation". On carefully examining the passages in which these subjects are treated of, we are unable to find anything beyond what has been for years past quite as clearly and well taught by Mr. Erichsen, whose very words, indeed, are largely appropriated by Mr. Gant, especially in regard to compound

fractures. Neither as regards the general rules as to the conditions under which amputation is required, nor as to the necessity of attending to the circumstances which may modify the surgeon's acceptance of these rules in any given case, can we find that Mr. Gant has advanced any novel views or added an iota to the stock of surgical knowledge. Another of the subjects to the improvement of our knowledge of which Mr. Gant lays claim, is that of the excisional surgery of the joints; and it is but fair to say that this subject appears to have been most carefully studied by him, and that his chapter on it (which embodies a course of "Lettsomian Lectures" delivered by him before the Medical Society of London), is very complete and instructive.

In his preface Mr. Gant, as we have seen, acknowledges his indebtedness to the various standard surgical works. Most prominent among these are, besides Mr. Erichsen's book, a number of the articles in Mr. Holmes's *System of Surgery*; and we find, on making a careful comparison of several of the chapters in Mr. Gant's book with the corresponding articles in these works not only that in many instances there is a striking similarity of expression, but that the author of the present work has made little if any material addition to our knowledge in respect of the several subjects. Had our author availed himself of the new edition of Holmes's *System* before finishing his manuscript, he could have still further improved his book by laying the volumes of that edition under contribution to the same extent as the first *System*. Thus we find here no reference to the observations of Billroth and others on traumatic fever; and, while Mr. Gant derives a large amount of his information on gunshot-wounds from Mr. Longmore's article in the second volume, his statistics do not include the latest of those given by the last-named author. The last volume of the new edition of the *System of Surgery* probably appeared too late for Mr. Gant to avail himself of it; and this is the more unfortunate, as he has lost the opportunity of making use of Dr. Burdon Sanderson's admirable exposition of the modern doctrines of Cohnheim and others regarding inflammation, which form an essential point of that advanced pathological knowledge on which our author justly lays stress.

There are various contributions of high value that have appeared in recent years, but which, from oversight or from their not having appeared in time, have hitherto not been noticed in our systematic surgical works. Among those which occur to us at the moment are, Mr. Hancock's article on the perforating ulcer of the foot (see BRITISH MEDICAL JOURNAL, June 26th, 1869); Dr. Bigelow's account of the mechanism of dislocation of the hip-joint; Mr. Furneaux Jordan's prize essay on shock, published four years ago in this JOURNAL; articles on the removal of tumours by electrolysis; cases of ligature of the abdominal aorta by Mr. McGuire and Mr. W. Stokes, etc. Any reference to these we search for in vain in Mr. Gant's book.

At the end of the book is "a carefully compiled index". On examination, we find this to bear very distinct traces of having been apparently made in a rather extraordinary manner; viz., by adopting almost wholesale the index to the last edition of Erichsen's *Art and Science of Surgery*, and altering it to suit Mr. Gant's book. Our reasons for arriving at this conclusion are: that the mode of arrangement is precisely the same; that Mr. Gant's index contains derivations of surgical terms identical with those given in the last edition of Mr. Erichsen's work; while in the case of some words, such as "acritochromacy", "agalactia", "amaurosis", "mastitis", "mydriasis", which occur in Mr. Gant's index alone, the derivations are not given. *En passant*, Mr. Gant or the compiler of his index has made a rather absurd mistake: while adopting the incorrect spelling "phymosis" and "paraphymosis", he retains the derivation from *φίμος*, a muzzle.

In conclusion, we must express our conviction that, though it is no doubt possible to produce a better work on systematic surgery than any which we now possess, Mr. Gant has distressingly failed in the endeavour to produce such a book. *Magnis excidit ausis*. His *Science and Practice of Surgery* is not, so far as we have been able to discover by careful examination, one whit more instructive in regard to principles, and very rarely so in regard to details, than other books of the same kind which have for some time been in the hands of the profession. Mr. Gant is, we believe, an able surgeon, and is evidently desirous of taking his share in the improvement of that branch of our profession to which he has devoted himself. In writing a systematic work on surgery, he has mistaken his vocation; but, if he will apply himself to the investigation of some of those surgical problems which yet require settlement, it is still open to him to bring credit to himself and benefit to his profession. In the great task which he has set himself in this work he has failed; but it is one which might easily overtax greater powers than he has proved himself to possess. The attempt is honourable; and even the failure is far from being discreditable.

A DESCRIPTIVE CATALOGUE OF THE CALCULI AND OTHER ANIMAL CONCRETIONS CONTAINED IN THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND. By THOMAS TAYLOR, F.R.C.S. Pp. 87. Taylor and Francis, London: 1871.

THIS is an interesting and valuable addition to the catalogues of the Hunterian Museum, by a gentleman eminently qualified to complete the work entrusted to him some years since by the Council of the Royal College of Surgeons. It forms the first supplement to the volumes already published. Great credit is due to the Council for the admirable selection of such men as Owen, Quekett, Morris, Cobbold, Stanley, Paget, Flower, Bader, Taylor, and Wilson, to compile these catalogues on subjects regarding which each contributor has special acquirements.

In the catalogue under notice, the medical officers of Her Majesty's Indian Army are conspicuous, not only by their numerous and valuable additions to the Museum, but by the great success attending their operations in lithotomy. Mr. H. C. Cutcliffe, a Fellow of the College, appears to have given his entire collection. Messrs. Thomas Atchison, W. E. Allen, Beatson, etc., of the same service, have been most liberal. These calculi are of great interest as illustrating the effect which diet and habits of living have upon the composition of these concretions, and also because, in almost every instance, they are accompanied by a statement of the age and sex of the individual from whom they were taken, the duration of the malady, and the progress and result of the operation.

Members of the Council past and present have also largely contributed to this valuable collection, especially the late Mr. Hodgson, who presented his large museum of calculi; among the donors we also find Messrs. Cock, Curling, Spencer Wells, Luke, Mackmurdo, Hilton, Bransby Cooper, Busk, etc. Messrs. Ceely, Pilcher, Roberts, Barker, Bird, Parker, Sir Duncan Gibb, and others, who show the great interest which they take in the Museum by contributing to its riches.

During the twenty-six years that have elapsed since Mr. Taylor's former catalogues, 356 specimens of calculi from the urinary organs of man have been added, making with the former a total of 1,005.

Of rare calculi, the most remarkable additions to the Museum are the half of a xanthic oxide calculus, consisting chiefly of carbonate of lime taken from the bladder of a man, and presented by Mr. Bird, of York. Of the latter species of calculus, the collection formerly possessed no specimen, although, on account of its great rarity, drawings of some carbonate of lime calculi in the possession of Mr. R. Smith, of Bristol, were published in a former catalogue.

Mr. George Cooper, amongst other calculi, sends a large uric acid calculus, which, at the present time, weighs two ounces seven drachms, and consists of a mixture of uric acid and urate of ammonia, but containing very little earthy matter. The following quaint account of the specimen accompanied it. "Cut from James Clitherow, of Boston House, 13th of August, 1680, then aged 62; he died November 25th, 1682." The statement of the expenses attending the operation is curious; it was taken from his book, and sent with the calculus. "To £150 paid by agreement to Monsieur Callot ye Frenchman for cutting me of the stone. To Apothecary, Surgeon, and Nurse that attended me, £26 10s. 6d. For rent of my lodgings in Hatton Garden and diet there, £28 15s. 2d. For a pallet bed and ye furniture of it then used, £6 17s. For charges of removing to and from London, £1 10s. Making a total of £213 12s. 8d."

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M.D., Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical School. London: Henry Renshaw, 1871.

THE tedious and not very profitable task of producing a manual of Pathology and Morbid Anatomy, has just been completed by Dr. T. H. GREEN, lecturer at the Charing Cross Hospital Medical School on the subjects of which his book treats. It has been a matter of much inconvenience and a serious drawback to the study of pathology in our schools, that since the promulgation, publication, and in large measure the acceptance, of Virchow's views on cellular pathology, no one in this country has been found to undertake the labour of collecting the current views on the science. This, no doubt, is chiefly explained by the rapidly transitional state of the subject rendering it difficult to prepare a work and pass it through the press, before its contents are already behind the time. This remark is particularly applicable to comprehensive treatises on pathology. The author of the present volume, however, has limited himself to the elements of pathology and morbid anatomy, his object being to give a brief account of the more important morbid processes which take place in the human body in accordance with the present position of pathological knowledge. He accordingly first describes the

general pathology of each process, and subsequently the same process as it occurs in the several organs and tissues of the body.

In fulfilling his task Dr. Green has naturally exercised a considerable amount of caution when dealing with many important morbid processes about which pathologists as yet widely differ, and he has been content to satisfy himself with noticing the more prevalent notions; while, at the same time, it is abundantly evident that the author is thoroughly conversant with the most advanced opinions, both British and foreign, on the subject of pathology and morbid anatomy.

The volume is freely illustrated with woodcuts, some of them from the author's own preparations, the majority, however, being reproduced from Rindfleisch's *Lehrbuch der pathologischen Gewebelehre*. We congratulate Dr. Green on the measure of success with which he has completed a not very easy task. He has presented us as nearly as possible with a concise and handy elementary work on human pathology and morbid anatomy, and we hope that it will meet with the favourable reception which its usefulness certainly deserves.

REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NOTE ON WINES.

THE French Academy of Medicine has devoted itself during two sittings in this month to the discussion of the question of the use of wines and spirits from the medical point of view. M. Bergeron has reported in the name of a commission specially appointed, and the Academy, after debating on their very able report, has determined to secure for it a wide popular circulation. The Academy takes precisely the view which we have taken on former occasions in considering this question. It demonstrates at great length that it is by quitting the use of the cheap light wines of the country, and by adopting the dangerous, seductive, and powerful stimulants, such as cassis, petit mèle, and cider and brandy, that the French population is declining into drunkenness. In our own country the place of these drinks among the working classes is taken by gin, rum, and strong beer.

A great and beneficial change has already been evoked in the habits of our upper and middle classes by the more extended introduction of a variety of light wines of varied and unimpeachable dietetic value. It seems to be the tolerably unanimous opinion of medical practitioners of this day, that the existing type of diseases is one of prostration and debility, and that the most successful basis of treatment is by the tonic and restorative methods. Thus, in hospital no less than in private practice, the prescription of stimulants has taken a constantly increasing development.

The reduction of the wine duties has been a great boon here, as not only has it had the effect of doubling the consumption of wine within the short space of ten years, but it has made light wine—what it should undoubtedly be—an article of daily and ordinary consumption, and far less liable to be taken in excess than when wine was a highly stimulating and costly luxury. At the present time, the facilities for obtaining cheap and wholesome wines and other stimulants, bearing the guarantee of large and respectable dealers in almost every town and village, is an advantage which deserves to be kept in view.

Cheap wine has no doubt a certain amount of prejudice yet to overcome, and the medical man may do much in assisting to dispel this. Cheapness in wine does not necessarily argue a deficiency in stimulating and nourishing qualities, still less unwholesomeness. The fact is, and it is important that this should be borne in mind, that the cheap wines of the present day were only a few years ago, though identical in quality and description, sold at prices very nearly double those of the present time. How this has been brought about by increased supplies, and the opening up of new districts and countries, it would not be difficult to show. Suffice it to say that, of the three principal wine-producing countries, viz., Spain, Portugal, and France, our home consumption has increased during the last ten years from 5,877,506 gallons in 1860 to 13,373,725 gallons in 1870, the quantity of wines from Spain alone being 6,269,325 gallons in 1870 against 2,975,769 gallons in 1860.

In our issue of the 7th January last we touched upon the article sherry, and drew attention to the important place occupied by Spain as a wine-producing country. Since that time we have continued to use opportunities of testing and comparing the relative qualities and prices of various sherries offered for sale, and have been especially struck by some light, delicate, pale sherries obtained from the Messrs. W. and A.

Gilbey of Oxford Street. We think it due to the commercial enterprise, and a fair recognition of the undoubted benefit which this firm has conferred upon medical patients in the introduction of sound wholesome wines at moderate prices, to say that some of these sherries approach nearer to our idea of what a good, generous, stimulating wine should be than anything we have seen for some time past, while the price places them within the reach of all when required for medicinal and dietetic purposes. We refer to this firm, now the largest in the trade, in order to illustrate the facts as to the facilities for obtaining cheap wines now as compared with only a few years ago, for it is certainly within our recollection when wines such as these could not be obtained under double the price.

VULCANITE INSTRUMENTS FOR ASCERTAINING SPECIFIC GRAVITY.

MR. BLAISE (Savigny and Co.), 67, St. James Street, has for some time occupied himself with the adaptation of vulcanite to the manufacture of urinometers, alcoholometers, saccharometers, hydrometers, and other instruments for indicating the density of liquids; and he finds, after repeated trials and tests, that it is better suited to the construction of the above-named instruments than either glass or metal. Vulcanite is perfectly proof against all kinds of acid except bisulphide of carbon. The instruments do not get out of order, or break, if used with ordinary care; whereas a very slight tap will break those made of glass, or a fall will injure those made of metal, which are also apt to corrode. Moreover, the vulcanite instrument takes the specific gravity much more quickly than one made of glass or metal, and is more durable and cheaper than either. Mr. Blaise owes to Mr. Pollock, of St. George's Hospital, the valuable suggestion of adapting vulcanite to the manufacture of these instruments.

Dr. Noad, F.R.S., of St. George's Hospital, certifies them to be far superior to those made of glass or metal, as they are not liable to break, do not corrode, and for accuracy are not to be equalled; and he strongly recommends them to the medical profession. This recommendation we can, from personal examination, endorse.

THERAPEUTIC RECORD.

STRYCHNIA IN ALBUMINURIA.—Brignoli, in *Lo Sperimentale*, besides recommending nux vomica in various neuroses, gastralgia, dyspepsia, cardiac palpitations, periodic cough, etc., states that he has observed it to have a marked effect in retarding the progress of albuminuria, especially the scarlatinal form with anasarca. He cites twelve cases of complete recovery.

VOMITING OF PREGNANCY.—Dr. Hubert, in a memoir read before the Medical Society of Lyons (*Lyon Médical*, 15th Oct. 1871, p. 467), produces evidence to show that in some cases this symptom depends upon displacement and movements of the uterus, and that it may be arrested by the immobilisation of the uterus by suitable bandages and the use of Hodge's or Zwanke's pessary.

THE BROMOHYDRATES OF QUININE AND CINCHONINE.—In a communication laid before the Academy of Medicine of Paris on Oct. 17th, 1871, M. Latour recommends these preparations to the attention of physicians. He prepares the neutral bromohydrate of quinine, it is stated, by dissolving the bromide of potassium in a slightly acidulated solution of sulphate of quinine; the basic bromohydrate by treating the neutral sulphate of quinine, dissolved in a mixture of equal parts of water and alcohol, first with a very dilute solution of ammonia, then with a neutral solution of bromohydrate of quinine.

CHLORAL IN CHOLERA.—Dr. von Reichard has employed chloral in the recent epidemic of cholera at Riga—first, to calm the cramps at the outset; secondly, to lessen the præcordial anguish in the last stage; thirdly, to arrest the vomiting; fourthly, to induce sleep, for which the patients have earnestly prayed. It has successfully fulfilled all these indications. In one case, in which the patient was *in extremis* and had apparently not three hours to live, sixty grains of chloral gave calm sleep; the temperature rose; the pulse fell from 130 to 90, and regained a certain fulness; the *facies cholericæ* disappeared; and the patient was, as it were, snatched from the jaws of death. Dr. Blumenthal, in three cases of severe cholera, saved two out of three patients. The doses administered were sixty grains in half-an-ounce of water twice or thrice in an hour. (*Berlin Clin. Wochenschrift*; *Gazette Méd. de Strasbourg*, 11th October, 1871.)

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, OCTOBER 28TH, 1871.

PROVIDENT DISPENSARIES *VERSUS* BENEFIT-CLUBS.

IN the discussion which has lately taken place upon the medical relief of the poor and the abuse of hospitals, it has been said that benefit-clubs are the "correlatives" of provident dispensaries, and that the medical man does well to fill up the club-certificates, which are frequently brought to him at hospital, notwithstanding the serious inroad which they make upon his time and attention. This is a statement which we cannot allow to pass unnoticed, because we consider that it institutes an unfair comparison between benefit-clubs and provident dispensaries, and because it would impose upon medical men a task which we believe they ought on the contrary invariably to decline.

That benefit-clubs are useful and valuable, as far as they go, we readily admit; but their medical arrangements are so far from satisfactory that we cannot regard them, in their present form, as answering the same end as provident dispensaries. That they might be amended and made useful as a system of insurance against sickness we do not doubt, but as yet they fall far short of meeting the requirements of the industrious poor in this respect. Our present object is to point out to our readers those features which make the provident dispensaries more suitable to the demands of the day.

It is obvious that what is wanted is the means of giving to all poor persons an opportunity of obtaining good medical attendance on terms which they can afford to pay, with as few obstacles and difficulties as possible. If we would rid the hospitals of the abuses which now form a serious drawback to their charitable operations, we must provide the working classes with first-rate medical advice, which shall be open to all comers, and which shall be obtainable on the cheapest terms compatible with security and with the reasonable remuneration of those whose professional services are called into requisition. It is a mistake to suppose that the poor do not appreciate the difference between first-rate and third-rate advice; between a skilled and an unskilled hand. On the contrary, they are quick to apprehend these differences. How often are we told by unsuitable applicants in our out-patient rooms that they have only come to the hospital because they knew that there they would get the best advice? Any system, therefore, which proposes to meet the wants of the industrious poor must not only be open to all, but it must also be such as to recommend itself to our profession, and to secure the services of thoroughly efficient practitioners.

Now, how far do the benefit societies fulfil these conditions? In the first place, they are limited almost exclusively to *men*; very few indeed make provision for attending the wives and children of members, and yet it is these who most frequently require the services of the medical man. Again, many artisans and labourers are altogether excluded from the highest class of clubs, because the trades at which they work are injurious to health or dangerous to life. Again, if we inquire into their medical arrangements they are equally unsatisfactory. The struggles which have lately been carried on in various parts of the country between clubs anxious to beat down the remuneration of their doctors, and the medical men who were desirous of maintaining their just rights and the dignity of their profession, have been recorded in the pages of this JOURNAL. But this is not the only complaint we have to make against the usual system of the clubs. Not only are they prone to drive

a hard bargain with our professional brethren, but many of them, specially in the metropolis, have no medical man at all attached to them. Though they may have accumulated and funded a large capital, and though their sick payments may amount to several thousand of pounds in the course of a year, yet they have no medical officer whatever in their pay. And why? Simply because through the superabundance of our medical charities they can get the work done for nothing. They can send their members to the nearest hospital or dispensary, and there they receive not only advice and medicine, but their club-certificates are also filled up from week to week; and it is in this way that the warrants are signed upon which thousands of pounds are annually paid out. This is an obvious and gross injustice both to medical men and to public charity. The benefit-club should undoubtedly retain the services of a medical man, and pay him a fee proportioned to the number of its members or to the amount of its annual sick grants; and money which has been given by the public for the relief of the needy ought not to be employed in doing the work of a prosperous society. But the evil does not stop here. The members who are sent to the hospital or dispensary are themselves pauperised by being induced to receive as a charity that which their clubs ought to pay for in the regular way of business out of the members' subscriptions.

Let us now contrast these arrangements with those of the provident dispensaries. These latter institutions are open to all—men, women, young persons, and children—whose earnings do not exceed a certain fixed limit. They reject none because their manner of life is beset with more than ordinary risks. They are managed by committees of gentlemen, of which the medical men are themselves *ex officio* members, so that they are sure of courteous and considerate treatment; while the success which has attended them where they have had a fair field and been efficiently conducted, has enabled them to give their medical officers a reasonable remuneration. Add to this that their moral effect is excellent, for it tends to encourage habits of independence and self-reliance among the members. Thus we see that, both on the side of the working classes and of the medical profession, they offer all that can be fairly demanded.

In considering, therefore, the relative merits of these two agencies for meeting the medical wants of the poor at the present day, we have no hesitation in giving our voice in favour of the provident dispensaries. If the country were well supplied with such institutions, and if they were affiliated to one another, so that the artisan and the factory girl who had once been enrolled a member might find an institution at hand of which they would be considered members wherever personal circumstances or the demand for labour might lead them, we believe that it would be a great boon to the working class, and would advance the best interests of our profession.

THE total number of freshmen at the eleven metropolitan schools registered up to Wednesday last amount to 470, or a total of 1486.

THE Sewage-Irrigation Works at Leamington were formally opened on Monday by the Chairman of the Local Board of Health.

A NEW Lunatic Asylum is to be built in and for the county of Northampton, to accommodate 518 patients.

THE next preliminary examination in Arts for the diplomas of Fellow and Member of the College of Surgeons will be held on the 19th, 20th, and 21st of December, when it is expected the number will be as large as on former occasions.

A new Pharmacopœia for the German Empire is about to be compiled. For this purpose, a committee of twelve members has been appointed, who held their first meeting on September 28th. A grant of 40,000 thalers (about £5,830) has been voted from the public revenue for 1872.

A **SPLENDID** testimonial, including a carriage and pair and handsome pieces of plate of the value of £600, has been presented to Mr. Cordy Burrows of Brighton—an old and esteemed member of the Association—by his fellow townsmen.

THE death of Sir Roderick Impey Murchison, Bart., has caused another vacancy in the required number of Trustees of the Museum of the College of Surgeons. This vacancy, with that caused by the death of Mr. George Grote, will be filled up at an early meeting.

THE AMERICAN GOVERNMENT AND THE LADY-DOCTORS.

It appears that the ladies in America are receiving practical recognition of an official character. The State Board of Health in Massachusetts, with the view of investigating the effects produced on the health of women by the use of the sewing-machine, has selected Dr. Lucy Sewall of Boston to prepare a report on the subject.

THE OFFICIAL TRIALS OF CONDURANGO.

It will be remembered that the American Government forwarded to the Government of this country a quantity of the Condurango plant, in order that its alleged influence over cancer might be tested. In some of the State hospitals of America it had been already given to some extent, but with purely negative results. The London College of Physicians was requested by our Government to report on its therapeutic influence, and accordingly forwarded the supply of the drug to the Middlesex and St. Bartholomew's Hospitals. It will be seen from the detailed reports, for which we are indebted to Dr. John Davidson, that so far condurango has failed to arrest in any degree the progress of the disease in those cases in which it has been up to this time tried in the Middlesex Hospital.

HER MAJESTY'S HEALTH.

A STATEMENT has been persistently circulated and placarded by a certain class of agitators, that the recent illness of the Queen has been due to her revaccination in the early part of the year. But for the fact that it has reached circles which should be better informed, we should think it unnecessary to notice this absurd misstatement. We are, however, able to contradict it upon the highest authority. It may, under present circumstances, be useful to state that it is entirely without foundation.

INTERNATIONAL COPYRIGHT.

MEDICAL authors are, perhaps, more affected by the question of American copyright than any others, as a class; for there are very few British medical works of repute which are not reproduced on the other side of the Atlantic, and their sale there is very large. There is one step which would, we think, offer a generous and effective solution of the question—to pass a law protecting American copyrights in this country. No reproductions of American medical works have, so far as we are aware, been made, in this country, except on a small scale, and by the inferior class of publishers. At any rate, we have clearly no right to pirate American books under any circumstances. The passage of such an Act, without waiting for a *quid pro quo*, would be the best way to prove the strength of our own convictions; and we believe that American legislators would not choose to stand alone in the path of iniquity.

AN ENGLISH PHYSICIAN BEFORE A FRENCH COURT-MARTIAL.

DR. ROSE CORMACK gave evidence on Monday last before a court-martial at Versailles, in the case of Saint-Bris, a Communist mentioned in Dr. John Murray's account of his visit to the Ambulance Anglaise in May, which appeared in the JOURNAL of June 10th. The accused wished to prove that he had never actually fought against the army of Versailles; and, as the company of National Guards to which he belonged had attacked the Government troops on the very day (May 11th) on which he was wounded, it was very important to establish that the wound occurred accidentally and some hours before the battle. He proved that, an hour after the accident, the statement he gave to Dr. Cormack was this: "Mon revolver est tombé et le choc a fait partir le

coup." Dr. Cormack's evidence showed that the wound was not inflicted by a Chassepot bullet; and his description of it entirely corroborated the statement of the accused, who was consequently acquitted of the charge of having been engaged in the combat of May 11th. Another count in the indictment was, however, substantiated, and the complete and hearty complicity of Saint-Bris in the insurrection was clearly proved. He was sentenced to transportation for life to New Caledonia. The giving evidence before the military tribunals now sitting at Versailles is not a pecuniarily profitable occupation. Witnesses are only allowed at the rate of five *francs* a day as a compensation for time given and to reimburse the cost of travelling. For three days' attendance on the court-martials of last week, Dr. Cormack consequently received fifteen *francs*. The summons obliges attendance under heavy penalties.

RUGBY AND CHARTERHOUSE.

THE Senate of the University of London yesterday exercised for the first time its privilege, under the Public Schools Act, of appointing a member of the governing body of Rugby and Charterhouse Schools. To Charterhouse it appointed Mr. Busk, F.R.S., President of the Royal College of Surgeons, thus recognising the claims of science in the direction of education. To Rugby it nominated Dr. Temple, Bishop of Exeter, an appointment which, under existing peculiar circumstances at that school, is likely to occasion a good deal of remark.

FATAL MARCHES.

THE *Militar Wochenblatt* discusses at length the precautions necessary to prevent the fatal accidents which occur among troops making forced marches during hot weather. First, of course, is the regulation of the march. This should take place during the earlier hours of the morning, the men resting at midday, and marching again in the afternoon. The soldiers should breakfast before starting in the morning, and should be made to understand the danger of drinking spirits on an empty stomach. The water-bottles should be filled with water slightly acidulated, or with weak tea, which is better. The sale of gin by the cantineers should be prohibited; and the sale of beer should be opposed by attaching water-carts to the columns. The columns should be elongated as much as possible; and, in passing near water, the men should be allowed to stop to fill their bottles. The bottles should have narrow drinking-spouts, so as to force the men to drink slowly. The upper buttons of the collar and tunic should be opened; and the surgeons ought to be mounted, so that, after staying to give timely aid to men compelled to fall out, they may as quickly as possible rejoin their detachments.

A SAD LESSON.

OUR obituary list includes to-day a death which deserves public attention. Mr. Faithorn had been in practice in Chesham for nearly thirty-five years. For years he was the only medical man there; but two years ago he took a partner (Mr. Churchill) much his junior. This town has been allowed, in spite of Mr. Faithorn's repeated and urgent protestations and threats of appeal to the central authorities, to fall into a horrible state of dirt and neglect of ventilation, drainage, etc. Somewhat more than a month since, two tramps went down in search of work, and took lodgings in, of course, one of the lowest parts of the town. They both shortly afterwards sickened of typhus, and one was removed to the poorhouse of the neighbouring town of Amersham. From the other, who was nursed at Chesham, the fever spread to all the lowest parts of the town—concentrating itself, however, in one low and dirty locality; and there it continues still to prevail. Mr. Faithorn's partner soon took it, and for some time was in the greatest danger, but is now recovering. Now arose the danger for Mr. Faithorn, who worked alone day and night in the most extraordinary manner, even after the fever had attacked him. At last, he could work no longer; and twelve days afterwards he died, at the age of 64. He had so exerted himself amongst the fever-patients, hardly giving himself rest night or day, and acting even as nurse as well as doctor, as was his habit where necessary, that it

is no wonder that he succumbed to the disease. Besides the two medical men, no one well fed and well lodged has up to this time taken the fever. These, we believe, are the accurate circumstances under which this faithful soldier met his death. They afford a striking instance of the gross neglect of all the rules of common sense, by which many of our country towns and villages, which, like Chesham, are situated in the most beautiful parts of England, and ought to be models of everything healthy, are turned into fever-dens. We cannot but feel strongly on this occasion; for it is to this disgraceful neglect of the proper rules of health and decency that his profession, his patients, and those still nearer to him, owe the loss of a man of eminent worth. He was a man of never failing courage and energy, of a kindness and warmth of heart beyond the common, and as unselfish as he was devoted.

VACCINATION PROSECUTIONS.

AT the Manchester City Police Court, Henry J. Jones was summoned for having neglected to take or send his child to the public vaccinator to be inspected after vaccination; but the magistrate decided that the prosecutor was bound to prove that the child had not been vaccinated, and, as he was not prepared to do so, the summons was dismissed.—At the Hartlepool Petty Session, Thomas Martens, a news-agent, was charged with having neglected to pay a fine and costs imposed in May last, to which he pleaded poverty and consequent inability to pay. A distress warrant was issued for the recovery of the amount.

CURIOSITIES OF LIFE.

THE *Philadelphia Medical Times* gives the following as interesting to many readers. Half of all who live die before seventeen. Only one person in ten thousand lives to be one hundred years old, and but one in a hundred reaches sixty. The married live longer than the single; and out of every thousand born only ninety-five weddings take place. Of a thousand persons who have reached seventy, there are of clergymen, orators, and public speakers, forty-three; farmers, forty; workmen, thirty-three; soldiers, thirty-two; lawyers, twenty-nine; professors, twenty-seven; doctors, twenty-four. Farmers and workmen do not arrive at good old age as often as clergymen and others who perform no manual labour; but this is owing to the neglect of the laws of health, inattention to proper habits of life in eating, drinking, sleeping, dress, and the proper care of themselves after the work of the day is done. These farmers or workmen eat a heavy supper on a summer's day, and sit around the doors in their shirt-sleeves, and, in their tired condition and weakened circulation, are easily chilled, laying the foundation for diarrhoea, bilious colic, pneumonia, or consumption.

CHOLERA.

THE last advices from the East are to the effect that cholera is spreading in Constantinople, it having assumed an epidemic form at Kassim Pasha, a filthy locality on the edge of a drain emitting an abominable stench. The deaths from September 26th to October 1st are stated to have been 136. Steps are being taken, however, to arrest the disease; for a committee has been appointed for rendering assistance in the shape of medical aid, etc.; and temporary accommodation is to be provided in different parts of the city for the reception of the sick on land, and two floating hospitals are to be provided for cases which may arise amongst the shipping; and a system of house-to-house visitation is to be organised. A sanitary cordon is established round Kassim Pasha. A cleansing out of some of the most crowded parts of the place is being made. Food and medical aid are afforded to those who are in want of such assistance.—Cholera is now assuming a sporadic form in Dantzic. The deaths from August 1st to October 4th were 46; the cases 60, of which 14 are said to have recovered.—In Elbing, 107 deaths are reported to have occurred from cholera between August 1st and October 4th.—In Königsberg, the latest cholera statistics are for the days October 7th to 10th, both inclusive, during which time there were 2 cases and 2 deaths. The deaths from all causes in the week ending October 15th were 82.—Further particulars of the cholera in St. Petersburg show that the epidemic has very much decreased in

that city. The numbers were, for the week ending September 27th, 20 cases, 27 recoveries, 12 deaths; for the week ending October 4th, 8 cases, 14 recoveries, 2 deaths. The number of cases under treatment on October 5th was 20.

MR. CHRISTOPHER HEATH ON CIRCULATION.

WE have before us a correspondence relating to matters of some importance to the interests of members of the Association and of their JOURNAL, and of so essentially a public character, that we feel bound to refer to it. The parties to it are Mr. Christopher Heath and the publisher of the JOURNAL. It is somewhat long, and includes various repetitions, but the substance may be pretty briefly stated. Mr. Christopher Heath opens the correspondence by a formal communication, adverting to the statements on one of the advertisement circulars. They are as follows.

"The following extracts from the last four years of the Government Newspaper Stamp Returns illustrate the leading character of the circulation of the BRITISH MEDICAL JOURNAL, and its rapid and continuous increase.

| | 1867. | 1868. | 1869. | 1870. |
|-----------------------------|---------|---------|---------|---------|
| The BRITISH MEDICAL JOURNAL | 121,400 | 163,000 | 171,700 | 193,750 |
| The <i>Lancet</i> | 90,575 | 99,250 | 87,500 | 93,025 |

And in another place:

"Allow me to call your attention to the BRITISH MEDICAL JOURNAL, which is now by far the most widely circulated of medical journals."

This, Mr. Heath states, is "misleading", and "carries a palpable misstatement on the face of it; for, whatever the number of stamps issued to the BRITISH MEDICAL JOURNAL and *Lancet* respectively, the circulation of the latter is very much larger than that of the former." He further believes that from the stated number of members five hundred defaulters would have to be deducted on June 30th. He declares, therefore, the statements of the circular in this respect to be "fallacious, dishonest, and dishonourable to the Association." To this astounding communication the publisher replies by expressing regret at the character of the language which Mr. Christopher Heath thinks fit to employ. The figures quoted, he observes, are the official and vouched figures of the Government Stamp Returns. They show precisely what they assume to show: that the BRITISH MEDICAL JOURNAL circulates nearly two thousand more stamped copies a week than the *Lancet*; and that it has nearly doubled its stamped circulation in the last five years, while the *Lancet* has stood still, with occasional periods of retrogression; and to this extent the figures afford an index to the character of the total circulation. The number of stamps used in 1871 for our JOURNAL is over 210,000. Our publisher adds that his statement as to the excess of the total circulation of the BRITISH MEDICAL JOURNAL over the total circulation of the *Lancet* is equally explicit, and is not made at random. He differs entirely from the opinion which Mr. Christopher Heath expresses; and, that the matter may be settled on a basis of facts, he invites Mr. Heath, as a representative of the *Lancet*, to submit to the publishers of that paper his challenge to place the books of both journals in the hands of a respectable accountant, and to publish the attested numbers. The deduction of five hundred members on June 30th, which Mr. Heath thinks should be made, he points out to be an error. So many had paid up arrears, and so many new members had been elected before that time, that from June 30th it became necessary, on the contrary, to print two hundred and fifty more copies of the JOURNAL weekly than in the preceding quarter. Mr. Heath, in reply, considers it "impertinent" that he should be addressed as a representative of the *Lancet*. He states that he writes in his new character of member of the Committee of Council, and asks on what ground he is identified as a representative of that journal. The publisher replies that he so addresses him because his recent communications to the office in the month of August were in the official character of representative of the *Lancet*, asking for early copies of documents relating to the Plymouth meeting, as *Lancet* reporter at that meeting, which were furnished by direction of the editor; and that his recent letter advocated the interests of that

journal in somewhat passionate language, and implied a precise knowledge of its affairs. He renews his challenge. Mr. Heath replies that he wrote his letter in his own study, without consulting the proprietors of the *Lancet*; and that "*he does not know the circulation of that journal*!" To this utterly surprising anticlimax the publisher replies by asking that Mr. Christopher Heath shall either justify or retract his injurious imputations. To this Mr. Heath has as yet made no reply. He can hardly, however, refuse to respond to this just claim, for the sake of his own credit, whether in his character of a spokesman representative of editorial staff of the *Lancet*, or in that other character of a guardian of the interests of the British Medical Association and its JOURNAL, which he somewhat anomalously accepted in becoming a member of the Committee of Council. The challenge of the publisher of the BRITISH MEDICAL JOURNAL (thus provoked by Mr. Heath), that the books of the two journals shall be compared by a public accountant, in order publicly to verify the statement as to the superior circulation of the BRITISH MEDICAL JOURNAL, on which Mr. Heath throws doubt, remains open.

DR. RICHARDSON'S LECTURES ON EXPERIMENTAL AND PRACTICAL MEDICINE.

THE first lecture of Dr. Richardson's eighth course on Experimental and Practical Medicine, will be delivered at 12, Hinde Street, next Tuesday, October 31st. The course will be continued on the last Tuesday of every succeeding month until March. The present series will commence with a lecture on "The Science and Art of Embalming the Dead."

DR. HITCHMAN OF THE DERBYSHIRE ASYLUM.

DR. HITCHMAN, whose instructive paper on Paresis of the Insane, read before a recent meeting of the Midland Branch of the British Medical Association, we print to-day, has lately resigned the office of Medical Superintendent of the Derby County Asylum, which he has held for twenty-one years. At a meeting of quarter sessions last week, it was resolved, without one dissentient voice, to grant to Dr. Hitchman a superannuation pension of £400, and one of £100 to Mrs. Hitchman. Dr. Hitchman took an important part in the original organisation of the asylum, and during his term of office he has brought to its management and to the treatment of its inmates rare qualities of skill, judgment, and character, which have conciliated for him the respect and esteem of those among whom he has lived, not less than of the members of his profession.

THE SANITARY SHAME OF LIVERPOOL.

RELAPSING fever has reappeared in Liverpool. A mortality of three is this week recorded from this cause. This would probably imply the existence in the town of some two or three hundred cases. We have already referred to the subject of the deplorable habits, unfortunate sanitary condition, and high mortality, which afflict and disgrace the poorer classes in Liverpool. We have received a communication from Dr. Skinner on the subject. We are prevented by want of space from dealing with it this week; but we hope to be able very shortly to print Dr. Skinner's letter and discuss its theme.

SMALL-POX IN WOLVERHAMPTON.

OUR readers will certainly not be surprised to learn, after what we wrote last week, that small-pox is rife in Wolverhampton. There are about two hundred cases in the borough, and the number is increasing. The epidemic has broken out in the Police Barracks, from which one officer was removed to die in the fever-hospital in the workhouse. The barracks have been abandoned for the new ones elsewhere, and the old barracks extemporised into a small-pox hospital for Wolverhampton. The Poor-law Guardians have represented to the Corporation the great danger resulting from the spread of small-pox. The death-rate is thirty-three in the thousand, and application is about to be made to the Home-Office to interfere and compel prompt action by the local authorities.

FLEXIBLE PROBES.

WE referred recently to the excellent flexible probe, which Mr. Steele of Bristol introduced to the profession here simultaneously with, but independently of, that of Dr. Sayre. Dr. Sayre writes from New York to express his opinion that this probe is "in some respects better than his own for certain cases, and it is much more easily cleaned. Both of them are necessary." He expresses a warm sense of pleasure at the cordial and gratifying reception which he had at the hands of his professional brethren in England.

PAWNING INFECTED CLOTHES.

LAST week, at the Salford Town Hall, a woman named Elizabeth Griffiths was summoned for having committed a breach of the Sanitary Act, 1866, by exposing a shirt which had been worn by one of her boys (now dead), who had been suffering from small-pox, without having had the shirt previously disinfected. The prisoner, who has living another child infected with small-pox, pawned the shirt, for which she was committed to prison for a month. The sick child was sent to the workhouse.

THE MEDICAL SOCIETY OF LONDON.

IN opening the ninety-ninth session of the Medical Society of London on the 16th instant, the President, Dr. Andrew Clark, congratulated the Fellows on the prosperity of the Society. As regarded financial matters, the Treasurer had a balance of £211; the Fothergillian fund had risen to nearly £1,000; and it was expected that the Society's house in Bolt Court, bequeathed by Dr. Lettsom, would soon be let at a much improved rent. The prosperity of the Society was to be kept up by aiming at precision in work, which should be compendious and practical; and by working with singleness of heart and purpose, in the spirit of good fellowship. As an instance of the value of the labours of such a Society, he referred to the investigation of the early history of disease, such as phthisis. In therapeutics also—regarding which there was a want of faith, and also a want of precise knowledge—important investigations might be made by committees of the Society, aided by grants from the surplus Fothergillian funds. Each Fellow should induce other members of the profession to join. It was in such a Society that fresh knowledge was obtained, errors were corrected, and doubts resolved. The President concluded by alluding to the great loss which the Society had sustained in the death of Dr. Hyde Salter, who at one time had been three years its Secretary. He had accepted the Lettsomian lectureship, but, finding his health failing, resigned the appointment early in the year.

OUT-PATIENTS AT HOSPITALS.

THE number of new cases in the out-patients' department of the metropolitan general hospitals relieved during the week ending Saturday, October 14th, according to the *London Mirror*, was 15,627—the highest at any one hospital being 2,811 at the London Hospital. The numbers at the several hospitals were: Charing Cross, 249; Great Northern, 535; Guy's, 2,400; King's College, 1,490; London, 2,811; Metropolitan Free, 622; Middlesex, 1,300; Royal Free, 897; St. Bartholomew's, 2,467; St. George's, 340; St. Mary's, 387; St. Thomas's, 1,375; University College, 284; and Westminster, 470—total, 15,627.

SMALL-POX IN SHEFFIELD.

OUR correspondent writes as follows:—Small-pox is rife in Sheffield; and there is but a single vaccination-prosecutor, although there is abundant work for three. On the 18th inst., a deputation from the Health Committee waited upon the Board of Guardians on the subject of the desirability of erecting a hospital for contagious diseases. At Eccleshall the guardians are going to build an iron house which will hold, at a cost of £240, twelve beds. It was suggested by the deputation that the Board might adopt a similar course. The chairman suggested that one of the wings of the Union should be extended, and it was ultimately decided that an architect should be asked to prepare

plans of the extension. Sheffield has long felt the want of a hospital for contagious diseases, and it is to be trusted that the guardians will act promptly and liberally in the matter.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THIS society commenced its session on Tuesday evening. Under a new rule passed last session, it was intended to commence the meetings henceforth a month earlier than has hitherto been the case. Extensive alterations, however, having been in progress on the Society's premises, it was necessary to omit the meeting which should have been held on the 10th. The alterations are still incomplete; a large room for meetings, which is being prepared in the rear of the library, hitherto used for this purpose, being not yet ready for use. The attendance of members on Tuesday was rather scanty; not more than about thirty-six being present. The proceedings commenced with the reading of an interesting report, by Mr. Le Gros Clark, of a case of obstruction of the ileum by large gall-stones. After this followed a paper by Mr. Warrington Haward, on ether and chloroform as anæsthetics. From his experience as an administrator of anæsthetics in St. George's Hospital, he was led to advocate the use of ether more extensively than is the case.

IMPROVEMENT OF DWELLINGS.

UPON this subject the following resolution was moved in the Economic Section of the Social Science Congress by Mr. John Holmes of Leeds, seconded by the Rev. H. Solly, and carried: "That the Section recommends the Council to take into its consideration what legislation can be taken to improve and render more effective the Public Health Acts, giving power to close or remove property found unfit for habitation; and, further, by what means statistical information could be obtained as to the experience of the various companies, societies, or other organisations, which are engaged in providing dwellings for the working classes."

SCOTLAND.

DR. JOHN CHIENE has been appointed Assistant-Surgeon to the Edinburgh Royal Infirmary.

MR. WILLIAM WALKER has been elected President of the Royal College of Surgeons of Edinburgh.

DR. GILLESPIE, after completing twenty-one years' good service on the surgical staff of the Edinburgh Royal Infirmary, has been appointed Consulting Surgeon.

THE sum of £3,470 has been subscribed towards £5,000 which is required for the new buildings of the Glasgow Convalescent Home at Lenzie Junction.

THE LADY-STUDENTS IN EDINBURGH.

THE Senatus and University Court will not oppose the admission of the lady-students to the professional examination. Technical difficulties had been raised, but have been overruled by legal advice. The whole question is, however, not yet resolved, and the ladies are determined to carry on the war till they win the coveted medical degree.

THE SALE OF THE EDINBURGH ROYAL INFIRMARY TO THE UNIVERSITY.

A FINAL interlocutor in both of the cases of suspension and interdict against the managers of the Royal Infirmary in respect of the contemplated sale of the Infirmary buildings to the University was issued by Lord Gifford on Tuesday. The former notes of suspension and interdict have been confirmed and declared perpetual by his lordship.

FEVER IN DUNDEE.

It is stated in the Dundee papers that the overcrowding of fever-patients in the Infirmary of that town is on the increase, and that in some cases two patients have to be placed in the same bed. It is difficult to imagine how this can be. The great and increasing prevalence of fever

in the town has been a matter of public notoriety for some time, and the authorities have had more than abundant time to afford a larger increase of accommodation than is now required. The Metropolitan Asylums Board were enabled to erect one of the most complete hospitals in London, capable of containing one hundred and fifty beds in a month. There can, therefore, be little excuse for the authorities in Dundee allowing the present state of matters to continue.

A NEW SCOTCH ACIDULOUS CHALYBEATE WATER.

DR. JAMES DEWAR, F.R.S.E., describes in the *Chemical News* a remarkable chalybeate water. Plenty natural waters, containing small proportions of iron, are to be met with in the United Kingdom; but, with the exception of those of Tunbridge Wells, Harrogate, Sandrock (Isle of Wight), Heartfell (near Moffat), and Vicarsbridge, in the vicinity of Dollar, they contrast very unfavourably with those of the numerous spas of the continent of Europe. If we restrict ourselves to an examination of the chemical characters of the above-mentioned Scotch chalybeates, we observe that the iron is present in large quantities in the form of sulphate, along with sulphate of alumina, on which account they are more nauseous to invalids, and are at the present time rather unpopular. Recently Dr. A. Dewar of Melrose sent to him for analysis a sample of a new well-water, whose peculiarity had previously attracted his attention. A chemical examination of the water in question showed it to be a well-defined acidulous chalybeate, unusually rich in carbonate of iron. The following are the analytical details. (As the surface-water gets access at present, a very exhaustive analysis appeared unnecessary):—Carbonate of iron, 17.5 grains per gallon; alumina, 1.8; silica, 8.5; sulphate of magnesia, 7.8; chloride of calcium, 16.0; carbonate of calcium, 4.1; alkaline chlorides, 11.4—total, 67.1. Carbonic acid gas per gallon, 40 cubic inches.—With the exception of the celebrated "Dr. Muspratt's chalybeate", at Harrogate, which contains 10.8 grains per gallon of carbonate of iron, along with 16.0 grains of protochloride, he does not know of any natural water in this country containing such a large proportion of iron in the form of carbonate. And it is to be observed that the water is not associated with a large quantity of other salts. The well whence the foregoing sample was taken has not been long sunk, and its water is perfectly different from all of those in its immediate vicinity. Should it maintain its present character, he has no doubt that, judging from its own qualities, as well as from its favourable climatic situation, along with the general interest attached to the locality, this chalybeate is certain to recommend itself to the medical profession.

IRELAND.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

THE General Annual Meeting of the Association for the election of Council and Secretary for the session 1871-72 was held on the evening of Wednesday, the 18th of October, in the College Hall. The following were elected members of Council:—Lombe Atthill, M.D., John T. Banks, M.D., Thomas Fitzpatrick, M.D., Samuel Gordon, M.B., T. W. Grimshaw, M.D., Thomas Hayden, F.K.Q.C.P., George Johnston, M.D., Henry Kennedy, M.B., Robert Law, M.D., James Little, M.D., William Moore, M.D., and Alfred H. McClintock, M.D.; *Honorary Secretary*, Henry Eames, M.D.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

ON St. Luke's Day, the 18th of October, the annual stated meeting of the College was held, when the following officers were appointed for the year 1871-72:—*President*, Alfred Hudson, M.D.; *Censor*, Samuel Gordon, M.B.; *Vice-Presidents*, John Ringland, M.D., James Little, M.D., T. W. Grimshaw, M.D.; *Treasurer*, Henry Dwyer, M.D.; *Registrar*, J. M. Finay, M.B.; *Representative on the General Medical Council*, Aquilla Smith, M.D.; *Professor of Medical Jurisprudence*, Robert Travers, A.M., M.D.; *Examiners in Midwifery*, G. Johnston, M.D., and Lombe Atthill, M.D.

THE MEDICAL CHARITIES OF IRELAND UNDER THE POOR-LAW.

I.—THE DISPENSARY SYSTEM.

ALMOST every important enactment in connection with the Poor-law, from the earliest period of its history, has been obtained from a Legislature intimidated into action through the devastations of fever and famine. The passing of the Medical Charities Act (Ireland) in 1851 was consequent on, and necessitated by, a period of pestilence and famine, from which Ireland was just emerging. An impartial observer, writing of that period, says, "In the early months of 1849 there were greater privation and suffering among the population of the western and south-western districts than at any time since the fatal season 1846-47. The cabins were crowded with ill-fed, ill-clothed, sickly people; and epidemic disease found victims prepared for its attacks; and in March cholera broke out in these unions, whence it afterwards extended to other parts of the country. Such was the state of affairs in Ireland in 1849; and it now became manifest that the voluntary dispensary system of medical relief was partial and insufficient. In August 1851, therefore, this Bill was introduced and readily passed."

The advantages that have accrued to the country under the working of this Act, the admirable way in which it has been administered by the Poor-law Commissioners, and the efficient manner in which its objects have been carried out by the dispensary medical officers, have so frequently been referred to in these pages, that it is almost a work of supererogation again to mention them. The dispensary system has been at once productive of improvement in the health of the people, and of the most economic results to the ratepayers, thus proving the relationship that exists between sickness and pauperism. This is further substantiated by the fact that, at present, there are not enough able-bodied persons in the workhouses in Ireland to do the household work of those institutions. It would appear that there are but 4.9 per cent. of able-bodied males and 11 per cent. of able-bodied females in receipt of in-door relief; and only 53,885 persons received out-door relief during the year ending September 29th, 1870. The total number of persons admitted into the Irish workhouses during the same year was 183,135. Of this number, 49,749 were admitted on account of sickness; of these, 8153 were suffering from fever or other contagious diseases, 39,086 from "other diseases", and 2510 from accidental injuries. This does not include the City of Dublin, which furnishes as many cases of fever as are admitted into all the workhouses in the other parts of Ireland together. Neither of the two Dublin workhouses admits zymotic disease of any kind. The dispensary medical officers of Ireland also during the same period attended 784,424 cases of disease; 203,200 of the patients were visited at their own homes. Amongst other cases, they had 7424 cases of scarlatina, 51 cases of small-pox, and 15,744 of fever. They vaccinated 140,220 children. (The workhouse medical officers, in addition, vaccinated 2160, a duty imposed upon them, for which they are not paid.) The dispensary medical officers also certified for 900 dangerous lunatics: this duty is imposed upon them by Act of Parliament, "without fee or reward". They attended 332 patients in the various Bridewells—also without remuneration. The medicines and medical and surgical appliances are supplied by the guardians: the cost for the year was £23,706:15:10. The rent of the dispensary buildings, 1055 in number, was £7352:10:4; books, forms, stationery, printing, cost £2693:16:3; fuel, attendance, midwives' salary, and incidental expenses, amounted to £8763:6:1. These items, along with the salaries of 800 medical officers (£77,917:8:10) and 41 apothecaries (£2362:0:7), in addition to the fees for vaccination, amount to £129,936:0:8, as the expenditure under the Medical Charities Act (Ireland). Thus it may be considered to be conclusively shown that, for a comparatively small outlay, the Irish dispensary system has proved itself to be a great success for the treatment of disease.

There is one very important subject in connection with the Irish Poor-law Medical Service, which, up to the present time, has not received the attention which it merits. I have already said that it is admirably carried out as a curative system; but the deficiency exists in its preventive agency. Ireland is carefully mapped out and subdivided into dispensary districts, which ought to facilitate improvement in its sanitary condition. The dispensary medical officers annually attend more than one-sixth of the inhabitants. They are the first to come into contact with zymotic disease. They are in constant communication

with the poorest classes, by whom hygiene is most neglected and amongst whom, in consequence, zymotic disease is almost invariably present, and from whom it spreads to the upper classes. It was evidently contemplated under the Sanitary Act of 1866 that the dispensary medical officers should be the health-officers of their respective districts, and provision was made in that Act for the payment for extra medical services performed under its provisions. Yet the Poor-law medical officers are not so employed, except perhaps in rare instances; and then they are not paid for their work. Sanitary work is very imperfectly carried out in Ireland. Of this, the report on the "Sanitary Condition of Dublin", which lately appeared in these columns, furnishes an illustration. Sanitarians of such eminence as Dr. Mapother and Dr. Cameron must know well that the facts stated by Dr. Grimshaw and myself are incontrovertible.

To carry out sanitary law in Ireland efficiently the Poor-law medical officers must be *ex officio* officers of health; and, in order that they may be enabled to do their work fearlessly, they must be independent of local boards. They will not, nor can they be expected, to fall foul of the Union magnate, whose tenement-houses require to be drained or whose village pump requires to be repaired; and much less will they excite the ire of a Mayor and Corporation or a Board of Town Commissioners, more especially when their election and payment, and all their hopes of an increase of salary and superannuation, are centred in those authorities.

The only branch of preventive medicine that is thoroughly carried out in Ireland is vaccination; and this resulted in the stamping out of small-pox in 1869. The total births registered in Ireland ending September 30th, 1870, were 149,244; that is, an annual rate of 28 per 1000 of the population. The vaccinations performed by the dispensary medical officers for the same period were 140,220, by the workhouse medical officers 2160; making a total of 142,380, leaving but 6854 unvaccinated under the dispensary system. That is, of course, too small a number to leave for deaths before vaccination and for children vaccinated by other practitioners, and may be accounted for in this way, that some of the reported vaccinations were re-vaccinations, and that a considerable number of children born were not registered. The birth-rate in Ireland has been stated to be nearer 30 per 1000 than 28. If this be so, the other 2 per 1000 would give an addition of 10,000 children to the total births. It is satisfactory to see, therefore, that both the registration and vaccination are improving; and if 30 per 1000 be correct, deducting still-births (which, until they are registered, will always render the birth-rate incorrect), there cannot on an average in each of the 800 districts be more than six or eight children whom the dispensary medical officers fail to vaccinate. This year there has been a considerable increase of small-pox; but in all the cases traced it has been proved to have been imported, and it spread chiefly either among adults that had not been vaccinated at all, or in whom the work was doubtful, or on those in whom the prophylactic power of vaccination had died out. According to the Medical Charities Act, the medical officer "Shall, and he is hereby required to, vaccinate all persons who shall come to him for that purpose". Under another Act the dispensary medical officer is entitled to the sum of one shilling for each case of successful vaccination. In England the minimum fee is one shilling and sixpence; but there is no uniform standard,—one parish may pay two shillings and sixpence for each case of successful vaccination, and the adjoining parish only pay one shilling and sixpence. Where vaccination is performed beyond a given distance from the vaccine station, there is a graduated increase of fee allowed.

There are several curiosities in the vaccination system in England, which are not to be discovered in Ireland. There is a staff of vaccination-inspectors; and there is a system of gratuities over and above the fees paid for vaccination. The regulations which govern the dispensation of these gratuities are far from satisfactory. The quantity per cent. fixed by the authorities is entirely beyond the vaccinator's control; the quality of the vaccination, and the strict observance of the regulations, which involves an immense amount of clerical labour, are the only two conditions which can be controlled and fulfilled by the public vaccinator. According to Mr. Simon's report, the amount distributed under the head of vaccination gratuities in England, amounted to £5685:8 over and above the amount paid for vaccination fees; while the payment for the vaccination of the whole of Ireland was but £6314:4:7. Are not inspectors of vaccination required in Ireland and Scotland as well as England? If gratuities are to be awarded and a large measure of success obtained thereby in England, why not in Scotland and Ireland? Has the expensive machinery with its inspectors, gratuities, vaccination clerks, and the consolidation of large areas and enormous populations into the hands of one vaccinator, separated from the Poor-law Service, protected us from small-pox? It would afford the guardians of Ireland a wholesome lesson, if they would study

the vaccination arrangements in England; viz., the cost and the result. They would surely, then, cease to cry out about the expense of vaccination in Ireland. At one time, they say, the dispensary medical officers vaccinate too many; or they object to pay for re-vaccination, or delay the payment for the vaccinations on the most frivolous grounds. The Commissioners have been necessitated to issue an order that payment should be made in twenty-eight days after the vaccination account is laid before them. This order is not always obeyed; and three months have been allowed to elapse before the account has been paid. As a justification of this delay, the medical officers have been accused of having falsified their returns.

Though the Act requires the dispensary medical officers to vaccinate all who present themselves, yet they are only paid a shilling for each case of successful vaccination of those who reside in their own particular districts; hence, it appears on a careful examination that they only receive a little over tenpence for each case. The State gets gratis the protection of those vaccinated out of their districts. There is not that encouragement given to vaccination which is desirable, and it is adduced as an instance of the narrow-minded views which obtain with regard to preventive medicine; but, notwithstanding this, vaccination has become universal in Ireland. Should an improved system of sanitation be adopted in Ireland, and the Poor-law medical officers be enabled to perform the duties connected with public health fearlessly and independently, zymotic disease would greatly diminish; and perhaps it may yet be said of fever, as it has been said of small-pox, "In Ireland it has been stamped out." It is well to remember that in the year 1838 small-pox caused no fewer than 7150 deaths in Ireland, representing, according to the Irish Census Report of 1841, from 40,000 to 50,000 persons attacked with small-pox in that year alone. In the decade ending 1841, there were 58,006 deaths from small-pox; and in the decade ending 1861, when the Medical Charities Act had been but ten years in operation, the deaths from small-pox had diminished to 12,727.

The secret of the success of vaccination in Ireland is doubtless due to the system, which consolidates in one person the offices of registrar of births and deaths, vaccinator, and Poor-law officer, thus affording the greatest facility for carrying out systematic vaccination. To this, now, is required the addition of the function of health-officer in order to establish an unequalled and almost perfect system of State medical relief. The sanitary powers require to be co-ordinated under a health department. The appointment of a health Commissioner for each province, as has been already suggested, with power to enforce necessary sanitary arrangements, and to whom the dispensary medical officers should report from time to time on the state of their districts, would probably be found to be practically efficient. Nor would the duties on the medical officer be very onerous; for, when he was called to attend fever or other zymotic disease, a few pertinent inquiries, a sharp glance round the house and its belongings, would tell him why such a case was there. In a short time the truth will enter even the dullest parochial brain—that if you remove the cause you prevent the fever.

BENSON BAKER,
District Medical Officer, Christchurch, Marylebone.

PROVIDENT DISPENSARIES.

THE following rules have been suggested by the Medical Subcommittee of the Charity Organisation Society for the Establishment and Management of Provident Dispensaries.*

I. Name of Institution and the boundaries of the district.

II. OBJECT AND DESIGN.—The object and design of the Dispensary is to enable the working classes and such other persons in the district as are unable to pay for medical attendance at the usual charges (provided they are not in receipt of parochial relief), to secure for themselves and their families the advantage of medical attendance, advice, and medicine during illness by their own periodical payments, assisted by contributions from friends of the Institution.

III. THE FUNDS.—There shall be two distinct funds to be called the "Honorary Subscribers' Fund" and the "Members' Fund" respectively. The *Honorary Subscribers' Fund* shall consist of the contributions of friends of the Institution, who shall be called "Honorary Subscribers." The *Members' Fund* shall consist of the periodical and other payments (except those for confinement) made by persons entitled to the benefits of the dispensary, who shall be called "members." The Honorary Subscribers' Fund, with the addition of ten per cent. of the

Members' Fund, shall defray the expenses of management, drugs, and medical appliances, and shall supplement the midwifery fees paid by members. (Rule VIII, 4.) The Members' Fund, after deducting ten per cent., shall be paid to the medical officers, in the proportions mentioned in Rule VIII, 4.

IV. HONORARY SUBSCRIBERS.—The Honorary Subscribers shall be the contributors to the Subscribers' Fund of the following amounts:—Five guineas for a Life Subscription, and half a guinea and upwards for an Annual Subscription. The powers are described under the head of "Management", Rule VII.

V. MEMBERS.—The members shall be persons of the working-classes, and others, whose income is proved to the Committee of Management to be insufficient to pay for medical attendance at the usual charges; always provided that the Committee has power to erase the name of a member who is disqualified by improved circumstances. *Note.*—Families earning not more than thirty shillings a week are considered suitable members of London Provident Dispensaries.

1. Any applicant for membership must state his or her name, age, residence, occupation, and average earnings of self and family, and must deposit three months' subscription, which will be returned if the depositor be not accepted a member. If approved of by the Committee, the applicant will be admitted a member at the end of a month; but if the applicant is then actually suffering from illness requiring medical treatment, he or she must pay an entrance fee of five shillings and three months' contributions. And in the event of any other member of the family requiring medical advice before the expiration of the probationary month, each shall pay a further sum amounting to one half of the entrance fee.

2. The scale of payments suggested is as follows:—

| | Town, per month. | Country, per month. |
|---------------------------------|------------------|---------------------|
| A. Adults over 18..... | 6d. | 4d. |
| B. Young persons (14 to 18) ... | 4d. | 4d. |
| C. Man and wife | 10d. | 8d. |
| D. Children under 14 | 2d. | 2d. |

Any number above four shall not be charged.—*Note.* In order to facilitate the collection of members' payments, it is suggested that cards of four different colours should be issued; so that one-fourth of the members (holding cards of a certain colour) shall come up to pay each week. These sums, when paid, shall be entered on cards to be kept by the members. A man and wife, and their children under 14, shall have one card only.

3. No married man or woman to be admitted unless the whole of the children (if any) join who are under 14 years of age, except in the case of the man when he belongs to some medical club, and produces proof thereof. Children (not orphans) under 5 years of age, cannot be admitted, unless entered with their parent or guardian.

4. Female members of three months' standing may be attended in their confinements on paying at the Institution not less than 15s. in London and large towns, and 10s. 6d. in rural districts, one month previously; or the money may be paid by instalments of not less than 2s. 6d. each, the last of which is to be paid a month previous to confinement. If the attendance of a medical officer is required in a premature confinement by a member, she must pay the full fee of 15s. or 10s. 6d., as the case may be, or any part of it remaining unpaid at the time of sending.

5. Members may have the attendance of the midwife on payment of 5s. The payment must be completed one month before confinement, at one time, or by two instalments; but members of less than three months' standing must pay 7s. 6d.

6. Every member may choose a medical officer from the dispensary staff, but no change can take place during illness without the consent of the Committee of Management.

7. All patients who are able must attend at the dispensary at the appointed times, bringing their cards and prescription papers with them. Children of members will be vaccinated without any charge. Patients must find their own bottles, phials, cups, etc.—*Note.* In some dispensaries it might be desirable to charge for revaccination, to avoid competition with public vaccinators.

8. Patients too ill to attend at the Dispensary must send their cards before nine o'clock in the morning to the residence of the medical officer they have chosen, who will see them at their homes.

9. In cases of sudden illness or accident, members will be attended at any time on sending their cards to one of the medical officers.

10. Notice shall be given by the members to the Honorary Secretary of their withdrawal from the dispensary in consequence of leaving the district; and members who have complied with this rule will be re-admitted on their returning to the neighbourhood without extra payment; but members leaving the district for more than three months without having given notice, will have to pay on their rejoining a fine of 5s. and three months' arrears of contributions.

* Suggestions for amendment can be sent to Dr. Ford Anderson, 28, Buckland Crescent, Belsize Park, N.W.

11. The payments of members must be made in advance; and no member who is in arrear will be entitled to the benefits of the Institution. Members in arrear must pay fines as follows—2d. for the first month, 4d. for the second month, and 8d. for the third month, in addition to the arrears. Any member in arrear more than three months shall cease to be a member, and shall not be again admitted without the special sanction of the Committee of Management.

12. Members of one year's standing may, on changing their place of abode, be entered on the books of other provident dispensaries, provided they have not been longer than one month in the new district, and provided that such members are not ill at the time.

13. *Powers of Members.*—Adult members of one year's standing shall have a voice in the management of the dispensary. (See Rule VII.)

VI. OFFICERS.—Attached to the dispensary there shall be trustees, a treasurer, a committee of management, an honorary secretary, auditors of accounts, medical officers, a dispenser of medicines, a midwife, and such paid assistants as may be necessary; and all officers shall continue in office till one month after the general meeting, or until their successors are appointed, subject, nevertheless, to the provisions of Rules VII, 2, and VIII, 2.

VII. MANAGEMENT.—The dispensary shall be managed by subscribers of not less than three months', and adult members of not less than one year's, standing. In the case of the members, one claim only for a voice in the management shall be acknowledged for a family card. The powers of the subscribers and adult members shall be exercised only at a general meeting, or at an extraordinary general meeting, in accordance with the object and design of the institution.

1. *General Meetings.*—A general meeting* of the working subscribers and adult members entitled to vote (of whom nine shall form a quorum) shall be held annually in the month of — for the following purposes: *a.* To receive the report of the Committee of Management on the transactions and state of the Institution. *b.* To receive the medical officer's report. *c.* To receive the auditor's report of the accounts and state of the books. *d.* To appoint the Committee of Management, Trustees, Treasurer, Honorary Secretary, Auditors of Accounts, and to confirm the appointment of the medical officers for the ensuing twelve months. *e.* To revise, modify, or alter, if need be, the rules of the Institution. *f.* To transact all business relating to the object and design of the Institution.—*Note.* Members entitled to vote must present their cards, in order to avoid recording more than one vote for each card.

2. *Extraordinary General Meetings.*—An extraordinary general meeting of the subscribers and members entitled to vote may be held at any time upon the requisition in writing of nine voters, of whom not less than five shall be subscribers, such requisition to state the object of the meeting, and to be delivered to the Honorary Secretary. Extraordinary general meetings shall have all the authority and powers of, and be subject to the same responsibilities and duties as, general meetings.

3. *Trustees.*—The property of the Institution shall be vested in Trustees [see (1) *d.* of this Rule] for the use and purposes of the Institution, subject to the control, and at the disposal, of the Committee of Management.

4. *Treasurer.*—The Treasurer shall receive all monies paid on account of the Institution, and shall disburse the same on the order of the Committee of Management. He shall keep his accounts according to Rule XII.

5. *Committee of Management.*—The Committee of Management shall consist of not less than nine Honorary Subscribers and adult members entitled to vote; five of these shall be Honorary Subscribers. Three shall form a quorum. The Treasurer, Honorary Secretary, and medical officers shall be *ex officio* members of the Committee. It shall superintend, manage, and conduct the business of the Institution. It shall keep accurate minutes of all its transactions containing cash accounts of receipts and payments. It shall appoint the medical officers, subject to the confirmation of the general meeting or an extraordinary general meeting. It shall have power to appoint and dismiss the dispensers, midwife, and other paid assistants not mentioned by name in Rule XIV. It may also suspend any other officers for neglect of duty, and temporarily appoint another in his stead, and report thereon within ten days to the general meeting or an extraordinary general meeting. In carrying out this clause, action shall be taken by the Committee of Management only when at least two-thirds of its members are present; and it shall report to the general meeting on the transactions, state, and progress of the Institution.

6. *Honorary Secretary.*—The Honorary Secretary shall act under the instructions of the Committee of Management. He shall give eight days' notice in writing to the Honorary Subscribers of any general meeting, and of any extraordinary general meeting, and shall post up a like notice at the dispensary for the same period. He shall receive and pay over to the Treasurer all members' payments, together with all

other monies coming to his hands in behalf of the dispensary; and he shall keep accounts of all such receipts and payments, according to Rule XII.

VIII. MEDICAL OFFICERS.—1. *Number.*—There shall be a Consulting Physician, a Consulting Surgeon, and a Consulting Physician Accoucheur, also medical officers in ordinary; all of whom shall be duly qualified and registered.

2. *Appointment.*—They shall be appointed annually, or when a vacancy occurs, by the Committee of Management, and their names submitted within a fortnight for confirmation to the general meeting, or to an extraordinary general meeting. Canvassing at the appointment of any medical officer is disallowed, and will disqualify for election. *Note.*—The number of medical officers in ordinary to depend on number of members. One for every thousand members suggested as a fair average.

3. *Duties.*—One of the medical officers shall attend daily at the Dispensary at the hours appointed by the Committee of Management; and if a member is prevented from attending by illness, the medical officer selected by that member shall attend at his or her place of abode. They shall attend members (entered under them) in their confinements, who have paid the midwifery fee to the Honorary Secretary; or, in case of premature confinement, members of three months' standing who pay the fee at the time of sending. They shall assist the midwife in cases of difficulty, if she should require them. They shall keep an accurate register of all cases treated by them, and report to the general meeting on the statistics of health of the Institution. They shall inspect and check with their signatures the orders for drugs and the drug bills (see Duties of Dispenser, 1 and 2). No operation of importance shall be undertaken without a consultation with one or more of the Dispensary staff. They shall give three months' notice of leaving.

4. *Remuneration.*—The remuneration of the medical officers shall consist of the Members' Fund (after deducting 10 per cent.) to be divided amongst them half-yearly at Midsummer and Christmas, by the Committee of Management, in proportion to the amount received from the members who have selected them. For every case of confinement which they attend, under Rule V, 4, they shall receive the fee paid by the member, and, in addition, six shillings from the Honorary Subscribers' Fund; and for every case which they attend at the requisition of the midwife (Rule X, 2), they shall receive ten shillings and sixpence from the Honorary Subscribers' Fund.

IX. DISPENSER.—1. *Qualifications, Appointment, Salary, Dismissal.*—A Dispenser, who, if possible, should be a person registered under the Pharmacy Act, shall be appointed by the Committee of Management, at such salary and giving such security as the Committee shall determine, and may be dismissed at its discretion at a special meeting of the Committee called for that purpose, on payment to him of a proportionate amount of his salary.

2. *Duties.*—He shall be present at the Dispensary daily at and for such time as the Committee shall determine. He shall take charge of the drugs and appliances. He shall faithfully compound and dispense medicines to the members of the Dispensary according to the prescriptions of the medical officers—delivering them with printed, or plainly written, labels of directions. He shall from time to time prepare a list of whatever drugs, etc., may be wanted for the Dispensary, and enter the same in a book, which, with the order for the same, shall be signed by two of the medical officers; and all bills for drugs, etc., shall be examined with such order-book, and signed by the Dispenser and medical officers; and the order-book and bills shall be laid before the Committee of Management at its quarterly meetings.

X. MIDWIFE.—1. *Appointment.*—The Midwife, who should be duly qualified, shall be appointed by the Committee.

2. *Duties.*—To attend all members in their confinement who have an order from the Honorary Secretary requiring her attendance; and in cases of premature confinement, to attend members who pay five shillings to her at the time of sending, unless they are members of less than three months' standing, when they shall pay her seven shillings and sixpence. Sums received by her in this way to be handed to the Honorary Secretary or Treasurer. In cases of difficulty, she shall send for the medical officer under whom the member is entered.

3. *Remuneration.*—For each case of confinement attended she shall receive five shillings, unless in case of a member of less than three months' standing, when she shall receive seven shillings and sixpence.

XI. ASSISTANTS.—Such paid Assistants as Assistant Secretary, Collector, and Attendant, shall be appointed by the Committee of Management, as may be required; and in some localities the two former of these offices may be combined with that of Dispenser.

XII. ACCOUNTS AND AUDITORS OF ACCOUNTS.—The Treasurer shall keep a debtor and creditor account with the Committee of Management. The Honorary Secretary shall keep two distinct accounts:

1. The Subscribers' Fund Account; 2. The Members' Fund Account. The Auditors of Accounts shall annually, prior to the general meeting, audit such accounts, and shall call for and inspect all books and vouchers and documents relating thereto; and shall report the state of the books and the financial position of the Institution to the general meeting.

ROYAL COLLEGE OF SURGEONS.

THE following is an abstract of the unconfirmed minutes of the meeting of the quarterly Council on the 19th instant. On the President reporting the death of Mr. Samuel Solly, F.R.S., since the last meeting of the Council, and adding that the vacancy thereby occasioned would be filled up at the annual meeting of the Fellows in July next, it was moved by Mr. SOUTH, the senior member of the Council, and seconded by Sir WILLIAM FERGUSSON, Bart.—“That the President be requested to convey the sincere condolence of this Council to Mrs. Solly and her family, on the irreparable loss they have sustained by the death of Mr. Samuel Solly.”

The thanks of the Council were unanimously voted to Mr. Francis Kiernan, F.R.S., F.R.C.S., for his valuable donation of pathological specimens to the Museum.

The following report of the Committee on the financial arrangements proposed in the draft scheme for an Examining Board for England was read.

“Your Committee, appointed by the Council on the 24th of July last, ‘to consider and report to the Council on the financial arrangements included in the appendix’ to the draft scheme for an Examining Board for England, have held two meetings, on the 31st of July last, and on this date, and, having considered the same, have agreed to the following report to the Council, viz.:—

“That the following are the propositions contained in the appendix to the draft scheme, viz.:—That one-half of the fees received for the examinations be appropriated to the payment of Examiners, Assessors, and other expenses incidental to the examinations, in such manner as the Committee of Reference may determine, subject to the approval of the co-operating medical authorities. That the remaining half of the fees received for the examinations be appropriated in the following manner: Towards the maintenance of the Museum of the Royal College of Surgeons as an institution of national as well as professional importance; for its unendowed professorships, and other allied expenses, one-third; in respect of medical qualifications to be granted, one-third; in respect of surgical qualifications to be granted, one-third.

“And that, in the opinion of your Committee, the said propositions should be adopted by the Council, with the following alterations, viz.:—That the fees received for the examinations be appropriated to the payment of Examiners, Assessors, and other expenses incidental to the examinations, in such manner as the Committee of Reference may determine, subject to the approval of the co-operating medical authorities; and that the residue be divided in the following manner, viz.:—Towards the maintenance of the Museum of the Royal College of Surgeons as an institution of national as well as professional importance; for its unendowed professorships, and other allied expenses, one-third; in respect of medical qualifications to be granted, one-third; in respect of surgical qualifications to be granted, one-third.

“RICHARD QUAIN, *Chairman.*”

It was moved by Mr. LE GROS CLARK, and seconded by Mr. CHARLES HAWKINS—“That the report of the Committee be adopted.” Thereupon the following amendment was proposed by Mr. HANCOCK, and seconded by Dr. HUMPHRY—“That the financial arrangements, as originally proposed in the appendix to the draft scheme for an Examining Board for England, be adopted in lieu of those contained in the report from the Committee.” The votes of the Council having been taken on the amendment, a majority was in its favour.

The sum of ten guineas was voted towards the memorial window to John Hunter in Kensington New Church, on the application of Messrs. Buckland and Merriman, the Honorary Secretaries.

The Secretary reported that Mr. Charles Hawkins had offered to the acceptance of the Council a small coloured engraving of the picture of Henry VIII presenting the Charter to the Barbers and Surgeons.* The donation was accepted with thanks.

Mr. JOHN GAY gave notice of the following motion at the next meeting of the Council:—“That the proportionately large number of rejections at the preliminary examination for the diploma of the College is a fact which demands the serious consideration of the Council. And that a Committee be appointed to consider the subject, and to report to the Council thereon.”

* This is a most interesting little picture, and apparently of great rarity, inasmuch as it is unknown to the authorities of the British Museum. Mr. South obtained permission to have it copied for his History of the College, now preparing for publication.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Tuesday, the 31st day of October, 1871, at One o'clock *precisely*, to elect a Secretary, and for other important business.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary* (pro tem.)
13, Newhall Street, Birmingham, October 17th, 1871.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ORDINARY MEETING.

THE next Ordinary Meeting of this Branch will be held on Tuesday, November 7th, at the Town Hall, Cardiff, at 1.30 P.M. The Council will meet at 12.30 P.M.

The Dinner will take place at 5.30 P.M.; and members may introduce professional friends to the meeting and dinner.

Members intending to read papers or notes of cases are requested to communicate the titles thereof as soon as possible to one of the Honorary Secretaries.

All members who purpose joining the dinner, will oblige by communicating their intentions to one of the Honorary Secretaries before the 31st instant.

ANDREW DAVIES,
ALFRED SHEEN, M.D., } *Honorary Secretaries.*

October 4th, 1871.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE first general meeting of this Branch was held on October 12th, at 3 P.M.; present, OLIVER PEMBERTON, Esq., President, in the chair, and sixty-three members and visitors.

New Members.—The following gentlemen were elected members of the Association and Branch:—Mr. Evans, Sutton Coldfield; Dr. Jones, Coleshill; Mr. H. C. Moore, Lifford; Mr. J. P. Bradley, Birmingham; Dr. Philpot, Birmingham; Dr. R. L. Campbell, Stourbridge; Dr. Blackwood, Wednesbury; Mr. C. H. Greaves, Stafford; Dr. Crawford, Stafford; Mr. C. E. Handyman, Worcester; Mr. Charles Perks, Burton-on-Trent; Mr. Whitehead, Birmingham; Mr. Briggs, Birmingham.

Communications.—1. Dr. JAMES THOMPSON (Leamington) exhibited a specimen of Rupture of the Left Ventricle of the Heart. [See page 496.]

2. Dr. JAMES THOMPSON also showed a specimen of Hereditary Narrowing of the Rectum. The subject from whom the specimen was taken died at the age of forty-eight from chronic peritonitis, the result of the bursting into the peritoneal cavity of an abscess, situated between the upper surface of the right lobe of the liver and the diaphragm, and which appeared to have been caused by an old injury sustained in rowing some years previously. There was a family history of trouble in the lower bowels. During life, several attempts had been at various times made to pass a long tube through the rectum without success. When the specimen was fresh, it with difficulty admitted the passage of the forefinger; there was no induration, and several internal and external hæmorrhoids existed. During life, the finger passed into the rectum reached the opening of the tube, which felt like the os uteri partially dilated.

3. Mr. ARTHUR BRACEY exhibited a case of Congenital Cataract in a girl aged 12 years. When the pupil was fully dilated by atropine, the lens was found to be opaque in its centre only, and a margin of transparent tissue existed. This condition being regarded as permanent, an artificial pupil was made by iridectomy over the clear portion of the lens, and the patient now has excellent vision.

4. Mr. A. BRACEY also brought a patient in whose eye the Lens had become Dislocated into the Anterior Chamber.

5. Mr. LAWSON TAIT showed an ingenious little addition to the obstetrician's armamentarium in the shape of a Thimble for Rupturing the Membranes, devised by Dr. Gordon of Edinburgh. The thimble was most effective, and could, from Mr. Tait's experience, be used without injury.

6. Mr. CARDEN read a paper entitled Some Points in Surgical Experience. The paper gave an interesting account of Mr. Carden's amputation at the knee, with the various criticisms which it had called forth, and the result of the continued experience in its application. It was followed by an interesting discussion.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 17TH, 1871.

T. HOLMES, F.R.C.S., Vice-President, in the Chair.

MR. HOLMES, in taking the chair in the absence of the President, offered a few remarks congratulating the Society on the continued and very marked prosperity of the Society. A proof copy of the *Transactions* for the past session was laid on the table.

Dr. PEACOCK exhibited a very interesting specimen of combined Aortic and Mitral Valvular Disease, consequent on rheumatic endocarditis. The specimen was taken from the body of a young man eighteen years of age, who had suffered from several attacks of acute rheumatism and one attack of chorea. Since the first attack of rheumatism, he had been subject to dyspnoea.

Dr. T. H. GREEN brought forward a specimen of Acute Interstitial Hepatitis obtained from the body of a boy ten years of age. Three weeks before admission into the Charing Cross Hospital, the patient was scarcely unwell, but two days before admission he vomited. He then became intensely jaundiced, and his stools white. Two days afterwards, the pupils dilated, delirium supervened, and he died in a few days comatose. After death, all the viscera excepting the liver were found to be healthy. The stomach and intestine were found full of blood. The liver was slightly diminished in size. In the hilus were found two enlarged glands pressing on the common bile-duct. The gall-bladder contained half-an-ounce of bile. Microscopically, there was seen cellular infiltration of the interlobular spaces; also increase in the fibrillated tissue. The hepatic cells were very little altered. Dr. Green was of opinion that the change in the liver was inflammatory, but the peculiarity of the jaundice and the absence of bile from the stools were probably due to the pressure of the glands.—Dr. MURCHISON asked what the temperature was; he thought Dr. Green was probably correct regarding the cause, but if no jaundice had occurred, what would have been the diagnosis? He had found that the temperature was barely raised in some cases of atrophy of the liver.—Dr. GREEN, in reply, stated that there was no pyrexia.

Dr. MURCHISON exhibited some Hydatids which had been successfully removed by operation during life from the Abdominal Cavity of a woman affected with Multiple Hydatid of the Peritoneum. The patient, a woman aged 29, had been under his care in the Middlesex Hospital. She was rather emaciated, but enjoyed good health. The girth of the abdomen was thirty-four inches. There was no ascites, and no solid mass; but the surface of the abdomen presented a nodular feel, the nodules varying from the size of a cherry to that of a fist. Some were fixed; others, again, were movable. They were closely aggregated together throughout the abdomen, and hydatid vibration was felt. There was no tenderness at any part. These symptoms led Dr. Murchison to believe that the case was one of multiple hydatid of the peritoneum. The patient would not submit to an operation, and refused to remain in the hospital. She saw Mr. Spencer Wells, who punctured the abdomen. He afterwards opened the abdomen, and removed three or four pounds in weight of hydatids. For some months afterwards she remained well, but the patient has since been lost sight of. It appeared from the history obtained, that the patient had been married at eighteen years of age. She was delivered of a child a year afterwards; and, three months later, symptoms referable to the disease presented themselves. She was suddenly seized with pain under one side, where a lump appeared, with symptoms of peritonitis. This passed off; but she had several attacks of a similar character afterwards, during which period she bore four children.

Dr. MURCHISON brought forward a second case of Hydatid of the Peritoneum. The patient was a man forty-five years of age, and remained in the Middlesex Hospital from March 30th until April 10th. The abdomen was enlarged; and six different masses were felt, some of them being very superficial. The first symptom which drew the patient's attention to the disease was pain in the abdomen. Three drachms of fluid were drawn off from one of the cysts; it contained abundance of chlorides, but no hooklets.

A prolonged and interesting discussion ensued on these two cases of hydatid. The PRESIDENT observed that, so far as he knew, the case of the woman was the first in which hydatids had been removed by operation.—Dr. WILKS alluded to a case of multiple hydatid of the abdomen which had been removed at Guy's Hospital.—Dr. PHILLIPS gave the history of this patient in some detail. The patient was admitted for ovarian dropsy; but, on being operated upon, it was discovered that the case was one of hydatids. They were contained in

a cyst and not scattered over the abdominal wall as in Dr. Murchison's case. Dr. Wilks, in remarking on the primary seats of the disease, asked if they ever began in the abdominal wall, and if so, in what tissue.—Dr. MURCHISON replied that there was nothing to shew definitely that the liver was affected primarily in his first case; still the symptoms pointed to that organ being first attacked.—Dr. MOXON alluded to a case of multilocular hydatid of the spinal column, and Dr. MURCHISON to a similar one in the Museum of the Middlesex Hospital.

Dr. ROBINSON brought forward a case of some obscurity which he believed to have been an example of Acute Laryngitis, producing sudden death by asphyxia.

Dr. PAYNE shewed a gland from the body of a patient who died from Lymphadenoma. The disease had lasted three years. From time to time there was considerable febrile disturbance; and last year symptoms at first of paraplegia, and latterly of loss of motor power in the left arm, presented themselves. Consolidation of the left lung and diarrhoea supervened. The specimen showed microscopically the second stage of the changes in which these glands undergo thickening and increase of the network passing through the gland. In the general history of lymphadenoma there is first hypertrophy of lymph-elements, which is afterwards destroyed by the increased fibrous stroma.

Dr. GOODFELLOW exhibited an interesting specimen of Aneurismal Pouch, originating from the wall of the heart near one of the aortic semilunar valves. The aortic valves and aorta were greatly diseased, and the heart weighed sixteen and a half ounces. The subject of the disease was a porter, forty-eight years of age, who had suffered only a few months previously from sciatica, when symptoms of dyspnoea supervened, which increased until a fortnight previously to his admission into the Middlesex Hospital.

Dr. MURCHISON exhibited a specimen of Cardiac Aneurism, which was filled with dark coagulum, and bulged into the right ventricle. The patient had complained of cardiac pain and palpitation for several years. There was a loud systolic murmur over the whole heart and at the angle of the scapula; but there was no disease of the mitral or aortic valves. Albuminuria latterly supervened, and the patient died of dropsy.

Dr. MOXON brought before the notice of the members the fact that in the bodies of persons who have died with old stricture of the urethra, wasting disease of the kidney is frequently found; and he asked the opinion of the Society whether suppurative kidney-disease is not curable and frequently recovered from.—The PRESIDENT believed that it was not necessarily fatal.—Further discussion on this interesting subject was prevented by the lateness of the hour.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 4TH, 1871.

J. BRAXTON HICKS, M.D., F.R.S., President, in the Chair.

Dr. BARNES presented, on behalf of Dr. Boddaert, of Brussels, the Lever employed by Dr. Boddaert; also a Memoir on the Rational Use of Forceps and Lever by the same gentleman. The lever was a solid bar, nearly straight, and without fenestra; it could only be a lever, and in no sense a tractor.

Dr. BARNES exhibited a specimen of an Iliac Artery obstructed by a clot. The case was described by Mr. Williams, of Truro. The subject was seized during an abortion with prostration, coldness, failure of pulsation, and gangrene of the leg of the side on which the artery was plugged.

Mr. SPAULL exhibited a foetus, the subject of Hydrocephalus. The child presented by the breech, and the head had to be perforated.—Mr. MITCHELL had met with several cases of the kind; in one of them he had perforated the head and delivered the child with forceps, all having been head-presentations.—Dr. G. R. P. MURRAY thought that in such a case as that related, much diagnostic information could be obtained by placing the hand on the lower part of the abdomen and feeling the unusually large size of the uterus after the birth of the extremities and body of the child. The possibility of the existence of twins should, however, be remembered.

The PRESIDENT read a paper on the Intermittent Contractions of the Uterus during Pregnancy; their physiological value and assistance in diagnosis. He shewed as the result of eight years' constant observation, that the habit of the uterus was to contract at intervals of from five to twenty minutes, and then to relax. These contractions, he said, lasted about three or five minutes, although under circumstances of irritation they might continue longer, and even in diseased states of the ovum were almost continuous. Only one apparent exception had been noticed, in a case of paraplegia, in which the contractions were not noticed. They were observable as early as the third month of preg-

nancy. They were not due to the irritation of examination; for, as frequently as not, the uterus would be found hard on first handling it. Dr. Hicks thought that at least two advantages were derived, physiologically, from these contractions: the one to supplement the heart's impulse in a part remote from its influence; the other to assist the ultimate disposition of the foetus. He discussed at length the assistance which these contractions gave the practitioner in the diagnosis of extra-uterine from uterine tumours, of uterine tumours from pregnancy, and of extra- from intra-uterine pregnancy.—Dr. BARNES called attention to the work of Dr. Tyler Smith, in which the peristaltic movements of the pregnant uterus were well described.—Dr. HICKS said the extract quoted from Dr. Tyler Smith's work had escaped his notice. But the peristaltic movements referred to by Dr. Smith were the result of external excitation.

Dr. COPEMAN, of Norwich, related three cases which he had met with in practice. The first was one of Induction of Premature Labour on account of excessive vomiting; the second, a case of Large Fibrous Polypus of the Fundus Uteri; and the third, a case of Procidencia Uteri in a maiden lady.—Dr. BARNES agreed with Dr. Copeman, that the introduction of a bougie or catheter into the uterus was the best mode of provoking labour, but it could not be depended upon to complete the process.—Dr. PROTHEROE SMITH referred to an instrument shewn him by Dr. Tarnier, of Paris. It consisted of a metal grooved director, about eight inches long, carrying a tube of India-rubber, thin at its distal extremity. This was introduced into the uterus, towards the fundus, separating the membranes. It was then distended with water, so as to form a bulb-shaped bladder when the metal director was withdrawn. Uterine action usually set in within a few hours.—Dr. PLAYFAIR generally used a simple catheter, which he passed between the membranes and the uterine wall; but on more than one occasion he had seen it fail.—Dr. BRUNTON had induced premature labour successfully nine or tentimes by injecting warm water into the uterus. He had, however, now given up that method, both on account of the danger said to attend its use, and because in one case it totally failed. He now used a bougie (No. 12), in which no eye had been cut.—Dr. G. C. P. MURRAY expressed his belief in the value of the plan of injecting water into the uterus.—The PRESIDENT said that the safety of the child depended on two conditions: the rapidity with which the uterus came into action, and the freedom with which the child passed through the os uteri.—Dr. WILTSHIRE suggested the desirability of inducing premature labour at a period which corresponded to a menstrual epoch.—Dr. ROGERS had early in his career been accustomed to puncture the membranes high up, so as to save some of the liquor amnii, having first dilated the cervix with sponge-tents. Of late years he had used a long catheter with an opening at its rounded extremity.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 16TH, 1871.

ANDREW CLARK, M.D., President, in the Chair.

THE President made some introductory remarks.

Killing Animals without Pain.—Dr. B. W. RICHARDSON read a paper on the possibility of destroying animals intended for human consumption, without the infliction of pain. He recommended the following agents for producing insensibility: 1. Hydramyle and bichloride of methylene; 2. Carbon disulphide and methylene bichloride; 3. Chloroform or methylene and coal-gas. When a butcher kills an animal in the usual way, bleeding occurs; there are primary syncopal convulsion after the loss of forty ounces of blood, and fatal convulsive paroxysm after the loss of about ten ounces more. If the vapour of two drachms of either of the agents referred to were administered, narcotism was produced, and the primary convulsion was suspended or much reduced; the second was an entirely painless phenomenon. No odour or taste of the anæsthetic was left in the flesh of the animal.

Hypovenosity of the Lower Limb.—Mr. GAY read a paper on this subject. The term was used to express a condition in which there is a deficiency in the veins of the saphenous system, as hypervenessity might be used to express an excess in the development of these veins. In the latter, especially with varicosity, the limb was usually lean, and the outlines of bone, muscle, and tendon, were, as a rule, sharp and well defined. In hypervenessity, these outlines became gradually effaced, the skin became dusky, the whole limb dense or brawny, and muscular action difficult and painful. With the exception of perhaps a few dilated or varicose venous twigs below the ankles, or on the dorsum of the foot, there was scarcely a vein to be seen. As the disease advanced, the subdermoid fat layer became denser and lost its elasticity. Its remote causes were disease of the vessels, such as phlebitis, insufficient muscular exercise, systemic asthenia, etc. Degeneration and conse-

quent incompetence of the saphenous veins and their branches was its direct or exciting cause. Secondly, it was presumed, the deep trunk veins became dilated, their valves partially inert, and fatty deposit and degeneration took place in the muscles and their connective tissue. The grounds for this inference were: (a) that functional deterioration of the saphenous system, through thickening, atrophy, retrecissement, or thrombus, was an occasional pathological fact; (b) and that saphenous inefficiency as shown by a varicose condition of the venous radicles, as well as by a dusky colour of the skin, otherwise than from melasma or scleroderma, were habitually associated with and indicated dilatation of the deep trunk veins. The author remarked that the venous system was double—*superficial* and *deep*, or *main* and *complementary*; the former playing to the latter the part of a waste-pipe, or compensating system, ready to relieve it when its vessels were unduly filled. The deep veins constituted the *real* venous system; therefore, the current through these veins, in the healthy performance of the double circulation, was maintained by a combination of forces, of which voluntary muscular was not a necessary co-efficient. The current through the complementary veins, on the other hand, received, in the limbs more especially, its principal impulse from voluntary muscular action. If its vessels became inefficient, the surplus quantity of blood due to muscular exercise was poured into the deep veins with a force that resulted in dilatation, valvular incapacity, muscular deterioration, and other changes. The forces which determined the returning current of the blood were complex: the principal of them were the heart's action, arterial elasticity, and the influence of the nervous system. Of these, each might separately be cut off, and yet the blood would find its way back to the heart. Moreover, the blood passed from the arteries into the veins without the aid of any of these forces. Mr. Gay believed that there was a sort of molecular force which existed in connection with muscular tissue or sarcode, and that to it the venous current was mainly due; that in fact, as an agent in the circulating system, it was to the capillary very analogous in some respects to what the heart was to the arterial system. As the deep or main system of veins was associated with the nutritive processes, so the superficial or complementary was essentially eliminatory. From these veins in the lower limb dropsical effusion took place; and it was not improbable that in other dropsies, as of the pericardium, pleura, or peritoneum, the fluid escaped from veins of the complementary system. The treatment was the reverse of that ordinarily employed, viz.: an entire freedom of the limb from all compresses, enforced walking exercise, begun in moderation and periodically increased, hot applications, especially hot sea-water to the limb, and perhaps the internal administration of liquor potassæ; in short, the use of all those measures, hygienic and therapeutic, which could, on the one hand, restore the circulation of the limb, and on the other, relieve it of its superabundant fat.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, OCTOBER 4TH, 1871.

JOHN THORBURN, M.D., President, in the Chair.

Retrolbulbar Neuritis.—Dr. SAMELSON related the history, together with the *post mortem* account by Mr. James Taylor of Chester, of the following case. A man, aged 30, had epileptic fits in 1868, and again, followed by delirium, about Christmas 1870. On the 12th of March last, the sight of the right eye was suddenly reduced to mere perception of light. The ordinary ophthalmoscopic phenomena of neuroretinitis were but faintly marked; but the macula lutea was occupied by a dark red spot, such as is commonly observed in cases of embolus of the central artery of the retina. There were persistent pain and tenderness on percussion above the right orbit; the eyeball was painful on moderate pressure, and on being directed upwards or outwards. All the morbid symptoms gradually abated within three weeks, under the repeated application of leeches to the forehead. The sight was again equal to No. 20 of the Moorfields test-types. In April, he had epileptic fits, followed by delirium. Death occurred on the 27th. The whole of the pia mater was found to be intensely injected; the arachnoid at the base of the brain was very thick, white, and opaque; and behind the chiasma was a mass a third of an inch across and an eighth of an inch thick, of almost cartilaginous hardness, apparently part of the thickened arachnoid. On cutting through into the subarachnoid space, some gelatinous material bulged, very similar to the coagulated fibrine occasionally found in the peritoneal cavity. The surface of the brain here was rather brown and softer than natural. The pituitary body, very red and granular, completely filled up the sella Turcica. The sheaths of the optic nerve were much thicker and denser than usual; and this seemed to be a continuation of the thickening of the arachnoid. The eye could not be obtained for examination.

Paresis of the Third Nerve.—Dr. SAMELSON related the case of a girl 14 years of age, who after an illness of five weeks, consisting in headache, languor, and inappetence, was in April last seized with slight ptosis, divergence, and mydriasis, affecting the left eye. After a severe attack of headache and a fall out of her bed on the night of the 27th of April, she was found dead in the early morning. On inspection of the cranial cavity, fully a tumblerful of dark and for the most part fluid blood was upon the base of the skull, collected in the fossæ occipitales. The right lateral ventricle contained a small hydatid.

A Shot in the Eye.—Dr. SAMELSON showed the recently enucleated left eyeball of a farmer, who in April last was accidentally wounded, when the sclerotic was ruptured near its temporal junction with the cornea. Besides total detachment of the retina, a shot was shown to be impacted within the ciliary structures, behind the nasal corneo-scleral junction.

Extraordinary Case of Foetation.—Dr. J. O. FLETCHER showed a full-grown foetus which had been removed from the body of a woman aged 57 by Mr. Heathcote, from whom and from Dr. Whitehead, who had seen her during life, the following history was obtained. Mrs. — had had five previous pregnancies—three living children. She ceased to menstruate when she was 31, in March; and, in the following December, labour-pains came on, and lasted for two days. The waters were said to have come away; but no presentation could be felt. After the cessation of labour-pains, the swelling was said to have diminished. The lochia continued to flow for four months, and then ceased, the menses recurring regularly from that time till the age of 48. The abdominal tumour remained, and the patient complained of feeling a cold dead lump in the belly. Dr. Whitehead, who examined her last July, found the os uteri shapeless and turned to the left side, but could not detect the child. Dr. Fletcher remarked that the case at first looked like a tubal foetation; it had, however, many of the characters of interstitial foetation. A committee was appointed to examine the specimen, and to report upon it at next meeting.

Subcutaneous Section of Neck of Femur.—Dr. HARDIE showed a case in a woman 22 years of age. The operation was performed for ankylosis with malposition. The patient had now a perfectly straight limb, and could walk about with great freedom.

Congenital Cystic Tumour.—Dr. HARDIE showed a child from whose neck he had removed a tumour of this description.

False Conception.—Dr. HADDON related a case. The patient, 28 years of age, had borne four children, one of whom was born in a state of decomposition a month past the full time. Menstruation ceased on 7th April, 1871, having on that occasion been more painful, more profuse, and four days longer in duration than usual. On 6th June, the woman having been in the interval without discharge and with none of the usual feelings of pregnancy, pains set in, accompanied by a discharge at first pale, afterwards becoming bloody. On 14th June, a pear-shaped mass, of the size of a small hen's egg and of firm consistence, was expelled from the uterus, after which the patient rapidly recovered. On section the centre of the mass was found to be occupied by a cyst with a smooth lining membrane containing a little clear serum. The mass was, in Dr. Haddon's opinion, an old clot of blood; and, to show that such clots could be formed in the uterus independent of conception, he referred to "polymenorrhic stratifications", as figured by Dr. Granville in his *Illustrations of Abortion and the Diseases of Menstruation*, and to Dr. Graily Hewitt's *Diseases of Women*.

The Use of the Ophthalmoscope in Epilepsy.—Dr. HADDON had examined the eyes of eleven epileptics, hoping to detect some peculiarity which might assist in the prognosis of the disease. In ten of these, he found a dark rim surrounding to a greater or less extent the clearly defined margin of the optic disc; in the eleventh, who had fewest fits, no trace of such a rim could be detected. The rim was found well-marked in a masturbator; while it was entirely absent in the eyes of many healthy friends. In Dr. Haddon's opinion, this appearance, although not perhaps peculiar to epilepsy, yet pointed to some disease or derangement of nutrition which might assist in the study of its pathology.

Complete Evulsion of the Scalp.—Mr. STOCKS showed the entire scalp of a mill girl, 23 years of age, which was accidentally torn off by machinery five weeks ago.

Application of Heat or Cold to the Body.—Dr. W. ROBERTS exhibited a pad designed to apply regulated and sustained heat or cold to the surface of the body. The pad consisted of a flat coil of continuous and very thin India-rubber tubing cemented to a strong canvas backing. Through this a current of water, of any temperature, could be passed by connecting one end of the tube with a vessel of water (warm or cold) placed on a raised level, and putting the other into a vessel on the

floor. Dr. Roberts had had two such pads constructed: one a foot in diameter for local effects, and another measuring three feet by two to place under the back or round the trunk to obtain a general effect on the temperature of the body.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE Annual Report of the Poor-law Medical Officers' Association has been delayed through the indisposition of Dr. Joseph Rogers. From the balance-sheet, it appears that there is but £52 : 7 : 10 in hand. The arrears of subscription are considerable. Members are asked cordially to co-operate in the work of the Association by forwarding their subscriptions, and communicating with their parliamentary representatives, and petitioning, when the time shall arrive, in favour of the Poor-law Medical Bill which Mr. Corrance intends to introduce next session. Particulars of the Bill and forms of petitions will shortly be published; and the opinions and criticisms of the Poor-law medical officers will be invited.

The subscription to the Poor-law Medical Officers' Association is *five shillings* a year, and, in order to simplify accounts, will in future become due on the 1st of January. It is payable to J. Wickham Barnes, Esq., 126, Gower Street, Bedford Square, London.

VACCINATION.

DR. PITT has been requested by the Norwich Board of Guardians to visit the parish school containing nearly 300 children, and inspect and report as to the condition of the vaccination. Dr. Pitt found twenty-six children unvaccinated. He furnished his report, for which he charged one guinea. The guardians have appreciated the service by withholding the payment until it is approved of by the Local Government Board. This appears to be an extra duty, and it is to be hoped that the Local Government Board will at once approve of the important service of Dr. Pitt and sanction the payment of the fee.

OBITUARY.

JAMES STANLEY CHRISTIAN, L.R.C.P.

DR. CHRISTIAN was the third son of James Christian, Esq., of Sligo, who held the then responsible and lucrative office of clerk to the grand jury. His sudden death left a large family very scantily provided for; and the subject of this notice had many and great difficulties to surmount in entering the medical profession. He always attributed his subsequent success in life to the energy and example of his eldest sister, who survives him, and who, with limited means, devoted herself to the education and support of the younger children of her parents.

Mr. J. S. Christian became a member of the Royal College of Surgeons in 1837, an extra-licentiate of the Royal College of Physicians of London in 1841, and a Fellow of the College of Surgeons of Ireland in 1844. After practising for some time in the county of Monaghan, where he made many friends, he came to England, and practised near Deal in Kent. He ultimately settled at South Kensington, where he has been well known and esteemed for upwards of twenty years, and where he succeeded in establishing one of the best practices in the west end of London.

Dr. Christian married, in 1857, Julia, daughter of the late E. L. Ogle, Esq.; he had one child, who died in 1867.

His devotion to his professional duties must be considered as the remote cause of his premature death. He neither allowed himself that relief from excessive labour, nor that support for an overworked system, which he constantly prescribed to his patients. On Sunday, the 8th instant, as he was seated conversing with his brother-in-law, Mr. Ashurst, at the house of the latter in Kensington, he was suddenly seized with paralysis of the left side; and though Drs. Sieveking, Barclay, and Seaton were promptly in attendance, and administered remedies to which at first the disease appeared to be yielding, on the night of the 14th an unfavourable change took place, and he expired in the house of his brother-in-law on Tuesday morning, the 17th instant. His death leaves a void difficult to fill, in a very numerous circle of friends: all his patients were such.

AUGUSTUS G. GREAVES, M.R.C.S., DERBY.

MR. GREAVES died somewhat suddenly on October 1st, from thoracic aneurism. He had been in failing health for the last three years, being at times quite unable to attend to his professional duties. He had practised as a surgeon in Derby about thirty-five years. For a great portion of that period he was one of the surgeons of the Derby Provident Dispensary, and up to the time of his death held the appointment of medical attendant of the Diocesan Training College at Derby. Few men had more friends, or were more generally esteemed.

JOHN BAIN, L.F.P.S. Glasg., JOHNSTONE, RENFREWSHIRE.

MR. JOHN BAIN died on September 22nd, at the early age of twenty-seven, from typhoid fever, of ten days' duration. He commenced his professional career by acting as Surgeon for about a year in the anchor liner, *Britannia*. He was then appointed House-surgeon for the Paisley Infirmary, from which he, sixteen months ago, removed to Johnstone to commence general practice. During the short time he was in Johnstone he made many friends, by whom his early removal is deeply regretted. He was genial, warm-hearted, and unwearied in alleviating the distress of others, and he has died in the discharge of his duty.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS.—At a meeting of the Council of the College on the 19th instant, Mr. Robert Boyle Travers, of Ros-tellan, co. Cork, was admitted a Fellow; and Mr. Richard Bowes, of Richmond, Yorkshire, was elected a Fellow of the College. The gentlemen are both members of the College: their diplomas bearing date respectively May 21st, 1841, and November 4th, 1831.

The first examination for the present session for membership of the College will take place on the 4th proximo for the primary, and on the 10th for the pass.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 19th, 1871.

Carey, Richard John, Northampton
Kindon, Joseph, Croydon
Robinson, Edmund, Leeds
Wall, William Barrow, Wedmore, Somersetshire

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the monthly examination, held on October 10th, 11th, and 12th, the following candidates were successful.

For the Licence to Practise Medicine.—Sydney Richard Smyth, William Robert Hughes, Henry Thompson Cox, Nicholas Skottowe Smith, Patrick Freebern Gavin, and Frederick A. Ernest Barnardo.

For the Midwifery Diploma.—Richard George O'Flaherty, Halton Smyth, Sydney Richard Smyth, Wm. Robt. Hughes, Henry Thompson Cox, Nicholas Skottowe Smith, Fred. A. E. Barnardo, and Patrick Freebern Gavin.

APOTHECARIES' HALL, DUBLIN.—At the preliminary examination in Arts, held on October 19th, the following gentlemen received certificates entitling them to commence their medical studies.

James Roche Nagle, James Henry O'Brennan, Michael Cormac Cullinan, Wm. Moore, Wm. Dunne, James Maurice M'Loughlin, Michael Joseph O'Shea, Robert Edward Donovan, Henry O'Neill, John Albert O'Meehan, William Oliver Deacon, Peter Mulvany, and Francis John Lynch.

The following gentlemen, having passed their professional examinations, obtained the licence to practise.

Hugh Orr, Virginia, co. Cavan; Francis Augustine O'Reilly, Killeshandra, co. Cavan; John Peacocke, Limerick; and Thomas Wm. Myles, Limerick.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—Surgeon.
AXMINSTER UNION, Devon—Medical Officers for the Colyton and Shute Districts.
CADDER, Parish of, Lanarkshire—Medical Officer for the Western District.
CARDIGAN UNION—Medical Officer for District No. 3.
CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.
CHESTER GENERAL INFIRMARY—Dispenser.
CORK UNION—Medical Officer for the Blackbrook Dispensary District.
DERBY PROVIDENT DISPENSARY—Two Medical Officers.
EAST PRESTON UNION, Sussex—Public Vaccinator for District No. 3.
EASTRY UNION, Kent—Medical Officer for the Deal District.
EXETER LYING-IN CHARITY—Surgeon.
FINSBURY DISPENSARY, Brewer Street North—Physician; Resident Medical Officer.

FULHAM UNION—Medical Officer and Public Vaccinator for District No. 5
£50 per annum, and extra fees.
GLENDALE UNION, Northumberland—Medical Officer for the Lowick District.
GREAT NORTHERN HOSPITAL, Caledonian Road—House-Surgeon.
GREAT OUSEBURN UNION, Yorkshire—Medical Officer for the Workhouse:
£30 per annum. Medical Officer and Public Vaccinator for the Great Ouseburn District: £20 per annum, and extra fees.
HONITON UNION, Devon—Medical Officer for District No. 8.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Resident Clinical Assistant.
HULME DISPENSARY, Manchester—House-Surgeon: £130 to £150 per annum, apartments, coal, gas, and attendance.
KEIGHLEY, Yorkshire—Medical Officer of Health.
LIVERPOOL INFIRMARY FOR CHILDREN—House-Surgeon: £80 per annum.
LONDON FEVER HOSPITAL—Physician.
LOUDOUN, Ayrshire—Medical Officers for the Newmilns and Darvel Districts:
£30 per annum each.
METROPOLITAN DISPENSARY, Fore Street—Surgeon.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Lectureship on Materia Medica.
NEWPORT, Pembrokeshire—Admiralty Surgeon and Agent; Certifying Factory Surgeon.
NORTH DEVON INFIRMARY, Barnstaple—House-Surgeon: £100 per annum, board, lodging, etc.
NORTH UIST, Inverness-shire—Parochial Medical Officer: at least £200 per annum.
OLD KILPATRICK, Dumbartonshire—Medical Officer for the Western District: £25 per annum; and Sanitary Medical Officer: £5 per annum.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Surgeon.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
ST. GEORGE DISPENSARY, Mount Street, Grosvenor Square—Physician-Accoucheur.
SMETHWICK, Staffordshire—Medical Officer of Health.
TYRIE, Aberdeenshire—Parochial Medical Officer.
WEXFORD UNION—Medical Officer for the Wexford Dispensary District: £120 per annum, and Registration and Vaccination Fees.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DONOVAN, Humphry J., M.D., appointed Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Emlagh Dispensary District of the Caherciveen Union, co. Kerry, *vice* W. J. Kisby, L.F.P.S. Glasg., L.A.H. Dub.
DORAN, Alban H. G., Esq., appointed House-Surgeon to St. Bartholomew's Hospital, *vice* A. J. Hogg, Esq.
FAGGE, Charles Hilton, M.D., appointed Physician to the London and Westminster Bank, in the room of the late *Samuel Solly, Esq., F.R.S.
MACCALL, William N., M.D., appointed Assistant Medical Officer to the Clinical Hospital and Dispensary for Children, Manchester.
MAYNE, Charles, Esq., elected Medical Officer for the Killiney Dispensary District of the Rathdown Union, co. Dublin.
PARRY, Lloyd Davenport, L.R.C.S. Edin., appointed Medical Officer and Public Vaccinator for Sandy, Orkney, *vice* T. B. Stokoe, M.D.
*PARKER, R. W., Esq., appointed House-Surgeon to the London Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

HALL, W., Esq., of Atherstone, to Ellen Hall, daughter of *J. HIGGINBOTTOM, Esq., F.R.S., of Nottingham, at Hastings, on October 12th.
WRIGHT, J. Bampton, M.D., of Wellingborough, to Caroline Addison, second daughter of W. TOLLER, Esq., of Kettering, Northamptonshire, on October 12th.

DEATHS.

FAITHORN, George, Esq., Surgeon, at Chesham, Bucks, aged 64, lately.
FAWCUS, James, M.D., Inspector-General of Jails, Lower Provinces, Bengal, in North Shields, of pneumonia, the sequel of fever caught in Calcutta, aged 38, on October 11th.
JONES.—On October 23rd, at Cleobury Mortimer, Salop, aged 65, Anne, wife of *William Weaver Jones, Esq., Surgeon.
*LOWDELL, George, Esq., Surgeon to the Sussex County Hospital, at Brighton, lately.
*SHANNON, James, M.D., late of Ennistymon, county Clare, at Dublin, aged 60, on October 2nd.

TAUNTON AND SOMERSET HOSPITAL.—The Treasurer's account shows a deficiency of £534, besides £116 on the building fund account.

MISS BRAKENBURY of Brighton having given £5,000 for the erection of a new building for the Ardwick and Ancoats Dispensary, Manchester, on condition of a site being obtained, the Committee are raising a fund for that purpose and for furnishing, etc. The sum of £1,500 has been already subscribed.

BEQUESTS, DONATIONS, ETC.—Baron Berners has bequeathed £1000 to the Leicester Infirmary, and £1000 to the Leicester and Rutland Lunatic Asylum.—Mr. William Stevens Louch has bequeathed £1000 each to St. George's Hospital, Westminster Hospital, Middlesex Hospital, St. Mary's Hospital, and the Brompton Hospital for Consumption, etc.; and £200 to the Victoria Infirmary for Sick Children, Chelsea.—Mr. James Staynor, of Ilminster, as the representative of a Committee of Gentlemen, has sent £400 to the Taunton and Somerset Hospital.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY...St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Victor de Méric, "A Case of Traumatic Phthisis;" Dr. Alfred Willshire, "Edema of the Lung following Small-pox;" Mr. W. F. Teevan will exhibit some Instruments; Mr. John Pennefather, "On the Sense of Hearing" (with illustrations).

WEDNESDAY.—Royal Microscopical Society, 8 P.M. Dr. Braithwaite, "On Bog Mosses;" Dr. J. J. Woodward, U.S. Army, "On the Scales of Deguria Domestica as seen with Black-ground Illumination;" Mr. W. S. Kent, "On some new Infusoria."—Obstetrical Society of London, 8 P.M. Dr. Rasch, "On a novel way of using the Uterine-Sound in Flexions of the Uterus;" Mr. Eugene Goddard, "On a Case of Ovariectomy during Pregnancy;" Dr. Conrad (of Pesth), "On Prolapse of the Female Genital Organs."

THURSDAY.—Harveian Society of London, 8 P.M. Dr. C. Handfield Jones, "Notices of some of the less usual Phenomena in Chronic Alcoholism."

EXPECTED OPERATIONS AT THE HOSPITALS.

WEST LONDON HOSPITAL, Saturday, October 28th, 3 P.M. Lithotripsy by Mr. Teevan.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

DR. TAYLOR (Cardiff).—Mr. Morgan's very able pamphlet will no doubt, in the first instance, receive the attention of the Committee of Council. We should like to hear the opinions of the most experienced members of the Committee of Council before commenting on his ingenious proposition.

MEDICAL ETIQUETTE.

WE have before us a statement from Dr. Royston, of Westbourne Park, London, referring to the conduct of Mr. Delamark Freeman of Talbot Road. He left that gentleman in charge of his patients during a professional holiday. He states that, on his return, that gentleman continued to attend two of those patients against his wish; and, in a third case, he asked a lady whom he had delivered for Dr. Royston, whether she should in future employ Dr. Royston. We need not say that such conduct as that here described is in the highest degree unprofessional and improper; and we can only hope that Mr. Freeman will be able to clear himself in some way of this very grave charge. Conduct such as is described would be destructive of all professional confidence, and involves, indeed, very serious considerations of honour. We shall hope to hear from Mr. Freeman on the subject.—Notice of another correspondence on a subject of etiquette, between Messrs. Kliff and Tunaley, is unavoidably postponed.

"A WOULD-BE INDIAN SURGEON" complains that the competitive examinations for the Indian Medical Service are not held sufficiently often. They are announced as likely to take place twice a year; none has taken place for two years. This surgeon loses sight of the changes which have taken place consequent on the amalgamation of the two services. The demand must regulate the supply in every service.

VIR LENTUS.—It is usual for all the medical men of the locality to have the option of attending the patients whom they send into the village hospital.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

TREATMENT OF CATARACT BY PHOSPHORUS.

SIR.—Would some of your numerous correspondents kindly inform me if a solution of phosphorus in oil of almonds, as recommended by Dr. Tavignot, has been used in this country for the removal of cataract; and, if so, with what result. Any information on this subject would greatly oblige. I am, etc., A MEMBER.

PUNCTURE IN TYMPANITES.

SIR.—In justice to Dr. Davey, of Bristol, will you allow me to correct an error in my paper on Punctures of the Colon, in last week's JOURNAL? Dr. Davey's case was recorded in the JOURNAL of August 21st, 1869, and not 1870, as I have inadvertently stated. The priority of this mode of treatment in this country appears to belong to Dr. Davey, as his case was operated on on the 7th October, 1868; while to Dr. Clifford Allbutt belongs the first published record, in the *Practitioner*, February 1869, of a case operated on by Mr. Teale, on January 5th, 1869.

I am, etc., J. HANCOCKE WATHEN.

DISINFECTANTS.

SIR.—Dr. Domett Stone, in the *Times* of September 28th, makes the following assertion:—"That earth is a disinfectant, no one will deny." I most assuredly deny it. Indeed, this and nearly every other substance mentioned in the letter of Dr. Stone and other writers on the subject of late have no title to the name disinfectant. Disinfection "is the process of dispelling and neutralising contagious miasmata." Most of these substances are simply antiseptics and deodorisers—that is, the decomposers of certain gases, the product of putrefying animal and vegetable matter, in this way preventing the ill consequences that might arise from imbibing these noxious gases, either by inhalation or otherwise; some of them also delaying or preventing putrefaction. Now these are very different from those qualities required for the decomposition of a fresh non-putrid animal poison, such as the poison of scarlet fever, small-pox, cow-pox, etc. These poisons when putrid are as innocuous as animal poisons. May we not then very well ask ourselves the question, as the substances in common use are not disinfectants, but antiseptics, deodorisers, and antiputrescents, whether they do not act in the way the very reverse from what is intended, and, instead of hastening the destruction of specific or fresh animal poisons, prevent or retard their decomposition? and thus it is in the parish of St. Marylebone, at least, that for the last three or four years we appear to have a constant supply of scarlet fever poison ready at hand. I am sure our energetic Officer of Health and his subordinates have most assiduously employed, and at no trifling trouble and expense, the various chemicals recommended by the Privy Council; but with what result? *Nil, nil, nil*, or something worse than *nil*, an increase in the number of deaths; and the disease, instead of being epidemic, becoming persistent. As a disinfectant, I have no faith in anything but the fumes of sulphur—sulphurous acid. A little sulphur may be burned in the room of the invalid, half a dozen times a day, without detriment to the patient. As an antiseptic for the sick room, nothing surpasses the fumes of iodine: a few grains placed on a tile and a lighted lamp placed beneath and carried round the room, will remove any septic poison in a few seconds. A little of the tincture of iodine added to water, into which a piece of putrefying meat may be immersed, will at once remove any septic taint; and, after being washed, the meat may be eaten with impunity. I write this from actual experience. I am, etc.,

1, Montagu Square, October 1871. A. WYNN WILLIAMS, M.D.

LINIMENTUM POTASSII IODIDI CUM SAPONE.

SIR.—The following modification of an old official German formula for the above preparation, may be of use to your correspondent, "A Slowman":—White curd soap (Gibbs), 3 ounces; potassium iodide, 18 drachms; glycerine (1.25 s.g.), 12 fluid-drachms; distilled water, 14 fluid-ounces; oil of lemon, 1½ fluid-drachms; spirits of wine, 1 fluid-ounce. Dissolve the soap with eight ounces of water by gentle heat in a water-bath; dissolve the iodide of potassium and glycerine in the remaining water, and heat the solution to the same temperature as the dissolved soap; mix the solutions, stirring constantly until nearly cold; then add the oil of lemon dissolved in spirit.

It is a semitransparent and gelatinous liniment, somewhat resembling in consistency and appearance "Steer's Opodeldoc". It should be weighed and dispensed in a wide-mouthed bottle or a covered jar. If properly made, it never varies in colour or consistence.

The variable result obtained from the official form are, perhaps, due to the olive oil soap ordered to be used. Olive oil differs greatly in the proportions of oleate and palmitate of glycerine which it contains; and consequently the soaps made therefrom differ in a similar manner.

The samples obtained from wholesale houses were doubtless prepared from private recipes; hence their dissimilarity. I am, etc.,

F. J. BARRETT, Pharmaceutist, South Staffordshire General Hospital.

Wolverhampton, October 9th, 1871.

SIR.—In reply to "A Slowman", I beg to state that, for many years, I have been in the habit of adding from half a drachm to one drachm of iodide of potassium to two ounces of the ordinary soap liniment. It is rather slow in dissolving, generally requiring about half an hour; and glycerine may be added or not. I have found it very efficacious in chronic glandular or other swellings, in promoting absorption. I am, etc., OCVOR.

HOUSE-SURGEONS AND FEES FOR NECROPSIES.

SIR.—Can you kindly refer me to the law upon which was founded your reply to Dr. Page's question (BRITISH MEDICAL JOURNAL, September 16th, 1871, p. 340) regarding payment to house-surgeons for *post mortem* examinations of patients who die in the house, and oblige Yours faithfully,

WILLIAM HAINING, M.D.

* * The 5th section of 6 and 7 William IV, c. 89 disentitles the officer of any lunatic asylum, public hospital, or infirmary, from fees for attending inquests on the bodies of persons dying in such infirmaries or hospitals. It does not, of course, disentitle him to fees for inquests on persons brought in dead, and for these cases fees are always paid. So, if in the case of any person dying in a hospital the coroner shall require for his information a *post mortem* examination, this is an extra work, for which the Act requires him to pay an extra fee of a guinea, and he may employ as an expert either the medical officer of the establishment or any other expert. In either case, for this work specially performed by him, he is authorised to pay; and, in case of his declining beforehand to pay the fee, we think the house-surgeon would be justified in requesting him to employ some other expert for the purpose.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

ACTION OF CHLORAL ON THE FÆTUS IN UTERO.

SIR,—Recently one of my patients, who was within a few days of the expected time of her confinement, was seized with severe pains in the abdomen and back—the result, I think, of cold. I prescribed chloral hydrate in twenty-grain doses every four hours, with benefit. She took two six-ounce mixtures. Labour set in after a few days, and she was confined of a dead child. Is it within the experience of any of your correspondents that chloral hydrate acts injuriously upon the fœtus *in utero*?
I am, etc., AN ASSOCIATE.

DR. HJALTELIN (Iceland).—The paper shall appear next week.

PRACTITIONERS AS JURYMEN.

SIR,—There is a general impression in our profession that its members are, *virtute officii*, exempt from the annoyance of serving on juries. The enclosed paragraph, extracted from last week's *Malvern Advertiser*, states that—"A question arose as to whether the names of certain medical gentlemen practising in the district, who had not sent in the required claim for exemption, should not be included in the jury list; and Sir Henry Lambert (Chairman, and formerly a barrister) allowed it to be understood that another year that would be done." In the interests of the medical profession, and as a member of it, I solicit your opinion, with any references in support of it in the *JOURNAL*, on the following questions.

1. Are medical men liable to be summoned as jurymen; and, if so, are they obliged to claim exemption previously to the preparation of jury-lists (which should be advertised in the papers, instead of being affixed to a church door, where very few observe the lists)? 2. Is the statement in the paragraph founded on erroneous data?

It cannot be held to be the duty of practitioners to serve as jurymen when the lives, health, and wellbeing of their patients are imperilled.

I am, etc., STANLEY HAYNES, M.D.

Malvern Link, 11th October, 1871.

* * By the 35th section of the Medical Act, "Every person who shall be registered shall be exempt, if he shall so desire, from serving on all juries and inquests whatsoever, and from serving all corporate, parochial, ward, hundred, and township offices, and from serving in the militia; and the name of such person shall not be returned in any list of persons liable to serve in the militia or in any such office as aforesaid." The exemption of registered medical practitioners is, therefore, a matter of law; and they are never called upon individually to claim it. The *Medical Register* shows their claim to exemption, and this is an official document of which copies are furnished by the Government to the various courts.

MR. CRAISTER (Bramley) would do well to address the Council of the Royal College of Surgeons on the subject. We are strongly of opinion that this person ought to be struck off the College List and off the Medical Register.

THE WEST SOMERSET BRANCH: THE DISCUSSION ON CARBOLIC ACID.

SIR,—Practice and recent pathological theory make the above subject one of the most important that can at present engage the inquiry of the profession. As a member present at the meeting on the 3rd instant, when the question "Does application of carbolic acid favour the healing of wounds?" was discussed, my estimation of the verdict was distinctly that, except in one or two presumable cases, carbolic acid should in no form be applied directly to a wound, but that a carbolised outer covering, not in contact with the wound, was found, or (as yet there being no proof) thought to be found, favourable in practice, the theory of its action being questionable; it was certainly not concurred in, that "when used in the *dilute* form of 1 to 4 or 5 of oil, and 1 to 50 or 100 of water, it exercises a very salutary influence, and is a most valuable aid in the treatment of wounds." Oil doubtless lowers in a greater degree than water the violence of carbolic acid as a penetrating caustic; but 1 to 4 or 5 of the former medium, and 1 to 50 or 100 of the latter, are nothing like equivalents; and the meeting did not stultify itself by taking them to be so. The President's remarks were ingenious, and clearly expressed his conviction that a carbolised atmosphere is destructive of germs, and that germs are a morbid cause.
I am, etc., PROBE.

October 16th, 1871.

SIR,—From ill health, after thirty years' service, I have resigned my Poor-law appointments, and have asked for a superannuation pension. If the Board of Guardians grant it, can they prevent my carrying on a small private practice here or elsewhere?
I am, etc., P. L. O.

* * Certainly not.

PAYMENT OF CLUB-SURGEONS.

SIR,—I have for many years past been the medical officer of the Foresters' Court here at St. Mawes. They have, however, lately used me very scurvily; and as they will not tender me an apology, I have resigned my appointment. But it seems upon an inquiry, that only a certain few have the entire management of affairs, and are, I am afraid, actuated by personal motives. Their term of office expires at the end of the quarter; and as the majority of the court seem disposed to support me, I have agreed to again attend them upon the condition that they increase my salary. I have suggested an increase of one shilling *per annum* for both seniors and juveniles. The seniors used to pay me four shillings, and the juveniles two shillings *per annum*. I now require five shillings for the seniors, and three shillings for the juveniles, which will then but hardly requite me for all the attendance, medicines, and appliances that I may be called upon to administer in the course of a year, leaving but a very small balance for profit, as all medical men must be aware who have anything to do with these societies. I may state that the yearly income of many of the members is in excess of my own.

As they are advertising for another surgeon, I have felt it but my duty to let the profession know how matters stand, and also to ask their support on the present occasion. A gentleman in the neighbourhood of Falmouth has, by misrepresentation, been induced to become their champion for a time; but I am happy to say he has just written me to say that, should I be able to come to any understanding with the court, he will be willing to retire. I could have wished that he had told me so at an earlier period; for he must have been sure that I would not have resigned such an appointment without some good cause. I believe I am the first in this part of the world to protest against the miserly pay of the better class of benefit societies to their medical officers; and I shall most certainly look for the support of the whole profession in this most important cause.

St. Mawes, October 16th, 1871. I am, etc., HENRY HARDEN.

ACUPRESSURE.

SIR,—In the *BRITISH MEDICAL JOURNAL* of October 7th, I observe a letter by Dr. McRae, of Fettercairn, containing strictures on a recent paper on Acupressure, published elsewhere by Dr. Pirrie. Dr. McRae takes exception to the term "inelastic" as applied to iron wire, and seems to doubt the existence of such a material as elastic iron wire. He would, I think, have done more wisely had he—before adopting the sarcastic tone in which his letter is written—made himself acquainted with the properties of the different varieties of iron wire. It requires no very deep knowledge of the mysteries of hardware to be acquainted with the fact that there is hard tempered iron which is elastic, and annealed wire which is inelastic. Any wire-worker will give Dr. McRae ocular proof of their respective qualities, if he wish to extend his information.

Regarding Dr. McRae's remarks on the origin of the method of acupressure, now called torsocclusion, I beg to differ from him; for, though Dr. Knowles did propose it in 1864, Sir J. Y. Simpson had applied it in 1860.

Aberdeen, October 16th, 1871. I am, etc., J. C. OGILVIE WILL, M.D.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The *Whitehaven News*, Oct. 19th; The *Durham Chronicle*, Oct. 20th; The *Carlisle Journal*, Oct. 20th; The *Merthyr Express and Advertiser* for the Coal Districts of South Wales, Oct. 21st; The *Sunderland and Durham County Herald*, Oct. 20th; *Saunders's News-letter* and *Daily Advertiser*, Oct. 23rd; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Smart, Penge; Dr. T. Clifford Allbutt, Leeds; Dr. J. D. Heaton, Leeds; Mr. Erichsen, London; Mr. Guest, Manchester; Dr. J. G. Davey, Northwoods, Bristol; Dr. Hitchman, Mickleover; Mr. H. Cooke, Wicklow; Dr. J. Ingleby Mackenzie, Sidmouth; Dr. Althaus, London; Mr. Benson Baker, London; The Secretary of the Pathological Society; Mr. Teevan, London; Mr. W. Weaver Jones, Cleobury Mortimer; Dr. Bradbury, Cambridge; Mr. Millican, Lerwick; Mr. Fay, Liverpool; Dr. C. C. Ritchie, Manchester; Mr. Leeds, Sheffield; The Secretary of the College of Surgeons, Scotland; Dr. Skinner, Liverpool; Our Dublin Correspondent; Mr. Phillips, Jersey; Mr. W. H. Ashurst, London; Sir Francis Hicks, St. Thomas's Hospital; Mr. Foster White, St. Bartholomew's Hospital; Dr. Nichol, Bradford; Mr. J. W. Burman, Wakefield; Our Glasgow Correspondent; Mr. Holmes, London; W. D. L., London; Mr. Bartleet, Birmingham; Dr. Drysdale, London; Dr. Wade, Birmingham; Our Edinburgh Correspondent; Mr. T. Watkin Williams, Birmingham; The Secretary of the Obstetrical Society; Dr. Liebreich, London; Dr. A. W. Edis, London; Mr. T. J. Dyke, Merthyr Tydfil; Dr. R. H. Taylor, Liverpool; Mr. Craister, Bramley; An Associate; Dr. J. Crichton Browne, Wakefield; Mr. Morrison, Hanwell; Dr. G. F. Burder, Bristol; Mr. Philip Grubb, Warminster; Dr. Nankivell, Torquay; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Dalby, London; Dr. John Chiene, Edinburgh; Mr. John Calder, Liverpool; Dr. Styrap, Shrewsbury; Dr. Nolan, Dublin; Mr. Waterhouse, Pontypridd; Dr. Ketchen, Middlesborough; Mr. S. C. Hirst, Bowling, Bradford; Dr. Markheim, Paris; Dr. Milner Fothergill, Leeds; Our Vienna Correspondent; Mr. A. Dunbar, Uttoxeter; Mr. R. J. Harvey, Dublin; The Matron of the Skin Dispensary, Manchester; Dr. R. Elliot, Carlisle; Mr. J. R. Armstrong, Lamberhurst; Mr. J. A. McBride, Cirencester; Mr. J. Nicholson, Stratford; Dr. C. Kidd, London; Dr. Taylor, Cardiff; Dr. A. White, Ben Rhedding; Dr. Liveing, London; Mr. C. Steele, Bristol; Dr. Moore, Dublin; Dr. Wade, Birmingham; Dr. Sheen, Cardiff; Mr. Sergeant; The Secretary of the Medical Society; Mr. Reginald Harrison, Liverpool; Dr. Grimshaw, Dublin; Dr. J. H. Houghton, Dudley; Mr. Wathen, Fishguard; Mr. R. W. O. Withers, Shrewsbury; Dr. Buchanan, Glasgow; Mr. P. H. Holland, London; A Member; Mr. W. Talbot King, London; Dr. Braxton Hicks, London; Mr. G. D. Brown, Ealing; Cantab.; Dr. Footman, London; Dr. J. G. Lock, Tenby; Dr. Playfair, London; Dr. Burke Ryan, London; etc.

BOOKS, ETC., RECEIVED.

Introductory Notes on Lying-in Institutions; together with a Proposal for Organising an Institution for Training Midwives and Midwifery Nurses. By Florence Nightingale. London: 1871.
The Skim-Milk Treatment of Diabetes and Bright's Disease; with Clinical Observations on the Symptoms and Pathology of these Affections. By A. S. Donkin, M.D. Edin., M.D. Durh. London: 1871.
The Cathedrals and the Lancers' Bridge; or the Madhouse and its Inmates. Great Yarmouth: 1871.
Lectures on the Principles and Practice of Physic, delivered at King's College, London. By Sir Thomas Watson, Bart., M.D., F.R.S. Vols. i and ii. Fifth Edition, revised and enlarged. London: 1871.
Annual Report of the Infirmary for Epilepsy and Paralysis, Charles Street, Portman Square. London: 1871.
The Science and Practice of Surgery. Illustrated by Four Hundred and Seventy Wood Engravings. By Frederick James Gant, F.R.C.S. London: 1871.
Notes on Comparative Anatomy: A Syllabus of a Course of Lectures delivered at St. Thomas's Hospital. By William Miller Ord, M.B. Lond., M.R.C.P. London: 1871.
The Family Medical Guide: with Plain Directions for the Treatment of every Case, and a List of the Medicines required for any Household. By George Fullerton, C.M. and M.D. Edin. London: 1871.
Reports of Dr. Parkes and Dr. Sanderson on the Sanitary Condition of the Borough of Liverpool.
Biological Science in relation to Religious Belief: being the Introductory Address delivered at St. Mary's Hospital Medical School, October 2nd, 1871. By Alfred Meadows, M.D., M.R.C.P. London: 1871.

REMARKS ON FIBRO-CYSTIC DISEASE OF THE UTERUS.*

By T. E. BEATTY, M.D., Dublin,

Ex-President of the Royal College of Surgeons and of the King and Queen's College of Physicians in Ireland; President of the Midwifery Section.

THE diagnosis of fibro-cystic disease of the uterus is still a problem unsolved in the history of the diseases of females. Some authors of repute are silent upon the subject, and in most of those that allude to this disease the notices are very short and meagre. In Scanzoni (*Translated by Gardner*, p. 237) we find the subject thus disposed of: "As we have already said, there are fibrous bodies which are formed by the aggregation of tumours of different sizes bound together by loose connecting tissue, which is rich in blood-vessels. In this tissue there are sometimes formed cavernous excavations filled with blood, the rupture of which often occasions very considerable extravasations of blood. At other times this intermediate tissue is infiltrated with serum, and there results therefrom a sort of dropsy of the fibrous body. There are also observations of the formation in the tumour of a cavity more or less large, filled with a serous, sanguineous, or putrid liquid, which, by the constant fluctuation, render during life the diagnosis of a fibrous body very difficult." This is all that is said about this very important subject by Scanzoni.

Dr. Graily Hewitt, in his admirable work on the *Diseases of Women*, takes notice of this affection, speaking of it as "that rare disease." He thus alludes to the improbability of detecting it during life. "The diagnosis of fibro-cystic tumour of the uterus is one of great difficulty, because we have here the two things combined and a solid outgrowth from the uterus which itself contains cysts. The difficulty arises from the physical resemblance this bears to a case of cystic disease of the ovaries. To estimate aright the difficulties of the question, and the best method of surmounting them, careful study of the cases actually published is essential." He goes on, further, to say: "Mr. Spencer Wells mentions two circumstances of assistance in the distinction. One is that the colour of the cyst-wall in fibro-cystic uterine tumours, when laid bare by abdominal incision, is darker than that of ovarian cysts." Now it is rather too late to obtain information after the abdomen has been opened. What we want is to obtain knowledge of signs that will prevent us from cutting into an abdomen by mistake. That such mistakes have been made, and by the ablest observers, is too truly shown in the records of medicine; and to the credit of the profession, it is to be said that there has been no attempt to conceal any of those cases, but, on the contrary, the greatest publicity has been given, and they have been hung out as beacons to warn others from falling into similar mistakes. In the *Biennial Retrospect* for 1865 and 1866, published by the Sydenham Society, I find seven cases alluded to which happened in the hands of Dr. Routh, Mr. Nunneley, Mr. Spencer Wells, Dr. Routh again, Mr. T. Holmes, and Dr. Hilton Fagge, in which gastrotomy was performed in hopes of finding a diseased ovary. In the volume for 1867-68, there is no notice of fibro-cystic disease of the uterus. These do not include the two cases mentioned by Mr. Spencer Wells in the first volume of his *Diseases of the Ovaries*, in the last and most remarkable of which I was implicated, for I had seen the patient before Mr. Spencer Wells, and had given my opinion that it was a case of ovarian dropsy; and at my suggestion the operation was performed. That the disease is a very rare one there can be no doubt, but it is not unlikely that several examples of it may have been treated by tapping, and, finally dying, have been buried as cases of ovarian dropsy, and their nature never ascertained. However, cases are sufficiently numerous to enter into the calculation whenever we come to examine an abdomen containing a fluctuating tumour. But we have not yet arrived at any positive signs by means of which such cases can be detected. Mr. Spencer Wells says (*Diseases of the Ovaries*, vol. i, p. 362): "Given a large semi-solid tumour, fluctuating in some parts, containing cysts which hold upwards of twenty pints of fluid, moving beneath the abdominal wall, the uterus being movable and not enlarged, so far as measure-

ment by the sound can detect, no sound or arterial impulse to be heard which is not often heard in ovarian tumours, and no history of hæmorrhage leading to a suspicion of uterine disease, and it will be admitted that these characters of the two fibro-cystic tumours of the uterus which I removed so closely resemble those of semi-solid ovarian tumours, that diagnosis must be very uncertain."

It fell to my lot to be consulted about one of these cases a short time ago, and I was fortunate enough to make a correct diagnosis, and thus prevent the addition of another to the list of unfortunate operations. The case was under the care of Dr. John Morgan, in Mercer's Hospital, Dublin, and I was invited by him to see and examine the patient. Dr. Morgan has kindly given me permission to make use of the case, and has furnished me with the following particulars.

"M. R., aged 22, married three years, came under my observation on March 15th, 1871. She had been a domestic servant, and always enjoyed good health until about one year after marriage, when she observed rather unexpectedly a small tumour in the left iliac region, which remained of the same size for a year, when she found a similar one commencing in the right iliac fossa. In about three months these growths seemed to have coalesced into one, and had enlarged considerably, giving the appearance of a woman in about the seventh month of pregnancy. She stated that the tumour had rapidly gained this size, and then remained stationary for the last six months. She suffered much from a sensation of weight and bearing down, with a distressing feeling of oppression of the respiration. There was considerable pain in the back and also in the epigastrium, the latter being particularly marked after her admission into hospital. Menstruation had continued rather profusely and at intervals of three weeks. On examination, the abdomen was found to be occupied by a tumour bearing great resemblance in every way to an ovarian dropsy. It was dull on percussion, was of an oval outline, uniform to the feel, and deep fluctuation could be perceived. In order to test fully the nature of the tumour, I tapped it on the left side with a small-sized trocar tube of the *aspirateur* on March 23rd, and I removed twelve or fourteen ounces of a dark-coloured fluid nearly of the colour of beer, of rather viscid consistence, and highly albuminous. As the patient fancied herself relieved by this procedure, I tapped her again on March 30th with the *aspirateur* trocar, and removed about the same quantity of fluid. The trocar was introduced about three inches lower down than on the first occasion. Neither of these operations was followed by any untoward symptom. She now underwent a rather profuse menstrual period of eight days' duration, after which, as the case was one of difficulty, I requested the assistance of Dr. Beatty, who, in company with Dr. Atthill, kindly examined the case. In some days afterwards, Dr. Churchill saw the patient, and on the same day I tapped the tumour on the opposite side with the *aspirateur* trocar, and withdrew nearly three pints of the same kind of coloured viscid fluid. During the succeeding twenty-four hours, symptoms of peritoneal inflammation showed themselves. She became collapsed, constant greenish vomiting came on, and she died on May 7th, 1871."

Post Mortem Examination.—The body generally was in good condition; the abdomen was much distended by gas. There was a considerable amount of purulent matter in the cavity of the abdomen and around the tumour. There were some adhesions between the omentum and the tumour, and in three places these were tolerably firm. The surface of the tumour was uniform, and from the upper part a curious offset had grown, which had apparently given way and caused the peritonitis. There was no evidence of inflammation in the vicinity of the punctures. On raising the tumour, the ovaries were found in their normal position, and free from disease. The tumour was found to have grown from the upper part of the fundus uteri. The large cyst in immediate connection with the uterus was opened, and showed the remarkable figure of the interior.

When I examined the woman, the tumour in the abdomen resembled in size and shape the gravid uterus between the seventh and eighth month. There was evident fluctuation, and it seemed as if the fluid was in one large chamber, but the walls of the cavity felt thicker under the fingers than is the case in a single cyst of ovarian dropsy. There was a doughy feel when pressed deeply, as if thick flesh formed the walls of the cavity, and the tumour could be traced deep down into the pelvis. On examination *per vaginam*, the os and cervix uteri were found in a natural condition, and the sound passed in gave evidence of the normal size of the organ; but it was fixed, and would not be moved in any direction. The length of time the tumour had taken to arrive at its present development was well considered. This is an element observed upon by Dr. Graily Hewitt in his work on the *Diseases of Women*. He considers it as a diagnostic mark between uterine and ovarian tumours, the growth being lower in the uterine than in the ovarian cases. I was fortunate in the case with which I

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

had to deal, for it was not of great size like that one in which Mr. Spencer Wells had operated at my suggestion (the girth of which was fifty-six inches); but the walls, instead of being spread out and thinned by distension, had still a considerable amount of thickness, which gave the peculiar doughy feel to the fingers, while the cavity was still so large as to give a very distinct fluctuation. This symptom, though available to me on this occasion, would not be of equal value in a case wherein the walls had become thin by distension, and therefore I do not offer it as a diagnostic mark in all cases of fibro-cystic disease of the uterus, but I think it would be useful in those that had not attained a great magnitude. The profuse and repeated occurrence of menorrhagia suggested the existence of fibroids, and the fixity of the uterus, though natural in size and shape, showed that it was attached intimately to something above it, and that being a soft, fleshy-feeling, doughy tumour with fluctuation, led me to the conclusion that the case was one of fibro-cystic disease of the uterus, an opinion which I then communicated to Dr. Morgan. I have much pleasure in being able, through the kindness of Dr. Morgan and Dr. John Barker, the Curator of the Museum of the Royal College of Surgeons in Ireland, to exhibit the specimen and the cast of the tumour, taken before it was opened. The length, including the uterus, from which it grew, was $14\frac{1}{2}$ inches; the circumference at the middle was $25\frac{1}{2}$ inches. The tumour grew from the upper surface of the uterus, which up to that point is perfectly natural and healthy. On slitting up the uterus, the interior was found in a normal condition, and a very perfect *arbor vitæ uterina* occupied the canal of the cervix. The tumour, on being cut open, displayed the large irregular rough cavity which you see; and this extended into the small projection from the upper part of its periphery. The ovaries are both healthy. The urinary bladder is shown *in situ* with a close adhesion to the tumour.

I think it is a misnomer to call this a cystic disease; for, in point of fact, there is no proper cyst in it. There is no lining membrane to the irregularly shaped cavern, at least in its progressive stage, as this specimen is; but the chamber seems to be composed of a number of cavities, all thrown into one or more large ones, with rough irregular folds of fleshy fibrous material hanging into it on all sides. It appears that Scanzoni's description of the origin and formation of the disease is correct. Speaking of the composition of fibrous tumours, he says: "In this tissue there are sometimes formed cavernous excavations filled with blood, the rupture of which often occasions very considerable extravasations of blood. At other times, this intermediate tissue is infiltrated with serum, and there results therefrom a sort of dropsy of the fibrous body. There are also observations of the formation in the tumour of a cavity more or less large, filled with a serous, sanguineous, or putrid liquid, which, by the constant fluctuation, render during life the diagnosis of a fibrous body very difficult."

As examples of this disease are very rare, I have thought it right to produce this specimen at this meeting of the British Medical Association, as a caution to all who investigate tumours in the abdomen.

Since writing the above, I have read the case of fibrous tumour of the uterus, removed from the uterus by Mr. Spencer Wells by means of gastrotomy and the *écraseur*, published in the *Medical Times and Gazette* of July 29th, 1871. That most remarkable case recovered after many struggles, and is the first of its kind in these kingdoms. It will, no doubt, give fresh courage to operators; and in the case just detailed it might have been imitated, for the connexion between the uterus and tumour could have been easily cut through by the *écraseur*.

ABDOMINAL PUNCTURE IN TYMPANITES.

IN the JOURNAL for October 21st, page 464, Mr. J. H. Wathen mentions that the earliest case of the use of "Puncture of the Colon for the Relief of Tympanites" which he has discovered, was by Mr. Teale, in February 1869.

I find the following remarks in the late Mr. T. P. Teale's Address on Surgery at Sheffield, in July 1845, at page 119 (*Transactions of the Provincial Medical and Surgical Association*: new series, vol. ii, 1846).

"*Paracentesis of the Intestine for Tympanites*.—The practice of paracentesis of the abdomen has been lately adopted by Sir Henry Marsh, for the relief of excessive distension of the abdomen from flatus, with the most soothing effect, and without any injurious consequences. The operation was performed with a fine trocar, and repeated several times, with great relief to the patient. M. Levret has also adopted the same practice. After evacuation of the air, immediate relief was obtained, and the patient rapidly recovered."

It may be further added that this mode of treatment also received the high sanction of Sir Philip Crampton and Mr. Cusack twenty-seven years ago.

THOMAS LITTLETON, M.B., F.R.C.S. Eng.

Plymouth, October 31st, 1871.

ABSTRACT OF A CLINICAL LECTURE

ON A

CASE OF SEVERE INJURY TO THE LOWER END OF THE FEMUR.

By PRESCOTT HEWETT, Esq., F.R.C.S.,

Surgeon to St. George's Hospital, etc.

GENTLEMEN,—The subject which I bring before your notice to-day is one of great interest, and one which may be to you, by-and-bye, in practice of the utmost importance, and which might, in some measure, affect your reputation: I allude to the case of the girl in the Wellington Ward, in the third or fourth bed on the right. She was admitted into the hospital on the 21st September last, and, as it is now the 17th of October, she has been a month in the hospital. She was walking down a flight of stairs at the International Exhibition, and, while doing so, she caught her foot on the edge of a step and fell, sustaining, it was supposed, a fracture of the end of the femur. She wore high-heeled boots. I do not know how it has happened, but there have been a great many accidents in the International Exhibition. I suppose they must have arisen partly from the height of the stairs, and partly from the height of the ladies' heels. Ladies are anxious to look tall, thinking that their appearance is improved, and therefore they wear high-heeled boots. Such accidents are not always, however, due to the high heels, for a lady whom I knew fell by tripping on the stairs at the Exhibition, and came down on the cheek-bone, breaking it, and having ecchymosis on the right side of the face for months afterwards. But the first thing to which I would call your attention in this case is the high heels of the boots. Ladies will, for the most part, wear them; but they could not do a worse thing, for their feet are placed in a difficult and most unnatural position. They are very tenacious about this fashion, but you must be as tenacious against it: the number of accidents in consequence is very great. To show you how very tenacious ladies are on this point, last year I was sent for to see a young lady in one of our London hotels. She wished to consult me about her foot. On seeing it, I thought its state depended upon her boots, and I asked to see them. The boots were brought in by the lady's maid, but the only thing I could observe about them was an immensely high heel. I said: "It is the high heel of your boots that causes the mischief, and unless you diminish this I can do nothing for you." She became quite angry, and said she could not alter them. "I cannot do it, and I will not." Suddenly again she toned down, and said: "Pray, sir, what would people say if they saw me walking about the park without high heels?" I said: "It is simply heels *versus* brains. If you have brains, you will cut off the heels; if you have no brains, you will continue to wear them." She fortunately had brains, cut off the heels, and her foot got quite well.

To return to our patient. On admission to the hospital, this girl was, as I said, supposed to have a fracture of the lower end of the femur, close to the joint, and the injury was all but compound. A long splint was applied, but it was very difficult to keep the fragments in their proper place; and, as the surrounding parts became very swollen and painful, the patient was put on an Earle's bedstead on the 26th, and then matters went on until I returned from my holiday, when I took charge of my patients on the 2nd of October, and saw this girl, being told there was great difficulty in keeping the fragments in their proper position. On examining the leg, after taking off the short splints, I found that there was a large projection on the outside of the thigh-bone, due to the upper piece of the bone pressing against the skin. And now, a closer examination of the parts led me to think that, after all, the case was perhaps one of separation of the epiphysis, and not a fracture. The injury is close to the knee-joint. The bone projecting is certainly not more than an inch above the condyle; the fragment, instead of being sharp, is obtuse; in addition to which we have the age of the girl, 17, and the nature of the accident. This case is then, I think, one of separation of the epiphysis of the femur.

Severe injuries to the lower end of the femur may be of two kinds—a fracture close to the knee-joint, and a separation of the epiphysis; the former is by far the more common form of the injury—the latter being, indeed, rarely met with in adults. It is but a few years ago that we were first quite clear as to what happens in the separation of the epiphyses, and all the cases published then were cases of children. I presume that you know we have a line of cartilage at the lower epiphysis of the femur. So long as this exists, so long may a separation take place. The question then arises, At what time of life does this piece of cartilage disappear and the condyles become joined to the shaft? The age varies in different individuals. The cartilage sometimes exists up to the age of 25 years. You will find in most of the authors no allusion

made to the possibility of this accident from 18 to 25 : it is only mentioned in a very casual manner that this does not take place after 14 or 16. However, I have had several cases at a later age than that. (Here Mr. Hewett showed a specimen in which there was a separation of the epiphysis at the age of 18.) You see the condyle completely torn off : it happened when I was assistant-surgeon. You will find a very accurate history of this case in the Catalogue of our Museum, vol. i, p. 137. There was also in this case a separation of the epiphysis of the tibia and lower end of the fibula. The limb, from the knee downwards, was icy cold, and there was great swelling about the ankle. Mr. Cæsar Hawkins, under whose care the patient was, amputated the thigh. On dissecting the knee-joint, all the deformity was found to depend upon a separation of the epiphysis, and the coldness of the joint upon an injury to the popliteal artery. The case in the hospital now reminds me very strongly of Mr. Hawkins's case. Now this case is one which might in a country village lead you into great trouble. You may depend upon it that, if such a case as this unluckily fell into your hands when you were beginning practice, it would be said that you did not know your business or you could make it all right. In a separation of the epiphysis what happens is this : the cartilage is torn from the bone in some parts, and in others the bone itself gives way, so that there is a very irregular jagged surface. To readapt such surface is a very difficult matter. You may bring one part into the proper place but not another, and such is the case with this girl. If a dissection were made, you would probably find such to be the condition of the parts.

I have shown you a specimen of separation of the epiphysis from our museum at 18 years of age. There is another such at 17, and two at 16, and all these histories are fully detailed in the Catalogue ; and there might be separation of the epiphysis at a later age even than 18. Always bear in mind that such may possibly happen, but very rarely, it is true, till the age of 25.

[Mr. Hewett then dwelt on fracture properly so called of the lower end of the femur, narrating some interesting cases, and exhibiting a number of specimens involving the condyles from the museum. He then proceeded.]

Having made out what is the nature of the accident in this girl, I must make some mention of the plan of treatment. In the present day, we for the most part use the long splint in cases of fracture about the lower end of the femur. When this girl came in, the long splint was applied ; but Mr. Rouse, after two or three days' trial with this splint, resorted to the inclined plane. The first was Earle's bedstead ; and then, finding that this did not answer, I ordered a common inclined plane, since which the parts have been kept in much better apposition, and she now finds herself much more comfortable. In addition to the inclined plane on which the limb rests, we have short splints on the outer, inner, and upper parts. I have been very careful to tell the girl that she will have some deformity about the thigh, although it will not interfere with her walking. And when you have a case of this kind to deal with, gentlemen, and you see that there must be some deformity, you will find it wisest to tell your patient and friends that such must be the case.

SMALL-POX IMPORTED INTO ICELAND BY FRENCH FISHING VESSELS, STAMPED OUT BY QUARANTINE AND SULPHUROUS FUMIGATIONS.

By J. HJALTELIN, M.D.,

Chevalier of the Legion of Honour ; Knight of the Order Dannebrog, etc. ;
Chief Physician in Iceland.

IN the middle of April last, four French fishing vessels came into the harbour of Reykjavik, in order to ask for medical aid against small-pox, which was then believed to be very common in the French fishing fleet all round the southern shores of our island. The first vessels that came into our harbour were from St. Valéry-en-Coute, where a small-pox epidemic was said to be extremely malignant at that time. One of these vessels had five sick men on board, three of whom had confluent variola ; and one sailor had died of the same disease before they arrived here, but had of course been buried in the ocean.

The sudden appearance of a malignant and highly contagious epidemic on our coast, and the news from abroad of the ravages of small-pox both in France and in England and Germany, excited great fear amongst the inhabitants, and that fear was fostered by the arrival of more vessels with new cases.*

* Captain Timbre, the Commander of the French Squadron stationed here, thought that the matter looked rather serious ; for, on account of his report, a large ambulance steamer was fitted out by the French Government. This steamer, however, arrived here in June, when all was over. It had on board four physicians and

Vaccination and revaccination were immediately instituted, with as much speed as was possible, throughout the whole country ; and I gave orders to all our medical men and the ordinary vaccinators to set to work without delay, and they were to that end provided with fresh vaccine-lymph and vaccine-crusts.

In order to try to prevent this dangerous disease from spreading, I advised our government to have at once a quarantine-hospital erected—of course not in our small town itself, but in its neighbourhood. An old large house, situated about half an English mile from the town, and which some years since had been the seat of our bishop, was as soon as possible fitted out for this purpose, and the vessels were ordered to bring their patients to this place, in their own boats, under the control of our policemen. The hospital was fitted with beds and some necessary furniture ; a medical student with some servants were lodged in it, and they were strictly prohibited from having any intercourse or communication with people outside.

I myself was obliged to visit this hospital daily, in order to look at the patients, prescribe the necessary medicines, and direct what else might be needful. I found most of the sailors very seriously ill, and no fewer than seven of them had the confluent small-pox ; they were evidently in great danger. Some sailors who were on board one vessel would not be carried into the hospital, but preferred to remain on board their own boat, prepared to live or die, as the chance might happen. I treated them on board the vessel itself, and when they seemed a little better they went home to their native country. These patients were treated in the same manner as those in the hospital. Most of the crew on board this vessel had evident marks of having, lately or before they sailed for Iceland, been affected with small-pox.

As this serious epidemic showed a high degree of malignity, and it could scarcely be hoped that the quarantine regulations would be sufficient to save the inhabitants from the disease, I considered what would be the best means to prevent it and to treat it. As I am a firm believer in the power of disinfectant and antiseptic remedies, I could not long hesitate in my plan, but was resolved to try these remedies one after another. The chief question appeared to be, whether I should use the oxygenating or the disoxygenating compounds of this class ; but for some reasons I thought that the disoxygenating antiseptics would be the most safe. I knew very well that some German physicians had in former days tried chlorine water with considerable success against malignant small-pox ; but, as I thought that remedy rather too irritant for the respiratory organs, I determined to try sulphurous acid, both externally and internally—externally in the form of fumigation, by burning refined sulphur in the sick rooms ; and internally by giving sulphurous acid mixed with pure water. The effect was very highly encouraging ; and it soon became evident that, although the patients at first had a great aversion to the fumigation, and complained of the strong and pungent sulphurous odour, they soon felt the good effects of it ; and they became so eager for it that I was obliged to restrain their eagerness a little, being afraid that their lungs might suffer. At the same time they got ordinary sulphurous acid internally, mixed only with pure water—the usual dose being about a drachm, mixed with an ounce of water, and this being taken every third hour. The result of this treatment was very satisfactory ; for not only did the eruptive fever and the heat diminish, but in the milder form of the disease the vesicles dried very quickly, leaving the skin covered with thin brown scales, which soon fell off. Out of twenty-two patients treated in this way, I only lost one : he was brought to the hospital in a moribund state, and expired about thirty-nine hours after his arrival. Amongst the patients thus treated, seven had confluent small-pox ; and of these, three were in the fourth or suppurative stage when they came into the hospital, and four were in the third stage. The others had the variola discreta in a high degree, with all the common symptoms of small-pox ; namely, high fever, with distinct minute papulæ, elevated above the surface, always beginning in the face at the side of the nose, and thence extending over the whole face, and lastly over the trunk and the extremities. In such cases the vesicles were very numerous, although not confluent ; and there were more or less severe headache, hoarseness, difficulty of swallowing, and some pyalism. These were generally quickly cured, and many of the patients could leave their beds after a few days ; they were then allowed to walk about, and some of them were even desirous after twelve days to go on board their fishing vessels.

Those with the confluent small-pox had of course more severe symptoms, and their cure required, therefore, a longer time. Some of them became blind in the suppurative stage, and the swelling of their faces was enormous : the secondary fever was, nevertheless, not so serious as

two apothecaries ; and was intended equally for the benefit of the Icelanders and of the French fishing fleet, in case of need. This is one of the many instances of the noble feelings of the high-minded French nation ; for sure it is, that assistance would have been necessary, if the epidemic had not been stamped out in time.

might have been expected, and all, except one who died, were quite cured in the course of five weeks, without any other bad consequences than that most of them were deeply pitted in their faces. Nearly all of them had secondary abscesses both on the trunk and the extremities; but these, after having been opened, healed in a short time without any ill results. In order to protect the sight, I used nitrate of silver, which I thought more sure than collodion.

The tension of the skin was very much relieved by the external use of linseed-oil, mixed with one-fifth part of carbolic acid, rubbed into the surface with a soft brush. Bed-sores and secondary abscesses were treated in the same manner.

Besides the generally favourable results of this treatment, there were also some remarkable circumstances which convinced me of the good effect produced by the sulphurous acid. These may be thus summed up in a few words.

1. The use of the sulphurous acid fumigation and the sulphurous acid internally evidently mitigated the primary and secondary fevers; the heat of the body was remarkably lowered, and the thirst was quenched even when the primary and secondary fevers ran very high.

2. The symptoms generally following the primary and secondary fevers of small-pox—as the pains in the back and the articulations, severe headache, vomiting, ptialism, etc.—were evidently mitigated by the internal use of the sulphurous acid; and I feel, moreover, inclined to believe that the sulphurous fumigations, which, to tell the truth, were used in an uncommon strength in all the rooms, probably assisted the internal use of the sulphurous acid in no slight degree.

3. There were, moreover, some facts which at least seemed to make it highly probable that the sulphurous acid and the sulphurous fumigations have a really destructive power on the small-pox virus. Of instances pointing in that direction I will cite a few.

When the quarantine hospital was being fitted out, the house-surgeon and the servants were all immediately revaccinated; and this revaccination had, at least in two of them, already produced true vaccine vesicles when they were shut up in the quarantine hospital. No sooner, however, had they been exposed to the sulphurous fumigations than the vesicles dried away without any following suppuration, just as the small-pox vesicles were afterwards seen to do on other patients who, before the beginning of the suppurative stage, arrived at the hospital. One other fact is perhaps more striking than all: a carpenter had been taken into the quarantine in order to make some new beds for the patients, and remained there among the sick for some time. When he had done his work he was let out, after having been exposed to strong sulphurous fumigations. He was then outside under strict observation during fourteen days; and when no precursory symptoms could be observed in him he was revaccinated with complete success, and had true vaccine pits a second time, for he had been vaccinated twenty years before.

But be all this as it may—and every one may explain these facts as he likes—at all events so much is certain, that a malignant small-pox has been successfully treated and stamped out of this island in the afore-said manner, without having infected a single person of its inhabitants. This is a fact which cannot be denied, and facts are, as we all know, “stubborn things”. There was certainly an extensive focus for contagion; and it is seldom the case that quarantine regulations are sufficient to destroy a disease of such tenacity and frightful virus as that of malignant small-pox. Experience has, on the other hand, shown that the Icelanders are, no less than other people of the globe, extremely liable to the small-pox contagion. In the past century the small-pox was very often imported into this island, and every Icelander is still shocked when he reads of the frightful epidemic of that kind which, in 1707, killed one-fourth part, or 18,000, of the inhabitants. Even in this century—viz., in 1840, small-pox was imported here; and in one parish where vaccination had been neglected it destroyed no less than one-eighth of the people, leaving others blind and lame, or very much disfigured. These instances are, amongst many others, a great warning against the erroneous and dangerous doctrines of the “antivaccine” apostles, who even in this *ultima Thule* are preaching their baneful and stupid dogmas.

The neglect of vaccination was clear enough in all the French sailors who came into our quarantine. Among the seven affected with confluent variola, I could not detect any true vaccine marks on their arms, although they told me that they had been vaccinated in their younger days.

As to the action of the sulphurous fumigation and the sulphurous acid, I must still make the following remarks. As generally known, it is commonly believed that the fumes of sulphurous acid are poisonous, and we therefore still find them in Dr. Alfred Taylor's *Medical Jurisprudence* characterised in this way: “The sulphurous acid gas, when existing in a very small proportion in air, has the power of irritating the glottis so violently that, if accidentally respired, it would commonly compel

the individual to leave the spot before the vapours were sufficiently concentrated to destroy life.” But sure it is that, although this gas is very irritant to all those who are not accustomed to it, I feel from experience convinced that it may be respired to a far higher degree than has hitherto been commonly believed; and I therefore fully agree with Naquet, who (in his *Modern Chemistry*, translated by Wm. Cortis, p. 114) says: “Sulphurous anhydride has a pungent odour; it excites coughing, but is not dangerous, unless it form a large proportion of the atmosphere.” I feel convinced that patients may be accustomed to it to a high degree, without any bad effect, and I therefore regard it as far less dangerous or inconvenient than chlorine gas. I have, moreover, remarked that sulphurous acid gas may even be inhaled with benefit in bronchial affections, and it has often been remarked here, during severe influenza or epidemic catarrh, that the sulphur diggers at the sulphur mines at Krisuvik have been quite free from that epidemic. At the quarantine I remarked the same fact; and while an epidemic catarrh was very common, both in Reykjavik and all round in its neighbourhood, all the people in the quarantine were exempt from it. The great disoxydising effects of sulphurous acid cannot be denied, and its cooling effect upon the system may easily be demonstrated; its destructive effects upon parasitic life are likewise undeniable; and why should it not also be capable of destroying “microzymes”? I have fully tried its beneficial effect in typhus and enteric fever, and I have no doubt of its usefulness in many other zymotic diseases. But, alas! our modern medical science seems still to have a very small and limited faith in real chemical physics; most is left to the so-called “healing act” of nature; it is trusted to flesh and blood to destroy zymotic poisons, as though the inventions of the human mind would never be able to master them, and therefore we still read in some journals, and indeed in some medical works of standing, that even such dangerous poisons as the variola virus should be left to the curative effect of the system itself.

One very eminent and highly esteemed medical author, Dr. W. Aitken, speaking of the treatment of confluent small-pox, says in his *Science and Practice of Medicine* (London, 1866, vol. i, page 260): “Small-pox must run its course, for it is not under the influence of any specific;” and another, Dr. Hermann Lebert of Berlin, in his *Handbuch der Practischen Medizin* (Tubingen, 1863, vol. i, page 71), writes to the effect that he has found it sufficient, even in confluent small-pox, to keep the patient in a moderate temperature, and give cooling medicines. But it must be remarked that both those authorities reckon the mortality from confluent small-pox at from 35 to 50 per cent.

Nearly ten years since I wrote in the *Edinburgh Medical Journal* my humble opinions about the disinfectant treatment of typhus, which I then thought might be extended to some, or perhaps most, other zymotic diseases. Time has confirmed in me the opinions which I then expressed, and has, moreover, convinced me of the worthlessness and danger of the so-called “expectant treatment” in all cases of malignant epidemics.

Reykjavik, October 10th, 1871.

EXFOLIATION OF THE BLADDER.

By GEORGE BUCHANAN, A.M., M.D.,

Surgeon and Lecturer on Clinical Surgery, Royal Infirmary, Glasgow, etc.

MY attention having been directed to this subject by reading a paper in the *BRITISH MEDICAL JOURNAL* for October 14th, I think the record of the following case occurring in the male, may prove interesting, as an addition to the important series of cases recently recorded in the *JOURNAL*.

Mr. C., aged about 60, a tall gentleman, of spare habit and sallow complexion, was placed under my surgical treatment by Dr. J. G. Wilson, his family medical attendant.

Dr. Wilson informed me that for several years Mr. C. had been in the habit of consulting him for dyspepsia, accompanied by rather vague urinary symptoms, the passing of urine being sometimes attended with pain. Both ailments were from time to time mitigated by the use of the water of some of the German spas, to which he was annually in the habit of resorting. Last year the continental war prevented his annual visit, and to that, along with anxiety as to some of his relatives who were engaged with the armies in the field, he attributed his being worse than usual last winter.

When I saw him, on December 20th, I found him suffering from cystorrhœa, the urine when cooled being loaded with ropy mucus and clouded with phosphatic deposit. The calls to pass urine were very frequent, obliging him to rise almost every hour during the night, and there were both pain and difficulty in micturition. On examination with a bougie,

I found a contraction at the membranous portion of the urethra; but that it was simply spasmodic, seemed probable from the fact that it had become occasionally spontaneously improved. With a little care I managed to pass a No. 5 silver catheter without pain, but after it was introduced it was firmly grasped by the urethra. Next day the spasm was nearly gone, and the urethra easily admitted an instrument of moderate size. The passage of bougies was continued daily till all tendency to contraction seemed removed, and the symptoms abated somewhat. Triticum repens in infusion was used for many weeks, without much influence on the appearance of the urine. Subsequently, I tried the effect of washing the bladder every two or three days with astringents, with some temporary benefit, but without any decided result. In the spring Mr. C. went into the country for a few weeks, and returned improved in general health, but with all the urinary symptoms much the same as when I desisted from active treatment. He then went abroad to try once more the effect of some of the German waters.

In September last, in the course of a continental holiday, I visited Baden Baden, and happened to meet my patient, Mr. C. I was surprised to find him very much improved in every way, the urinary symptoms having entirely disappeared, so that he now enjoyed a refreshing sleep during the night without requiring to rise; and that he was free from any uneasiness was obvious to me, for he was two or three hours with me taking his ice, and listening to the music in front of the Kursaal. On questioning him as to how this came about, he informed me that he had been to Wildbad, where he had taken a course of water and baths. But the crisis of his complaint happened when one day he felt unusual difficulty in passing urine, and, after considerable effort, expelled a white membranous substance, which he described as being like a little bag just of the size of the bladder. This he preserved, and shewed to his medical man, who declared it to be an exfoliation of the mucous membrane of the bladder expelled entire.

Since the discharge of this membranous cast of the bladder Mr. C. has had neither difficulty nor pain in micturition; the urine remains free from mucus and sediment; in fact, all the symptoms of cystorrhœa have disappeared.

ON INTEMPERANCE AS A CAUSE OF CHRONIC BRIGHT'S DISEASE.*

By WILLIAM ROBERTS, M.D., F.R.C.P.,

Physician to the Manchester Royal Infirmary.

DR. DICKINSON, in his recent able work on *Albuminuria*, has called in question the generally received opinion that the abuse of ardent spirits is, either alone or as reinforcing other etiological conditions, one of the most important causes of chronic Bright's disease. In an elaborate chapter he adduces a considerable array of statements and figures which have led him to the conclusion that, setting aside the cases associated with gout, alcohol has but a slight and remote effect in producing degeneration of the kidneys. This opinion, coming from such a quarter, and apparently supported strongly by facts, is likely to have a considerable influence on the minds of the next generation of practitioners, and, if it be an unsound opinion, is sure to lead to serious mischief in practice. This is the reason why I have considered it desirable to examine the evidence on which this opinion is grounded, and to bring the results of my inquiries under the notice of the Section.

The evidence hitherto relied on by writers on renal disease, in proof of the evil effects of alcohol on the kidneys, is of the same kind as that which is held sufficient to establish the connexion between intemperance and cirrhosis of the liver—namely, the fact that a large number of drunkards and intemperate persons are found among the subjects of chronic Bright's disease. Not only has this connexion been recognised by all writers on Bright's disease in this country and America, where intemperance is rife, but even in Germany and France, where the vice, at least in the form of spirit-drinking, is less prevalent than with us. The morbus Brightii of drunkards is a well understood type of disease among German writers. The impression that has grown on my own mind from an experience of several years both in public and private practice—much of which has been among patients suffering from renal disorders—is very strong that the intemperate, if they escape the earlier perils of delirium tremens, cirrhosis, and alcoholic phthisis, fall victims in large numbers, in their later years, to renal degeneration.

My present purpose, however, is not to set forth the facts which support the old opinion, but to show the inadequacy of the arguments brought forward by Dr. Dickinson in support of the contrary and new one.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

The first kind of evidence adduced by Dr. Dickinson is based on the results of *post mortem* examinations of persons who had died of delirium tremens, or of individuals who, having been notorious drunkards, met with a violent death.

From the records of St. George's Hospital, he obtained the details of the *post mortem* examinations of fifty-two adult males who had died of delirium tremens. From the same sources he took, for comparison, the same number of examinations of adult males who had met with accidental death, excluding such as had been notoriously drunken. The state of the kidneys in these two sets of cases is shown in the following table.

| | Delirium tremens (average age, 38). | Accident (average age, 41). |
|--|--|--------------------------------|
| Natural | 28 | 32 |
| Congested | 14 | 5 |
| Slight or uncertain changes in the cortex .. | 3 | 1 |
| Large, smooth, mottled | 3 | 1 |
| Granular surfaces | 3 | 6 |
| Cysts, without other changes | 1 | 7 |

The first thing that strikes one in examining this table is, not the slowness of the alterations in the delirium tremens cases, but the enormous proportion of serious organic disease in the accident cases. Is it to be believed that one in every seven or eight presumably healthy persons of the average age of 41 is the subject of granular kidney, or of the large smooth mottled kidney? This point alone would seem sufficient to fatally vitiate these observations. If the delirium tremens cases be taken by themselves, they present a sufficiently strong indication of the evil effects of alcohol on the kidneys. In nine cases, serious changes, either advanced or incipient, existed in the kidneys; in fourteen cases, there was congestion; and a perfectly natural state existed only in a little more than one-half. It is to be borne in mind that renal degeneration is usually a late event in the life of the intemperate; and that, consequently, the signs of renal disease in those who die at an average age of 41 might be expected to be found, for the most part, only in an incipient stage.

Dr. Dickinson next refers to the papers of Dr. Ogston of Aberdeen, who has minutely recorded the *post mortem* appearances of a chronic kind met with in the bodies—first, of seventy-three persons who were notoriously intemperate, and who had perished suddenly from the effects of accident, suicide, or homicide, and while apparently in ordinary health and activity; and, secondly, of forty-four additional persons of the same habits, who had also perished suddenly while apparently in ordinary health, but whose death was more directly traceable to the abuse of stimuli. The changes found in the kidneys are thus tabulated by Dr. Ogston.

First Series—73 cases, average age about 43 years.

General fatty degeneration in 1 case.

Hyperæmia in 4 cases.

Hypertrophy in 13 cases (in 5, lobulated; in 2, the cortices pale and attenuated; in 2, with yellow patches of fatty degeneration over the cortices; in 1, with partial obliteration of the tubuli; in 2, with granular surfaces; in 1, with (12) pus-depôts in one kidney; coincidentally in 1, with albuminous urine).

Atrophy in 1 case (kidneys attenuated, pale, with yellow fatty deposits in their cortices, serous cysts on their surfaces, and albuminous urine).

Buff-coloured, and cortices attenuated, in 4 cases (in 2, with albuminous urine).

Abnormal appearances in the kidneys, in all, in 23 cases, or in 31.5 per cent of the whole.

Second Series—44 cases, average age about 48 years.

Extensive fatty degeneration in 6 cases (surfaces granular in 3).

Hyperæmia in 9 cases (with albuminous urine in 1).

Hypertrophy in 14 cases (in 2, confined to the right kidney; in 2, kidneys lobulated; in 2, cortices pale and attenuated; in 1, tubuli obliterated; in 3, extensive fatty degeneration; in 4, marked hyperæmia; in 3, substance softened; in 2, atrophy of the left kidney; in 2, albuminous urine).

General atrophy in 3 cases (both kidneys in 1, right kidney in 1, left kidney in 1).

Partial atrophy in 6 cases (tubuli wasted in 2, cortices in 4).

Partial fatty degeneration in 5 cases (tubuli wasted in 1, surfaces granular in 1, cortices attenuated in 1, albuminous urine in 2).

Abnormal appearances in the kidneys, in all, in 28 cases, or in 63.6 per cent of the whole.

I am at a loss to understand how Dr. Dickinson could study these

ables without coming to the conclusion that the abuse of alcohol is a powerful agent in inducing renal degeneration. Whether regard be had to the gravity of the changes recorded, or to the percentage of cases in which they were found, the evidence of these tables seems altogether unequivocal. In judging them, Dr. Dickinson seems to have been unconsciously biased by his individual views of the types of renal disease, and to have overlooked the fact that clinically these types, speaking of chronic cases, are in large numbers, if not in the majority of cases, mixed together so as to produce a composite anatomical state. It must also be remembered that the alterations here recorded occurred in the bodies of persons who perished suddenly, while apparently in the enjoyment of their ordinary health; and that, consequently, they might be expected to be, for the most part, only in an early stage of development.

Dr. Dickinson next refers to the paper of Dr. Peters of New York, who examined the bodies of nearly seventy persons who had died from the excessive use of ardent spirits. Dr. Peters thus describes the changes found in the kidneys: "The kidneys are generally somewhat enlarged, flabby, their cortical substances infiltrated in numerous small spots, with a whitish matter, either albuminous or fatty; occasionally they are granular." This description is too vague to found any argument upon; but it seems to indicate a not inconsiderable amount of disease. Dr. Dickinson remarks on the granular condition having been only found *occasionally*; but I find in the same paper that "granular liver was found in four or five cases only"; so that in that respect the kidneys and liver were not very differently situated.

In the last place, Dr. Dickinson appeals to the Reports of the Registrar-General, and founds an apparently cogent argument on the want of correspondence between the death-rate from Bright's disease and the degree of intemperance prevailing in different localities. I have carefully gone over this point, taking the proportional number of deaths entered under the headings Delirium Tremens and Intemperance as a gauge of the inebriety or sobriety of the contrasted localities, and comparing large numbers, or a series of years, in order to get at tolerably trustworthy averages. My surprise was great to find that the conclusion of Dr. Dickinson was substantially correct, and that the death-rate from Bright's disease was as high in the more sober districts as in the more intemperate districts, and frequently much higher. But my surprise was still increased when I found that the death-rate from diseases of the liver, and from those specially entered as hepatitis or cirrhosis, was no higher—often much lower—in the more drunken districts than in the more sober districts. Now there is nothing more certain in the whole range of etiology than that diseases of the liver, and especially cirrhosis, are produced by the abuse of ardent spirits; and yet the Registrar-General's Reports show no trace of this connexion; indeed, if they show anything, they show that intemperance is actually a protection against diseases of the liver. This is a manifest *reductio ad absurdum* of this part of Dr. Dickinson's argument.

The following table summarises some of the results which justify the above observations.

Comparison of the Proportional Number of Deaths from Intemperance, from Diseases of the Kidney, and from Diseases of the Liver, in different Districts.

| | Deaths from intemperance. | Deaths from renal disease. | Deaths from liver-disease. |
|--|---------------------------|----------------------------|----------------------------|
| Town districts of Scotland, for the ten years 1855-64 | 1 in 402. | 1 in 134. | 1 in 105. |
| Mainland rural districts of Scotland, for the ten years 1855-64..... | 1 in 533. | 1 in 131. | 1 in 80. |
| The five most intemperate registration districts of England, for 1867 (Nos. 1, 2, 8, 9, 10.) | 1 in 512. | 1 in 92. | 1 in 86. |
| The five most temperate registration districts of England for 1867 (Nos. 3, 4, 5, 6, 7.) | 1 in 926. | 1 in 87. | 1 in 79. |

No further comment is necessary on this table. It shows conclusively that the Registrar-General's Reports cannot be safely relied on to determine the more delicate etiological problems.

I have now gone over *seriatim* the arguments advanced by Dr. Dickinson, and have, as I believe, succeeded in showing that they are inadequate to disturb the old opinion respecting the effect of alcohol on the kidneys; and that, in fact, the question remains just where it was before

he wrote his article. The only other point which he raises is regarding the proportionate number of granular kidneys in persons who have died of alcoholic cirrhosis of the liver. In forty cases of cirrhosis collected by himself, the kidneys were granular in eight. I may add that Frerichs found granular kidneys the same number of times in thirty-six cases of cirrhosis. In neither series is the proportion strikingly great, but it is certainly not inconsiderable. It must always be remembered that alcohol, like most other causes of disease, works along different lines in different persons, and that its effects vary according to the acuteness and chronicity of its poisonous action. How often does it not happen that we witness the production of cirrhosis from intemperance, without any of the nervous symptoms which usually characterise alcoholism; and, again, how often do we see the latter without the former?

Dr. Dickinson seems to have some difficulty in the *à priori* considerations regarding the way in which alcohol can reach the kidneys to do them injury. The kidneys are certainly less directly in the track of the absorbed alcohol than the liver and the lungs; but they are quite as much so as the brain and nervous system, which are the parts most surely and earliest affected by alcohol—always excepting the stomach.

The mode in which spirit-drinking affects the kidneys is probably twofold. In the first place, it is now well known that alcohol, taken in excess, is largely eliminated in an unchanged state by the kidneys. In the habitual tippler, a frequently reiterated stimulation of the kidneys must arise from this source. Such a stimulation, going on for years and years, can scarcely fail at length in inducing a strong proclivity to organic disease. Secondly, the blood of the intemperate becomes in process of time more or less vitiated, and inadequate to minister to the healthy nutrition of the tissues, and, among others, of the renal tissues.

I do not wish to represent the action of alcohol on the kidneys in too strong relief: the nervous system and the liver are undoubtedly more constantly and earlier affected. But next to these come, probably, the kidneys; and, among the later perils of the less violently intemperate—the steady but not drunken soakers, if I may use the phrase—a high place must, I believe, be given to certain types of Bright's disease.

NOTES AND OBSERVATIONS ON DISEASES OF THE HEART AND LUNGS.

By THOMAS SHAPTER, M.D., F.R.C.P.,
Senior Physician to the Devon and Exeter Hospital, etc.

IN the course of professional life, cases of abnormal conditions of the functions of the heart frequently present themselves. These may be classified as (1) errors of impulse; (2) errors of rhythm; (3) the occurrence of pain; and (4) a departure from the heart's usual or normal sounds. These abnormal conditions may exist separately or collectively, and may be due either to organic disease or to functional disorder; now indicative of fatal tendencies, now of only a passing disturbance in the animal economy. To arrive at a correct diagnosis and a safe method of treatment in these cases, it is absolutely necessary to fully, nicely, and accurately appreciate these several and special indications.

It is of the first importance to ascertain if these abnormal symptoms be due to, or in any way associated with, organic lesion. Seeing the book-certainty with which organic disease and its distinctive features are described, it might be assumed that this is a matter of no great difficulty. One of the most experienced observers of diseases of the heart, indeed, says: "The facility of making a correct diagnosis between functional and organic diseases of the heart is not so great as modern writers lead us to believe; and we more often arrive at a just conclusion by instinctive skill, the result of experience and judgment, than by communicable rules of diagnosis." (*Stokes On Diseases of the Heart*, p. 495.)

In the above, as it appears to me, Dr. Stokes begs the whole question of the difficulty of diagnosis in these cases; the accurate judgment of a man of vast experience being made to supersede the deficiency, to the inexperienced, of definite or even suggestive rules. There really is, however, great difficulty, not only in describing the means towards a correct diagnosis between functional and organic diseases of the heart, but the diagnosis itself, even to the most practised and able observers, is too often a conclusion not easily to be arrived at; and this Dr. Stokes himself, in a preceding page, fully acknowledges.

Supposing, however, we can positively and satisfactorily eliminate all

suspicion of organic lesion, it then becomes necessary to ascertain the immediate cause of the functional disturbances exhibited, paying especial attention to such concomitant disorders of the general health as may present themselves. These may not only be the exciting cause of the disordered action, but may have important influences on the future condition of the heart. There remain, in fact, for anxious investigation, the origin and the probable consequences of these functional disorders, with the indications of cure.

In order to arrive at something like rules for our guidance towards the true appreciation and management of these functional disorders, it may probably be useful to consider the several prominent symptoms of diseased action in relation both to organic disease as well as to these latter.

Amongst the prominent and very frequently occurring indications of disorder of the heart, disturbances in the force of its normal impulse must be enumerated. Its force may be diminished or increased. Either of these conditions may be associated with organic disease or with functional disorder only.

The circumstances attendant on, and giving importance to, the condition of a diminished impulse, may conveniently be first considered. A diminished impulse, varying from that which is slightly below the ordinary standard to that which is virtually uncommunicable to the observer, whether by eye or hand, is at times met with; and the due importance of this it will be necessary to appreciate, together with those other symptoms with which it is found to be associated. While we feel that, in many cases, a diminished impulse is consistent with the enjoyment of good health and long life; still it is a condition so often associated with debility in the structure of the heart itself, or with some other important disorder or lesion of the general system, that the study of this symptom and its several associations and probable consequences, is worthy of the physician.

The circumstances whereby a patient's attention is ordinarily arrested when there is the presence of a diminished impulse, are the occurrence of (1) breathlessness on slight exertion, with a (2) feeling of debility, amounting at times to a realised inability to do that which otherwise would be within the usual compass of his power; and this may be associated with (3) the occurrence of occasional faintness, even to actual fainting. On more minute inquiry, we may find, on examination, that there is a diminished (systolic) impulse; and we naturally first seek to find if the heart itself present any objective physical causes for such weakened condition. Is it diminished in size? Is it enlarged? Are its sounds less distinct or more pronounced? The personal condition of the patient is here to be considered, as, in a chest well clothed with fat, but little impulse may be immediately perceptible, though the heart be normal; while in very thin persons, though the impulse is really diminished, the thinness of the walls so far permits it to be felt as may at first induce the idea that its contractile action is not enfeebled.

Due regard being given to these personal conditions, we may, having ascertained that there is a diminished systolic impulse, find it to be associated with (1) a normal condition of the heart as regards size; or (2) a diminished or (3) an enlarged condition; or it may be associated, in addition to either of the above conditions, with diminished or increased valvular sounds, or irregularities in rhythm, or with other indications of cardiac affection; or there may be no indications of a structurally altered heart, but disease in contiguous or other organs influencing the just recognition of the impelling power.

Having duly appreciated the existence and the amount of the diminished impulse, and also the objective symptoms presented by the heart itself, it is necessary to weigh how far the former is dependent on the latter. We must also consider such other remote causes as may exist. Before pronouncing a diminished impulse to be due solely to a passing weakness, it is necessary to carefully eliminate each and all of those associated conditions which indicate it to be due to permanent disease. When this is done, and not till then, are we competent to assume the diminished impulse to be functional only, and such as may be so ministered to as to procure ultimate recovery.

It may be assumed that a diminished impulse is immediately due to a deficiency in the contractile agencies of the heart; and that this deficiency may be in the nervous influences solely, or may be due to permanent physical incapacities. Of the latter, we have illustration in several structural diseases of the heart; of the former, in circumstances, whether passing or permanent, of great physical exhaustion, such as on the occasion of shock, of the specific depressing influences of certain medicines (tobacco, aconite, chloroform, hydrocyanic acid, digitalis, etc.), and of adynamic fevers and other diseases, more especially of the spinal cord and brain-tissue.

Before considering the purely nervous causes of diminished impulse, we will briefly pass in review the circumstances attending this disturbance in the functions of the heart in its connection with some of the

more important structural affections with which this condition is frequently associated, so as the better to appreciate the *rationale* of the influences which produce it, not only in these affections, but in those, also, of a purely nervous origin. The most important structural affections with which diminished impulse is associated, are characterised by a condition of the heart whereby the dulness on percussion in the præcordial region is increased. The physical conditions of the heart in connection with this indication may, in general terms, be referable to (1) dilatation; (2) dilatation with hypertrophy; (3) fatty deposits; (4) deposits in the pericardium; (5) deposits in the pleura. After investigating the distinctive features of each of these conditions, it may be useful to make such notes as may present themselves as to the *rationale* of the deficiency in impulse exhibited in each, and the importance of this deficiency in relation to prognosis and treatment.

In the class of cases now to be considered, those which are associated with, or dependent on, valvular disease will be excluded; observation being limited solely to such as have an independent origin. Nevertheless, we may have to consider cases where the acoustic evidence of mitral murmur is present: this being due, not to valvular disease, but to the amount of dilatation generally, without hypertrophy, rendering the valves insufficient, and thus permitting a regurgitant murmur.

When the impulse is feeble, and there is obviously, on examination, an increase in the area occupied by the heart, as indicated by increased dulness, or by the impulse being diffused, we may assume, without going into an elaborate discussion of the various circumstances connected with contiguous disease or displacements by other organs which may modify the diagnosis, that there is either enlargement of the heart itself, or that there exist abnormal deposits in the pericardium or pleura; and, save when the enlargement is due to concentric hypertrophy, to fatty deposit, or to hypertrophy with softening, we may also assume, if the sounds be louder than normal, that the enlargement is due to dilatation and thinning of the walls of the ventricles.

We will now refer more in detail to the heart-symptoms which may characterise each of these conditions.

When, with the dulness on percussion extending abnormally in a lateral direction, the impulse is deficient in force, and at times slightly undulatory in character, yet diffused over an extended area, and this area, like the dulness on percussion, is extended laterally, but is not to be felt either in the back or below the right shoulder-blade; when, while the apex-beat is apparently seated towards the sternum, its shock is found to be, though diminished and indistinct, to the left of the nipple, and below the fifth interspace, and its shock at this point not more marked or appreciable than over the general area of the heart's position, and the rhythm, though sometimes regular, for the most part disturbed, the pulse being at the same time weak and intermitting, and when the valvular sounds, especially the systolic, are somewhat sharp, clear, and heightened in pitch; when this series of phenomena present themselves, we may infer that there is a generally dilated condition of the heart, the muscular structure of which is neither flabby in texture nor softened by fatty degeneration; and we may also infer the absence of hypertrophy.

Sometimes, however, the above named conditions are qualified by a persistent rhythmical irregularity, with the occasional occurrence of the first sound being absorbed in a murmur; we may then infer that dilatation has proceeded so far as to render some of the valves insufficient. The tricuspid, and then the mitral, are the chief seats of this extended dilatation; should, in extreme cases, the aortic valves also become thus inefficient, the rhythmical action of the heart and the irregularities in the pulse become very marked, while indistinguishable murmurs take the place of the valvular sounds. We may perhaps also infer, when the apparent impulse projects unduly towards the sternum, while both sounds are heard sharp and equal, and sufficiently pervading to be appreciated below the right shoulder-blade, and, at the same time, there is no marked percussion-dulness over the sternum, that the left ventricle is unduly dilated; and we may also infer, if, in addition to great rhythmical disturbance, the jugular veins be unduly distended and present the appearance of an undulating pulsation, that dilatation of the right ventricle exists; and if there be no appreciable abnormal dulness on percussion, we may also conclude that the dilatation is confined to the right ventricle; while if the left ventricle be dilated, we may conclude that the right participates in the like condition.

In all the above cases, we infer the presence of dilatation without special structural degeneration of the parietes of the ventricles. This dilatation, for the most part, exists in both ventricles; but, as just observed, sometimes the right side is solely so affected. As a general rule, the diffusion of the impulse is according to the ratio of the area of the dilatation, while the sharpness and intensity of the sounds is proportionately increased by the thinning of the parietes.

[To be continued.]

THE CIRCULATION IN THE ACARDIAC FŒTUS.

By GEORGE JOHNSON, M.D., F.R.C.P.,

Physician to King's College Hospital.

IT is satisfactory to me to find that the correspondence between my Reviewer and myself, published some months ago, had sufficient interest for Dr. J. W. Ogle to induce him to write an elaborate paper on the subject of the circulation in the acardiac fœtus (BRITISH MEDICAL JOURNAL, Oct. 28th). I had looked up all the authorities now quoted by Dr. Ogle before I commenced the discussion; but I did not refer to them during the correspondence, because the question whether an acardiac fœtus had survived its birth could be decided without such reference; and, further, it appeared to me that the speculations of Dr. Houston and Dr. Marshall Hall only tend to throw a cloud of doubt and obscurity over a question which Sir Astley Cooper's dissection had rendered clear and intelligible. I will endeavour as briefly as possible to state the facts of the case.

There is no authentic instance on record of an acardiac fœtus unassociated with a cardiac twin. Sir Astley Cooper's dissection and drawings show a direct communication between the two umbilical arteries of the perfect fœtus and the single umbilical artery of its acardiac companion. It is obvious, then, that the blood must of necessity be forced by the heart of the perfect child along the umbilical artery of the acardiac fœtus, as it was forced *per saltum* from the placental end of the divided cord in the case of twins cited by Dr. M. Hall. It is true that this involves, as Dr. Marshall Hall says, an inversion of the order of the circulation in the cord of the acardiac fœtus, the blood passing into that fœtus by the umbilical artery, and out by the vein; but this is a necessary result of the fact that *the heart which propels the blood through both fœtuses is outside the body of the imperfect fœtus*.

The movement of the blood and the direction of its current are determined by the heart. *The blood moves from the heart through the arteries; it returns to the heart by the veins.* This is a law without exception. It is manifest that Dr. M. Hall's hypothesis of "lateral action" involves a reversal of this law, and makes the blood move from the heart through the umbilical vein of the acardiac fœtus, and return towards the heart by the umbilical artery. This is an incredible hypothesis, inconsistent with anatomical facts and with hydraulic principles. The only part of the circulation in which the ordinary course of the arterial and venous currents is actually reversed is in the umbilical cord of the acardiac fœtus; and this reversal, I repeat, is necessitated by the fact that, one heart having to serve for two fœtuses, the central organ of the circulation is external to the imperfect fœtus.

Dr. Houston's suggestion that, notwithstanding the free communication between the vessels of the two fœtuses, the heart of the one has no influence upon the circulation of the other, but that the placenta has some mysterious power of attracting and repelling the blood, is obviously an untenable hypothesis. Such speculations as those of Dr. M. Hall and Dr. Houston, in opposition to the facts so clearly demonstrated by Sir A. Cooper, remind one of the curious hypothesis of Riolanus, of whom Harvey says, that "he would have the blood to make its way into the left ventricle through the septum of the heart by certain invisible and unknown passages, rather than through those ample and abundantly pervious channels, the pulmonary vessels, furnished with valves, opposing all reflux or regurgitation." (Harvey's *Works*, Sydenham Society's translation, p. 99.)

Finally, I would suggest that our present knowledge of the functions of the vaso-motor nerves and the muscular arterioles necessitates a thorough revision and modification of the theory of a capillary force and a *vis à fronte*. The case of an acardiac fœtus obviously affords no support to that theory. On the contrary, the invariable vascular connexion between such a fœtus and a fully developed twin is one amongst a multitude of facts tending to show that, in the circulation of the higher animals, while other influences regulate the supply and distribution of blood, the heart is the main and essential motor power.

OBSERVATIONS ON THE RADICAL CURE OF RETROFLEXION OF THE UTERUS.

By PERCY BOULTON, M.D., etc.,

Physician to the Samaritan Hospital for Diseases of Women.

DURING the last four or five years it has fallen to my lot to treat a large number of cases of retroflexion of the uterus; and, after many trials of various stems and pessaries, I have arrived at a plan which seems in every way satisfactory. In the JOURNAL of September 23rd I

see a report of Dr. Beatty's paper, which I regret I did not hear at Plymouth; and I wish to record my experience without further delay.

I would commence by endorsing all the advice given by Dr. Beatty as to the preliminary treatment in order to reduce inflammation, congestion, ulceration, etc., before introducing any stem. When the uterus is in a proper condition for receiving the stem, the question is, What kind is the most suitable? Dr. Beatty uses one of Sir James Simpson's, which requires "a flat boxwood pessary in the vagina" to keep it *in situ*. I object to this pessary for the following reasons.

1. The wearing of a stem invariably causes an increased flow of catamenial and other discharges; and such a pessary must retain these in the vagina.

2. It must effectually prevent the passage of the weak astringent wash which Dr. Beatty recommends to be used daily.

3. No examination can be made without removing the pessary; and, "as the bulb of the stem is to rest and move on the smooth surface of the boxwood pessary, and thus allow the uterus to change its position as the woman is horizontal or perpendicular," I think it more than likely that the uterus would become retroverted, and the stem slip out.

4. In most cases a pessary is unnecessary.

My plan is to introduce a self-retaining stem, thus doing away with the necessity of anything in the vagina. I have used various kinds, made of vulcanite or German silver. Those of Drs. Sims, Routh, Bantock, and Greenhalgh, have been preferred; and of these the latter is by far the best. The advantages are, that it is self-retaining, cleanly, being made of German silver, and allowing free escape of discharges; it is easily introduced; and the spring is stronger than the vulcanite ones, and therefore less likely to slip or get out of order.

The first fault I have always recognised. The stem, as ordinarily used after the operation of hysterotomy, is too large to be used in most cases of retroflexion; and I have, therefore, been in the habit of introducing stems identical in shape, but only two inches and a half in length, including the rounded head; and passing the whole within the os uteri. At times the edges of the head have caused pain to the wearer for a short time; but in most cases it has appeared to fit quite naturally within the widened cervix; and the absence of anything in the vagina has always seemed a great advantage. I have used this stem more than any other, and never had any difficulty with it till August last, when the following case came under my care.

Miss E. D. was suffering from melancholia, which was distinctly of a hysterical character. On examination, I found the uterus retroflexed, the fundus forming a tumour between the rectum and cervix. On August 3rd, I passed the sound two inches and a half, straightening the uterus; and then I inserted one of Dr. Greenhalgh's spring stems two inches and a half in length. The patient was anxious to go home to the country; and, as her mental condition rendered it advisable that she should be under constant surveillance, I consented to her doing so, cautioning her to keep very quiet. On September 14th, she came to London to have the stem removed. She had been wonderfully well, and had felt no inconvenience. When I examined the uterus, it appeared perfectly straight; but the stem had gone. I concluded that it had slipped out when at stool, and had not been noticed, as several of the vulcanite ones have done with other cases of mine. I, however, passed a sound gently, and discovered that the stem was in the uterus, but had worked up, the head being nearly an inch from the os externum. I had not much difficulty in extracting it with a copper sound bent into a short hook at the end, which I passed at one side of the stem, and then turned and drew it away.

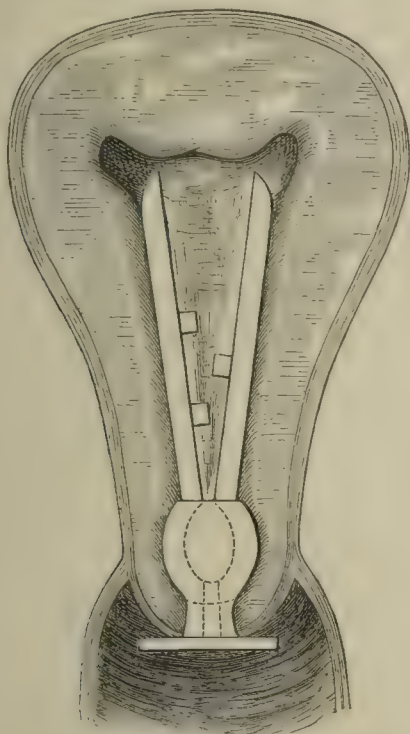
This case is instructive. The pointed extremities of the open stem must have passed up the cornua leading to the Fallopian tubes; and such a contingency is worth remembering in the future; for, although in this instance the stem was extracted, it might not always be easy to do so.

Not wishing to give up the stem that has hitherto served me so well, I have had a sheath made for the head, with neck and shoulders attached; and this does away with the only faults I have yet discovered. The smooth oval sheath over the head, reduced in size, protects the cervix from the sharp edges which used to cause pain to the wearer; while the shoulders prevent it from working higher up into the uterus, and render it easy to extract. This adaptation of mine makes the stem somewhat resemble Dr. Bantock's vulcanite one; but it is infinitely preferable, and leaves, I think, nothing to be desired.

In most cases of retroflexion, a self-retaining stem is all that is necessary. I have had cases, however, where, owing to increased size and weight of the uterus, from congestion or other causes, or from difficulty of defæcation, there has been partial prolapse. In these I always use a Hodge's pessary after replacing the womb and introducing the stem. This takes the strain off the uterine ligaments, and answers every pur-

pose; while the vagina is free from injections, escape of discharges, examination, or what not.

I have had cases where, after the stem was introduced, the uterus became retroverted instead of retroflexed. In these I introduce a Hodge's pessary with bars, which prevent the cervix from tilting forwards; and in that way the uterus is kept in a proper position. The accompanying plate shows the stem as now used.



The addition can be made to any of Dr. Greenhalgh's shorter stems, and in no way interferes with the mode of action or introduction. For cheapness, it can be made of vulcanite, though what I use are metal. This stem can be used after hysterotomy, and has advantages over Dr. Greenhalgh's original one.

DILATATION OF THE CERVIX UTERI BY GRADUATED BOUGIES IN CASES OF ANTEFLEXION AND MECHANICAL DYSMENORRHOEA.

By ARTHUR W. EDIS, M.D.,
Assistant-Physician to the Hospital for Women.

How often does it happen in the out-patient department of hospitals, as well as among one's private patients, that the physician is called upon to relieve dysmenorrhœa, sterility, dysuria, and all the numerous symptoms resulting from anteflexion, and yet does not consider it prudent to resort to the intrauterine stem, unless the patient can be admitted or can rest at home, and all the necessary precautions can be taken to preclude any injurious results arising from its introduction. I am well aware that many regard the insertion of a glass, metal, or vulcanite stem as a matter of slight moment, and are in the habit of doing it frequently even among out-patients; but, although it may be done with impunity and even with benefit in many instances, still the proportion of those who have serious symptoms following its employment is sufficient to deter the prudent practitioner from resorting to this expedient until, after the application of leeches to the uterus and frequent passings of the uterine sound, he has accustomed the organ to tolerate the presence of a stem. It is in those patients in whom giving up their employment is simply giving up their means of subsistence, and where, therefore, it is out of the question, that the method which I adopt, and which was practised successfully by Dr. J. Mackintosh forty years since, seems deserving of more extended trial than it at present meets with, and well worthy the attention of practitioners, who are frequently called upon to alleviate the periodic sufferings of those whose life is rendered miserable by what should be a perfectly natural function. The instruments which I employ are similar in form to the ordinary uterine sound, varying in size from that of a No. 8 to No. 12 catheter.

In cases of severe anteflexion, or where this is but slight, and where the internal os or the cervical canal is constricted, a slight amount of inconvenience is generally occasioned by the first introduction. This, however, soon passes off, and gives rise to no further symptoms. My

usual plan is to commence with No. 8, and pass it once a week, gradually increasing the size according to circumstances, and allowing the instrument to remain in for about ten minutes, taking the opportunity to employ it within a few days of the expected appearance of the catamenia. I have found this method of treatment capable of far more universal application than the insertion of a stem; and beyond some temporary inconveniences, such as are met with frequently in passing a catheter in the other sex, I have had no reason to regret in a single case the employment of gradual dilatation. Should any discomfort ensue from the treatment, it is readily alleviated by the use of a pessary containing morphia and atropine. In cases of anteflexion, I always direct the patient to hold her urine as long as possible, thus gaining assistance by the hydrostatic pressure exerted upon the fundus uteri. A mixture of iron and strychnia is also of service; but it will not relieve the symptoms unless other measures be resorted to as well. A few illustrative cases will best explain my remarks.

CASE I.—Mary G., aged 35, had been married sixteen years, and was sterile. The catamenia appeared at the age of thirteen, and had been regular, but always accompanied by pain, commencing about forty-eight hours before the flow, and continuing during the three or four days that it generally lasted. She complained of "bearing down," "forcing of the water," and other usual pelvic symptoms. On examination, the uterus was found to be anteflexed. The uterine sound passed with pain and difficulty upwards and forwards, causing "spasm" at the internal os. A No. 8 thick sound was then passed with some difficulty and pain, causing a "feeling of soreness" for the remainder of the day. It was again employed a few days before the next period, which, as is not unfrequent, was anticipated by two days. Within five weeks from the first interference, menstruation again returned, and, according to the patient's own description, she got through it better than she had done for years, the flow being more free and of a better colour, and not accompanied by any aching or pelvic distress. She has since passed through another period without experiencing any inconvenience whatever; and I have abstained from further interference, in the hope that not merely the dysmenorrhœa, but also the sterility, may be relieved.

CASE II.—Augusta S., aged 38, married seven years, was sterile. The catamenia appeared at fifteen; they were regular, accompanied by pelvic pains and distress during the first two days of the flow. On examination, the uterus was found to be anteflexed; the uterine sound passing upwards and forwards. The thick sound entered with some difficulty. This was repeated three times, at intervals of a week. At the next period, although "she felt as if they ought to come on", nothing appeared. No further interference was resorted to, and she is now daily expecting her confinement. This patient had previously been under the care of another practitioner for "stricture of the womb", and was told that it was impossible she could ever become pregnant.

CASE III.—Emma W., married six years, had one child five years since. The catamenia appeared at the age of seventeen; they were profuse, painful, though regular. She complained of pain in the loins and lower abdomen for about three days before the appearance of the catamenia and during the flow; also of dysuria, etc. The patient was also subject to slight attacks of epilepsy, coming on from excitement or worry. She was admitted as an in-patient in the spring of 1870, and remained six weeks. A glass stem was inserted, but brought on an attack of epilepsy, and the stem was forced out. Every attempt to replace it gave rise to a return of the epilepsy. Further interference was, therefore, desisted from, and the patient left unrelieved. In the spring of the present year she again presented herself in the out-patient department, suffering from the same symptoms. I then commenced carefully the dilatation of the cervix by means of the metal bougies. The first few attempts invariably brought on an attack of epilepsy; but in a short time the uterus became tolerant of interference, and she is now better than she has been for years, and suffers no inconvenience at her periods. The uterus was originally anteflexed; but, owing to the stimulus excited by the passing of the bougies, the atrophied uterine fibres at the angle of flexion have become more developed, and the amount of flexion is considerably less.

POISONING BY PETROLEUM.—In a case observed by M. Lugol, a woman, aged 40, swallowed a full glass of petroleum, with the intention of committing suicide. The pulse was small and thready; no nausea or vomiting; some epigastric discomfort. Magnesia was prescribed in abundance. In the evening there was a stool, on the surface of which swam petroleum, which was easily set on fire. Although the first symptoms were slight, gastro-enteritis presently set in, and death occurred on the twentieth day. (*Repertoire de Pharmacie*, Sept. 1871.)

ABSTRACT OF CLINICAL LECTURES ON OPHTHALMOLOGY,

Delivered at St. Thomas's Hospital, London.

By R. LIEBREICH, M.D.,

Ophthalmic Surgeon and Lecturer to the Hospital.

EXAMINATION OF THE EYE WITH THE OPHTHALMOSCOPE.

HAVING obtained a general aspect of the fundus, you may direct your attention to the optic disc. In order to observe this important part, it is necessary to make the patient turn his eye twenty degrees inwards towards the nose, and to make him fix a point on a level with your own eye. You will then immediately recognise the optic disc by the vessels of the retina which emerge from its surface. The aspect of the optic disc in the normal eye offers no fewer variations than that of the choroid.

In order to analyse well these variations, it is necessary to understand the signification of certain lines, drawings, and shadows appearing in the optic disc under the illumination given by the ophthalmoscope. There are, first, three different lines in the periphery of the optic disc, to which I gave the names of choroid limit, sclerotic limit, and nervous limit. The choroid limit is the external contour of the papilla. It indicates the edge of the choroid foramen, through which the optic nerve passes. This limit is ordinarily very sharp, and forms, by a stronger pigmentation, sometimes a fine dark circle, sometimes a more or less black crescent, or even a large black circle. The sclerotic limit is not so easy to distinguish. It is more visible in some pathological cases than in the normal eye. It forms a fine, clear, white circle, or ordinarily only half a circle, near the choroid limit, and it is produced by the light reflected from the edge of the sclerotic, where it extends backwards to form the sheath of the optic nerve.

By the side of this white line the darker periphery of the nervous substance is marked by a very fine grey line—the nerve limit proper. Starting from this line to the centre, we find a very delicate shading forming a lighter centre. In this lighter central part we recognise in a certain number of physiological cases a very characteristic drawing, forming a network, the clear lines of which represent the connective tissue of the "*lamina cribrosa*", while the grey meshes represent the transverse aspect of the nervous fasciculi which pass through the network of the lamina cribrosa. The clearness and extent in which we see this central drawing depend upon the form of the papilla, and especially upon the form and size, and depth of its physiological excavation.

It is very important to study the variations of colour, so as not to make the mistake of taking for pathological changes some exceptionally decided individual, but only physiological, appearances. The normal optic disc has sometimes an equal reddish-grey colour; sometimes it is grey in the periphery, and has a very clear luminous centre. In some cases it appears nearly as red as the fundus; and it is in such cases chiefly that we often find established the diagnosis of congestion of the optic nerve;—while I have proved that this red colour is not produced by a stronger vascularisation of the optic nerve itself, but only by an optic effect depending upon the choroid. If the border of this membrane encircle the optic disc more closely, the light, after having traversed the choroid and become red, gives, by dispersion, a red aspect to the papilla.

The manner in which the vessels of the retina are extended upon the optic disc increases, by its variations, the number of different aspects of the papilla in its normal state.

Beyond the papilla the configuration of the vessels of the retina is more uniform, and takes, at least so far as regards the principal branches, nearly always the same direction. This is the reason why it is possible to make the vessels serve as an indication in determining the places in which we have observed some changes. For this purpose I have given, in the first edition of my "*Atlas*", Plate I, a network of vertical and horizontal lines, each corresponding to a number or a letter serving as an indication of one point in the fundus.

The retina itself exerts only a small influence on the aspect of the normal fundus. Being nearly transparent, it reflects only a very small quantity of light, giving that peculiar hazy appearance which we see the more distinctly as the choroid is darker, because, in such cases, the weak light from the retina is not so completely overpowered by the light returning from the choroid. In children, the retina reflects the light with more intensity, and forms a real lustre, most strongly pronounced near the papilla and the great vessels, forming illuminated circles around the *macula lutea*.

The *macula lutea* or yellow spot, the centre of the retina, merits, from its great physiological importance, our particular attention, and it

is generally insufficiently investigated. The characteristic signs of this important point are the following. In the irregular round spot, the size of which is nearly equal to that of the optic disc, the choroid shows a darker pigmentation, both in the epithelium and in the tissue, so that, in dark eyes, this part appears almost black. In the centre of this spot appears a very small reflection, forming either a luminous point or a little ring. This is the reflection of the central foramen. Surrounding this latter we observe a clear yellow film before the choroid, the more intense as it is nearer to the foramen, occupying a different part of the *macula lutea* in different eyes. This yellow colour is situated in the retina, and is, as I proved many years ago, not merely a cadaveric phenomenon, but exists also in the living eye, although to a smaller extent and with less intensity.

The reflection of the retina, of which we have spoken before as dependent upon the anterior layer (the nerve-fibres), is completely absent in the whole *macula lutea*, which does not contain a real layer of nerve-fibres.

THERAPEUTIC MEMORANDA.

ABDOMINAL PUNCTURE IN TYMPANITES.

IN the number of this JOURNAL for October 21st, is a short but excellent paper by Mr. J. Hancocke Wathen upon Puncture of the Colon for Tympanites, with the opinions of which I cordially agree. The cases which he publishes are all eminently satisfactory, showing the amount of relief given by tapping the bowel for tympany in abdominal disease. But he says, "so far as I can ascertain, abdominal puncture for the relief of tympanites has been performed in five other cases", which he then gives, some of which have already been published. These, however, are by no means the whole of the published cases. If he will refer to the *Obstetrical Transactions*, vol. for 1869, pp. 47, 48, he will find I have recorded the last of four in which I tapped the intestines in May 1867. This paper was read in March 1868. The first case was three or four years before; but I believe that isolated cases have been performed before. I am under correction, but I believe that I was the first to call attention to the operation, although not in so decided a manner as those who have written since. Very recently the question has been under discussion in Paris, where the treatment is commended, twenty cases having been included in the paper.

It has yet to be determined whether there is much risk of extravasation into the peritoneal cavity; but experience at present shows this contingency to be unlikely. If the smallest exploring trocar be employed, the component tissues of the intestine are rather separated than cut, so that the opening is closed as soon as the instrument is withdrawn. One of the dangers of peritonitis arises from extreme tympany, which not unfrequently accompanies its attacks. The pressure of the gas on the sympathetic ganglia and nerves, and the tension of the tissues which they supply, add much to the collapse and vomiting found in the complaint. In such cases, I think, we may also employ tapping, as well as in other forms. But I believe that when the plan has been more extensively tried, it cannot fail to be considered as a legitimate operation in these very distressing cases. The least that may be claimed for it is, that the last moments of the patient can be rendered comparatively free from suffering.

J. BRAXTON HICKS, M.D., F.R.S.
St. Thomas Street, Oct. 25, 1871.

ABDOMINAL PUNCTURE IN TYMPANITES.

IN the BRITISH MEDICAL JOURNAL of the 21st October there is an account of some cases of abdominal puncture for the relief of tympanites, and in it reference is made to a case occurring in the practice of Mr. Salmon of Thornbury, where it much mitigated the patient's sufferings during the remaining twelve days of her life.

A similar case occurred to me in August 1869. The patient, a little boy aged three years, was suffering from peritonitis, presumed to be tubercular, and attended by great pain and tympanitic distension of the abdomen. The child's sufferings were very acute, notwithstanding the free use of opiates, and I fully expected that he would sink in a day or two. Hoping to give some relief, I punctured with a small trocar, letting out a large quantity of foetid air, followed by a drop or two of pus. As this gave great and immediate relief, I repeated the operation in a few days, when there was some reaccumulation. To my surprise he entirely recovered, and by the end of November was well, and remained so for about sixteen months, when he was attacked by whooping-cough and bronchitis, of which he died in April 1871. As his illness and death occurred at a distance from here, I had no opportunity of making a *post mortem* examination.

G. D. BROWN.
Ealing.

ABDOMINAL PUNCTURE IN TYMPANITES.

IN the issue of October 21st I observed an article "On Puncture of the Colon for the Relief of Tympanites", in which the writer makes the following statement in proof of the propriety of such an operation for tympanites in the human subject. He says: "You are all, no doubt, well aware that puncture of the intestine has long been practised on the lower animals. . . . The treatment is simple, and well known to most graziers. . . . I have just been informed by a most intelligent farmer that he has repeatedly performed the operation, always with the best results, never having lost a case."

Now it behoves all scientific men (more especially medical men), in advocating a new system of treatment, or in reviving an old one, where the life of a human being may be at stake, to be accurate in their narration, and have correct sources of information. Mr. Wathen has been simply misinformed; and if he had referred to any veterinary works bearing upon the subject, he would have been put right. The operation that he describes as "puncture of the intestine" in the ox is, in fact, puncturing the first stomach (*rumen*), and, as he states, is a very common operation. The *rumen* is not very liable to suffer from inflammation, so that we can operate upon this organ with impunity. It is customary with veterinary practitioners not only to puncture it, but to incise it to the extent of seven or eight inches, and remove its contents by the hand (occasionally removing about 112 lbs. in weight), and then introduce medicinal agents, at times using a flour-dredger to dredge the internal surface of the stomach with powdered nux vomica, etc. Thus it will be seen that there is no analogy between the cases which he quotes and the operation which he describes as being frequently performed on the lower animals; nor does the success of the one justify the performance of the other in the human subject. I do not think that Mr. Wathen would recommend his brother practitioners to operate upon their patients in this heroic manner.

Puncture of the colon for tympanites has, however, been performed on the horse, though with very little success; and, as far as my experience goes in such cases, I cannot recommend its adoption in the lower animals. There are several reasons for this opinion, but one significant fact may be sufficient at present. The intestines of herbivorous animals contain a large quantity of fluid, which, during the very violent struggles of the animal, is nearly certain to pass into the peritoneal sac, and thus give rise to a severe form of peritonitis, followed, in all probability, by death. This is no theory, as the *post mortem* appearances in such cases are so well marked that there can be no mistake in our conclusions.

With regard to the advisability or success of this operation in the human subject, I have nothing to say; but I should think that, as medical men have not the same difficulties and dangers to encounter in this operation that we have, it should be followed by greater success in their practice than in ours.

JOHN A. MCBRIDE, Lecturer on Veterinary Medicine and Surgery in the Royal Agricultural College, Cirencester.

TREATMENT OF GANGLION AND DIARRHŒA.

THE publication in the JOURNAL of the Reports of Medical and Surgical Practice in the Hospitals of Great Britain, conveys valuable information as to the views held and treatment adopted by our eminent members of the profession in various maladies, and certainly will be the best means of guiding the practitioner in his daily work, and of advancing the knowledge of pathology and therapeutics.

In the treatment of ganglion, no mention has been made of electrolysis; and, having experienced in private practice during the last four years the beneficial effects of the electrolytic needle, I am induced to add my observations to those already published in the JOURNAL. Miss T. O. consulted me in September 1867. She had during twelve months, after scarlatina, a ganglion an inch in diameter on the left wrist. I introduced two gilt needles, connected with the negative pole of a galvanic battery (four Daniell's cells), into the tumour, and closed the circuit by applying a wet sponge connected with the positive pole to the skin near the tumour, and allowed the continuous current to act for ten minutes. No pain was felt during or after the operation. I repeated it at intervals of seven days, during which time the tumour gradually diminished in size, and entirely disappeared after the fourth application. I saw my patient lately, and there is no trace of the ganglion left. In a second case about the same time, I obtained a permanent cure after two operations. I have since treated several cases of ganglion by means of electrolysis, and have been likewise successful.

With regard to the treatment of diarrhœa, I have tried in some cases opiates and astringents, and in others purgatives. I have seen better effects from the latter plan, and am therefore in favour of the elimina-

tive treatment of diarrhœa, cholérine, and Asiatic cholera, these being, in my opinion, only various degrees of one and the same malady.

A. WAHLTUCH, M.D., Manchester.

CLINICAL MEMORANDA.

EMBOLISM OF THE LEFT VERTEBRAL ARTERY: PARALYSIS OF THE GLOSSO-PHARYNGEAL NERVE: DEATH FROM STARVATION.

T. C., aged 68, a labourer, of full habit and florid complexion, met with an accident two months before his death, falling from a load across the back of a horse on his sternum. There was severe concussion of the chest, with considerable dyspnoea, but no ribs were broken. A few days afterwards, he complained of great pain over the left side of the occiput, extending down the neck; this gradually ceased, and he recovered so as to be able to walk about.

On October 14th he had a violent fit of sickness, and in the course of the day found he had entirely lost the power of deglutition. He complained of numbness in the right arm and leg, but had perfect motion. The pupil of the right eye was dilated, but sensible to light. He expressed himself as feeling quite well, only very hungry. He made the most determined attempts to swallow, but the fluid always returned by the nose. An open blister was made at the back of the neck and dressed with strychnia till tetanic twitchings were produced, and beef-tea enemata were given freely. He sank from exhaustion on October 26th. On removing the brain at the necropsy, that organ was found perfectly healthy, with the exception of the left vertebral artery, which was entirely filled up with an embolic clot.—[Query: Had this any connection with the accident?]

HENRY TAYLOR, Ixworth.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

KING'S COLLEGE HOSPITAL.

CANCER OF THE STOMACH.

(Under the care of Dr. GEORGE JOHNSON.)

THE following case is of interest from the rapid course of the emaciation and other symptoms, and the absence of much pain or vomiting, until within a month of the patient's death. The œdema of the legs was consequent, no doubt, on the obstruction to the flow of the blood through the inferior vena cava, caused by the nodular mass surrounding the pancreas, and lying in front of the spine.

C. W., aged 52, widow, was admitted into King's College Hospital, under the care of Dr. Johnson, on September 4th, 1871. She had enjoyed good health until twelve months ago, when she suffered for six weeks from symptoms of dyspepsia. She then continued feeling quite well until a month before admission, when she felt "a swelling in her stomach"; at the same time she lost her appetite and became somewhat thinner; still she was not sick, nor was her appetite impaired.

On admission, she was a well-nourished woman, with an anxious expression of countenance. She then had a bad appetite, was occasionally sick, and had pain in the epigastrium. The chest-sounds were healthy; the urine was normal; the liver-dulness was normal. In the epigastric region, just below the liver, a tumour could be felt extending towards the left hypochondrium; it was firm and nodular, and seemed to lie transversely: it gave no marked pain on pressure. The temperature and pulse were normal. On September 16th, she was noted to have lost seven pounds in weight during the previous week. The countenance was more anxious, and there was an expression of pain. The tumour in the epigastrium was much larger, and felt more superficial. There was now much sickness, loss of appetite, and inability to sleep at night. The feet and legs began to be puffy, and there was much prostration. Hypodermic injections of morphia considerably relieved the pain. On October 5th, she evidently had become much weaker and thinner; the pain and loss of appetite had become more marked; she vomited frequently, yet there was no hæmorrhage from the stomach. The abdomen was much distended with flatus, and the tumour could not be felt so distinctly. She continued becoming weaker until October 9th, when she died.

Necropsy by Dr. Kelly, thirty hours after death.—There were one

or two old adhesions in the right pleura; the lungs were pale and bloodless, and readily collapsed on opening the chest. There was no morbid deposit in the thorax. There was a smooth white patch over the right ventricle; otherwise the heart was healthy. The liver weighed eighty-one ounces. It was large and smooth on the surface. Scattered through its substance were a great many cancerous nodules; most of them were near the surface, and seemed to correspond to terminal branches of the portal vein. The most recent were slightly concave in the centre, and of a milk-white colour, while around there was a yellow zone of cancer-cells, and outside this an injected vascular zone. The older deposits were of a yellowish colour, and slightly raised above the surface. No patches were more than half an inch in diameter, while most of them were much less. The kidney and spleen were healthy. Below the stomach, surrounding the pancreas, and lying in front of the spine, was a large mass of cancerous glands. The intestines lay in front, and were not diseased. The mass was firm, nodular, and closely surrounded the aorta and inferior vena cava. The tumour felt during life was the most prominent and superficial portion of this mass. The stomach was found much diseased. Its coats were much thickened by cancerous infiltration into the submucous tissue, while the muscular coat was but little invaded. The serous coat was healthy. The mucous membrane was not ulcerated, but much injected in patches. The cancerous deposit in some places was nearly an inch thick, and ended very abruptly at the pyloric orifice. The stomach was small and empty. There was no other morbid condition met with.

LONDON HOSPITAL.

CASE OF TUMOUR OF THE MIDDLE LOBE OF THE CEREBELLUM.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P., Physician to the Hospital.

I WISH in this communication simply to record a case of clinical interest, and not to make a case the text for remarks on the functions of the cerebellum. This is the fifth case of disease of the cerebellum which I have had under my observation since January. The symptoms in these five cases were so different, that I am less inclined than ever I was to make general remarks on cerebellar disease. As in lesions elsewhere, we have to classify our cases of cerebellar disease with especial regard to the suddenness or slowness of the lesion. Cases of cerebellar hæmorrhage and cases of tumour of the cerebellum seem to differ even in kind. The case which I relate is one of tumour, and of tumour so placed that the diagnosis was comparatively easy.

John R., aged 5, was admitted April 25th, and was afterwards transferred to my care by Dr. Andrew Clark. Copious and very careful notes of the case were taken, chiefly by Mr. Stephen Mackenzie; and of these the following is an abstract.

History.—The boy had cut his teeth early. He walked at the age of thirteen months, and, except for two convulsive seizures, both on one day, when (his mother said) he was cutting a top tooth, he had been healthy. Four months before admission, the illness of which he died began. The first things noticed were, that the boy's head became so much larger that his father's cap would fit him, and that he complained of pain at the back of his head. He cried a good deal, and lost flesh. Two months later, he began to be "stupid". Fourteen days before admission, his legs began to fail in walking; and, two or three days before admission, he began to pass urine and fæces without notice.

When admitted, he seemed to be in good general health. He took his food well; and, although his mother said he had become thinner, he was well nourished. In what follows, the particulars of his case will be arranged under the following headings: 1. Mental condition and size of head; 2. State of optic nerves and condition of sight; 3. State of limbs; 4. Convulsive seizures.

1. *Mental Condition and Size of Head.*—His mental condition was very peculiar. He very rarely spoke, except when spoken to, or when he wanted something to eat or drink; but he did talk well on these occasions. He had picked up a phrase since his admission into the hospital. When any one asked him "What does the dustman say?" he would give a remarkably exact imitation of the dustman's cry, "Dust a-hoy." At a later date, he sang, the nurse told us, in good tune, two lines of a hymn; and, when Mr. Mackenzie asked him to sing it again, he got out the words "Angels of Jesus", pitching his voice properly. His memory was very deficient; he could not remember the name of his next bedfellow; did not care to see his father or mother; and it was doubtful if he recognised his mother. He did not play. He was, however, very good-tempered, and, as the nurse said, "biddable". Indeed, for his age, he was abnormally good-tempered—to a degree of apathy. His general mental condition is best described by

the word Mr. Mackenzie uses in his report—"hebetude". There was a general fading out of mental power.

He had a large head, but there was nothing characteristic about its enlargement. The orbital plates were not depressed; no gaping of the sutures could be detected; and there was no great prominence above the ears. It did not become much larger before death. There was no evidence of rickets in his history, nor were there any relics of it in the shape of his chest.

Optic Nerves and Sight.—At first, his sight was not obviously affected; but it was impracticable to test it. Neither the boy's mother nor his nurse supposed that there was anything the matter with it, although Mr. Mackenzie found that there was double optic neuritis. On May 11th, when I for the first time used the ophthalmoscope, there was no obvious imperfection of sight; both optic discs were much swollen and raised; the arteries were concealed in the swelling; the veins were large, and partly obscured, "knuckling" over the edge of the disc. The surface of the disc was of a nacreous appearance. There were no effusions of blood, nor did any appear afterwards. He subsequently became blind. The discs gradually cleared up to a remarkable extent, and on the day before his death they were of little more than normal size, but were indistinctly edged and a little swollen. Since headache and vomiting often occur with this pathological condition of the discs, it is not out of place to mention here that, during the boy's stay in the hospital, he did not seem to have pain in the head. He vomited frequently, but had no dyspepsia, taking his food well almost to the last.

3. *Limbs.*—When I saw him, he could not walk by himself, but, when helped a little, could reel along. His gait was a reel, not a stagger like that of ataxy; nor was it the gait of paraplegia. Whenever left to himself during the trial of his walking, he fell to the side to which he was inclining. Subsequently to the fits (to be presently described), both legs became permanently stiffened in a line with his body, the feet being strongly extended, and to a trifling extent turned in. As will be seen, this permanent set of the boy's legs was like their condition in the fits which preceded them.

4. *Convulsive Seizures.*—The first was on May 5th. The nurse called these "shocks", and said that both legs became rigid. He had many of this kind, but at very irregular intervals. Several of these seizures were carefully watched by Mr. Stephen Mackenzie. The following is Mr. Mackenzie's concluding report of the case, and contains an account of several seizures which he saw.

July 11th. There had been no material change in his condition for some time, except a progressive loss of flesh. He was now much emaciated. His mental condition continued of the same character. He lay still, and never spoke unless he was spoken to; and his replies were always monosyllabic. He now could utter another street cry—"Any watercresses?"—in good intonation; and, when saying it, smiled, which he never did when saying anything else. When he was asked who any one near him was, he invariably replied "Granmother"; and, in answer to the question "How are you to-day?" he invariably replied "Nothink". The great test of his bodily strength each day had been the degree of vehemence with which he could utter "Dust a-hoy." To-day his voice was piteously feeble. He was much weaker, but still took his food well. He had had convulsive seizures every few days, several of which Mr. Mackenzie saw. Sometimes, but not always, the seizure was preceded by a loud cry. There was no marked twitching of the face, nor any special deviation of the eyeballs. His hands were clenched; his forearms were flexed on the upper arms, which were generally kept to the sides. The head was drawn back, and the back was curved. His legs were always extended to the fullest possible degree, the feet being arched backwards. Sometimes he passed fæces and urine in an attack. The seizures generally lasted about three or four minutes; and, when passing off, they returned if he were moved about. He was not unconscious. There was no clonic spasm. In one attack, the two eyes were turned to the left, and the head to the right—not backwards, as usual.

July 21st. For the last three days the patient had been much worse. He had been lying during this time in almost exactly the same position—partly on his chest, and partly on his left side, lying askew. His back was arched backwards; the head was retracted apparently to the greatest possible degree; and the legs were fully extended. But now and then there was a perceptible increase in the rigidity. He could not swallow either solids or fluids, but answered simple questions. His "Dust a-hoy" was painfully feeble. He died next day.

Necropsy.—The body was much emaciated, but no disease was found in any part of the body except in the head. The head was large; the cranial bones were thinned; and the sutures were loose. The convolutions were flattened, and the cerebral ventricles were distended by fluid; the horns of the lateral ventricles were much dilated. There was a growth like that in the cerebellum, involving, and, as it seemed,

replacing, the right corpus albicans. The tentorium was much bulged upwards; and under it was found a tumour of the middle lobe of the cerebellum, of about the size of a billiard-ball. The corpora quadrigemina were much flattened, and the veins of Galen were greatly dilated. The tumour, on section, was of a grey green colour. It was rounded, easily separable. Its surface was defined and vascular. Dr. Moxon was so kind as to examine the tumour for me. He concluded that it was tubercle, partly from the facts stated, partly from the microscopical structure, and partly from the age of the patient and the absence of evidence of syphilis in the clinical history. He reported on the microscopical structure as follows. "Though it presents a great variety of elements in small quantity, yet by far the main part consists of the small rounded corpuscles that usually characterise tubercle; better formed and varying corpuscles being in the outermost part, and the 'tubercle-corpuscles' deeper."

REMARKS.—The diagnosis in this case was not difficult. There were three chief symptoms: 1, enlargement of the head; 2, blindness; and 3, reeling gait. Each of these symptoms by itself would be of uncertain value in diagnosis. The enlargement of the head might be owing to an adventitious product in the cerebrum—a large hydatid cyst, for instance. In such a case there might be an irregular gait, very like the reeling which was observed in the boy's case; but there would be, if not decided hemiplegia, much more weakness of one side of the body than of the other. The blindness from optic neuritis was of no value as to the position of the lesion, as tumour in very many parts of the encephalon gives rise to double optic neuritis. Perhaps, of the three symptoms, the reeling gait was of most value, but by itself would only point to tumour under the tentorium. Putting the symptoms together, it was supposed that there was a tumour of the middle lobe of the cerebellum, which pressed on the veins of Galen and straight sinus, and thus caused, so to speak, "ascites of the brain" (hydrocephalus). I made this diagnosis with confidence, because I had some years ago seen a case almost quite like that of my patient under the care of Dr. Gull. Dr. Gull without any hesitation diagnosed tumour of the middle lobe of the cerebellum, and this was found *post mortem*. Again I made a diagnosis in a similar case a year ago—correctly as to the position of the disease, altogether incorrectly as to its nature. Lastly, a few months ago Mr. Waren Tay showed me a case in which, from the presence of like symptoms, he correctly diagnosed tumour of the middle lobe of the cerebellum.

The symptom which is the most interesting in the case is the convulsive seizure. I regret exceedingly that I have mislaid a sketch of the boy's position in one of the severest of these seizures. The back was much more arched than is represented in the drawing handed round. It is important to contrast this seizure with those which are more often seen from tumour of the cerebrum. In these cerebellar convulsions, the spasm was chiefly tonic. In cerebral convulsion, it is chiefly clonic. In this case, the convulsion affected most the bilateral muscles of the trunk and the legs; whilst in cerebral convulsions the unilateral muscles are most affected, and the arms are more affected than the legs. In the kind of spasm, and in its regional distribution, it resembled rather tetanus than epileptiform convulsions; and, although the paroxysm differed from what is most commonly seen in the paroxysm of tetanus, it was enough like it to serve as a fragment of evidence in support of the view that the changes in tetanus are in the cerebellum. The cerebellum seems to represent the muscles of the body in an order the reverse of that in which they are represented in the cerebrum. The current view is, that the cerebellum co-ordinates more especially those movements which serve in locomotion and other quasi-automatic processes; whereas the cerebrum co-ordinates more especially the movements which serve in voluntary operations.

UNIVERSITY HOSPITAL, BERLIN.

EPITHELIOMA OF THE LARYNX: LARYNGO-TRACHEOTOMY: APPLICATION OF THE ACTUAL CAUTERY: RECOVERY.

Philip Boschwitz, aged 28, was admitted an in-patient in the Royal Klinikum, Berlin, under Dr. von Langenbeck. He had had the disease between three and four years. It came on very gradually. During the past few weeks, it caused such difficulty in breathing, that, especially at night, he would sometimes have fits of asphyxia of several minutes' duration. He could swallow well. There were no other abnormal signs in the lungs than those of slight general bronchitis. The man, who was a tradesman, was rather pale and cachectic.

A laryngoscopic examination showed that the entrance of the larynx was free; the epiglottis was normal, as were also the vocal chords, both in movement and outward form. Below the vocal chords could be seen a swelling of raw surface, uneven, which proceeded from the anterior

commissure to the left and below the left vocal chord, involving, therefore, the left half of the larynx.

It was first proposed to remove the tumour through the larynx; but this mode of operation was ultimately rejected, because the swelling appeared to have a broad base, and further extended to some distance below the chords, of which, however, there was no abnormal sensibility. The operation of tracheotomy was, therefore, performed on May 25th. An incision was first made through the crico-thyroid membrane, and was extended upwards through the thyroid cartilage nearly as high as the attachment of the vocal chords, and downwards through the cricoid cartilage as low as the third ring of the trachea. The vocal chords were not in any way injured; and, on looking up through the wound, they and their movements could be seen quite distinctly. Immediately on opening the trachea, the tumour showed itself. It was seized with forceps, pulled out, and cut off; and the place where it had sat was well cauterised with *ferrum candens*. The bleeding, which was slight, was arrested easily with a small sponge; a cannula was introduced, and the upper end of the skin-wound was closed with one or two sutures.

Bronchitis came on for a day or two, but again gradually subsided, and all went well. The cannula was withdrawn on the fifth day, and the edges of the wound were brought together by strips of adhesive plaster.

The patient quickly recovered: the wound healed, with the exception of a small fistulous opening, through which air passes when he coughs or otherwise exerts himself. His previous difficulty in breathing has entirely vanished, and he now awaits his discharge cured.

It had been a question at one time to perform a prophylactic tracheotomy, with the view of introducing Dr. Trendelenburg's cannula, which, when introduced, most thoroughly prevents any blood or other foreign matters from reaching the lungs.

THERAPEUTIC RECORD.

POWDERED CAMPHOR FOR HOSPITAL GANGRENE.—*Apropos* of M. Netter's recommendation of this application, M. Briquet recalls the fact that in 1814 and 1815 hundreds of patients were so treated, and since then Dr. Rousseau of Epernay has published similar cases.

HYDROTHERAPEIA IN INFANTILE PNEUMONIA.—Dr. Buch (*Allgem. Med. Central-Zeitung*), in cases where the temperature rises to 39 cent. (102.2 Fahr.) or above it, carefully wraps the child in a folded sheet well wrung out in cold water, leaving only the mouth and nose exposed. In less than three minutes, when the sheet has become warm, the child, clothed only in a night-dress, and without being dried, is put to bed and lightly covered, so that its temperature shall not rise again to 39. If the first wrapping do not bring it down to 38 cent. (100.4 Fahr.), he applies another. The immediate result of this treatment is said to be the return of sleep, and increased ease of respiration and expectoration. He gives also nourishing diet, with wine and quinine.

CIRCUMSCRIBED FALSE SUBCLAVIAN ANEURISM: INJECTION OF ERGOTIN.—Dr. Dutoit of Bern relates, in Langenbeck's *Archiv* (Band xii, No. 3), a case in which he successfully employed the injection of ergotin for the treatment of aneurism. He was led to this course by the perusal of the accounts of two cases of aneurism related by Professor von Langenbeck some time ago, in which ergotin was successfully injected. His patient was a man aged 40, in whom the aneurism had been produced by an injury received in 1866. When he came under notice in October 1869, there was behind the left clavicle a tumour as large as an ostrich's egg, presenting all the characters of an aneurism. Ergotin was injected over the tumour (from a solution of one drachm in three of alcohol and three of glycerine) every second, and later every third day; the quantity being gradually increased from one-third of a grain to three grains. Fifteen injections were made between October 25th and December 1st. Marked diminution of the swelling was noticed after the fourth injection; and from this time it steadily continued. The injections produced pain for about two hours. There was no suppuration, but the skin and subcutaneous tissue were hardened, so as probably to compress the aneurism. In the beginning of December, the swelling having disappeared from the supraclavicular fossa, digital pressure was applied three hours in the morning and the same length of time in the afternoon for six days, with the effect of causing the total disappearance of the swelling. For security, at a later period ten injections of three grains each of ergotin were made at long intervals, and a light compress and bandage were worn.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 4TH, 1871.

THE MEDICAL PROFESSION AND THE WORKING CLASSES.

DR. ALFRED SHEEN, Surgeon to the Cardiff Infirmary, has communicated to us some interesting observations on the unsatisfactory relations of the medical profession to the working classes. He considers the subject from two points of view. He observes that there are at present at the disposal of the working classes, for obtaining medical assistance in ordinary sickness, the infirmary, the benefit societies or "clubs", the parish medical officer, and, lastly, private medical attendance. These, he considers, all have their evils as affecting this class. The infirmary and the parish are demoralising to a certain extent, because they are eleemosynary, and a large number of the patients relieved by them could afford to pay a small fee if they had the opportunity of doing so. There is also a difficulty surrounding the obtainment of "tickets", more especially in the case of an infirmary, which must be detrimental in cases of acute illness, when much valuable time is thereby lost; and the same remark applies with those who, from feelings of delicacy or other motives, delay seeking advice through these channels until compelled through the nature of their illness. The parish medical relief, where that alone is required, is particularly demoralising, because, as a rule, it is easily obtained, and little valued afterwards. The club-system is the nearest approach to an organised system of medical relief for the working classes, but it is very faulty, even as it affects their welfare. It is notorious that a large number of club-patients think less of their own doctor than of an outsider; and this feeling Dr. Sheen believes to have its origin, unperceived perhaps by the class itself, in the low rate of payment made by clubs to their surgeons. Then, again—and this is a very grave fault—it only, as a rule, recognises relief to men, leaving out altogether their families. It also limits the age, and accepts none but healthy men. It has other faults which affect the profession.

As *private patients*, the lower orders are ever ready to seek advice, but unwilling in some cases, and unable in many more, to pay. As to the inability to pay, when poor people are ill, they must have advice from some quarter, and they will often rush to a medical man with all honest intentions of paying him; and few are the members of our profession who will higgie about the payment when sent for in a case of this kind. Speaking of the medical attendance as it affects the class itself, practically the lowest fee ordinarily charged is too high in a long attendance on a patient of the lower orders; and yet they have no alternative but to apply to the infirmary or to the relieving officer. This ought not to be; it is not what they should be driven to, or what we should be satisfied with. They ought at all events, to have the opportunity given them of obtaining medical help without lowering their own independence. This, Dr. Sheen has long been of opinion, is only to be brought about by the systematic and thorough organisation of the Provident Dispensary System. He believes that one of the greatest evils of the present age, and one of the proximate causes of increasing pauperism, is the ready obtainment by poor people for *nothing* (an abuse of charity) of that to which they ought to attach a certain money-value, however small it may be.

From the point of view of professional interests, besides the pay-

ments of benefit societies being so low as to encourage a habit of indifference on the part of the surgeons, a large number of members of clubs, claiming medical attendance as such, are in a position to pay the ordinary fees of medical men. It might be possible in the future, if provident dispensaries became generally established, to induce the benefit societies to separate their money relief from their medical relief, and attach the latter to the provident dispensary of the neighbourhood.

The private patients of the lower orders are those who give medical practitioners the greatest anxiety and trouble. A junior practitioner does a large private practice amongst the members of this class of society—for somebody must do it: he "books" every week with some satisfaction the amount due, and looks forward with confidence to the coming Midsummer or Christmas for an accession of funds to meet the *res angusta domi*. Several of his bills, however, come back to him through the Dead-letter Office; a few others are paid; and as to the rest, alas! for these his only remedy is the County Court or to go without his due. The latter course he frequently accepts as the more dignified. An inward misgiving on the part of the medical attendant of the patient's inability or unwillingness to pay does not have the effect of increasing that intimate confidence which ought to exist between the patient and doctor.

The abuses of the out-patient departments of hospitals have been freely and ably discussed of late. Dr. Sheen does not think, however, that they exist to the same extent in the country as in London and other very large towns.

The general establishment of provident dispensaries has a most important bearing on the Poor-law dispensary system, which, it is hoped, may soon be established throughout the country.

These views, coming from a practitioner of Dr. Sheen's intelligence, and one who has excellent opportunities of gathering professional opinion in his neighbourhood, seem to us of importance. They bear out very largely the observations which we have already made. The subject is one of so great importance to the profession and the public, that we have willingly given great prominence to it, and shall not grudge further space. We invite the attention of our correspondents to this subject, and to the rules for provident dispensaries which we published last week.

SCHOLARES NON ASCRIPTI.

WE have from time to time drawn the attention of our readers to the changes which have been made by the authorities of the University of Oxford in order to meet the wants of the day and the demand which there is for cheaper University education. To-day, we are desirous to lay before them some of the results which have been attained by the system of "unattached students"—a system the flexibility of which may recommend it to some of our associates who are desirous of sending their sons to the famous seat of learning on the banks of the Isis.

It is now three years since the statute was passed which enables students to be members of the University without belonging to any college or hall. Of these "scholares non ascripti," there were by the last report 106 on the books; and we understand that the fresh entry, which has just taken place, is extremely encouraging. Special tutors and censors are appointed to look after the discipline and to direct the studies of the unattached students, and the statements which these delegates make as to the success which has attended the system are most interesting.

The educational advantages which the "scholares non ascripti" enjoy are very great. Not only are the public or professional lectures of the University all open to them (including the whole course of instruction at the magnificent new Museum of Physical Science), but many colleges admit them to their tutorial lectures on very easy terms. Thus, so far as the educational advantages of the place are concerned, they stand in an unusually favourable position. The whole of the University degrees

and distinctions are as open to them as to any other students, and they share, in common with the rest of the undergraduates, all the facilities which have during the last few years been afforded to those who desire to devote themselves to some special branch of study. And here we would point out that the University does not now require a knowledge of Latin and Greek from those who do not intend to follow the Arts course. This is an alteration which may have an important bearing upon those aspirants to the medical profession who are anxious to enjoy an University training. Though it is not desirable that any should enter our ranks who have not that slender acquaintance with Latin and Greek which the matriculation examination requires, still it may not unfrequently happen that those who have been preparing themselves for medical study prefer to offer Botany and Chemistry, or French and German, instead of Latin and Greek. Anything which gives elasticity to the curriculum of study at our "old universities"—anything which makes their course of training better suited to meet the wants of actual life, will be welcomed by such a practical profession as ours. The introduction of a class of "unattached students," who may live with their friends, or in lodgings of their own selection, is a great step towards extending the usefulness of Oxford as a place of national education, and the various alterations which have been made in this system since it was first adopted have all been changes in the right direction.

But it may be asked, what is the yearly cost of this system to a careful undergraduate? It was introduced with the object of cheapening University education; has it answered that end? To this question the delegates give a very clear reply. Twenty "unattached students" voluntarily made a return of their expenses, and "the average weekly cost of living (board, lodging, and extras) on the twenty returns was thirty-one shillings. But if the lowest ten be taken, the average falls to twenty-six shillings. Taking this average as the sum per week for which a thrifty student can get respectable board and lodging in Oxford, we arrive at the following figures for a year's expenses. Board and lodging for three terms of eight weeks at twenty-six shillings, £31:4; University dues, £4:10; examination fees (on an average), £1:1; tuition expenses (about), £10:10; total, £47:5. It will, of course, be observed that these figures do not include travelling, books, clothes, pocket-money, or cost of living in the vacations. Still they prove that a careful student can get through his Oxford career for a sum not exceeding £50 a year."

Moreover, the system seems to be as favourable to quiet industry as it is to economy, for the report adds:—"The students appear to the delegates to have used great diligence in their work, and, by their steady and blameless conduct, to have shown themselves fully worthy of the privileges of greater independence which they enjoy. When it is remembered that there are now above a hundred of these students, it is satisfactory to know that there is not the slightest symptom of any of the moral evils which were dreaded by some persons at the time when the statute for their admission into the University was passed."

On a former occasion, in alluding to this subject, we said that if the system of "unattached students" could be carried out as its promoters desired, it would entirely meet the demand for a cheaper University education which has often risen from the ranks of our profession; and now we can announce that it is not only in full operation, but its success has been even greater than its well-wishers could have anticipated.

THE EDUCATION OF THE DEAF AND DUMB BY LIP-READING AND ARTICULATION.

THE notice of the profession has been lately directed to a method of instruction which, if it obtain in this country the same acceptance as it has already done in Germany, Holland, and Belgium, will have the effect of modifying, if not completely changing, the system which is pursued with us at present in the education of deaf mutes. The influence which the general opinion of the profession will have in deciding upon any reform in this respect will be very considerable, and we there-

fore again call the attention of our readers to the subject. The mode of conversing now taught at our asylums for the deaf and dumb is, as every one knows, by the finger-alphabet and by manual signs; but a new system is now in vogue in the countries which we have specified, by which the education of the deaf and dumb is carried out by means of lip-reading and articulation. It appears, from a paper read at the recent Social Science Congress at Leeds, by Mr. W. B. Dalby, of St. George's Hospital, that the education is commenced at the age of seven, and that it extends over a period of seven or eight years. At the end of that time, provided the children are possessed of ordinary mental capacity, they are able to understand, by reading from the lips, what is said to them by ordinary persons, and to make use of articulate speech, which, although not euphonious, can be plainly understood. For the first few years of education considerable patience and skill are demanded on the part of the instructor; but, as partially trained teachers are sufficient for the more advanced pupils, it is not found difficult to obtain instructors. It is impossible to combine successfully the two methods; for, so long as the children employ the finger-alphabet, and their attention is thus withdrawn from the lip-movement, they will not exercise the necessary perseverance to learn articulate speech, and it is owing apparently to attempts having been made in the country to mingle the two systems that the failure in establishing the so-called German—but originally English—method is attributable.

Mr. Dalby introduced to the section at Leeds, Mr. Polano, a Dutch gentleman, who, born totally deaf and dumb, had been taught to speak both Dutch and German; he conversed in the latter language, with several gentlemen present, understanding perfectly what was said to him, and replying intelligibly in return. No doubt seven or eight years may seem a long time to expend in teaching a child to speak and understand when spoken to; but it should at the same time be remembered that the other branches of education are being carried on at the same time, so that, although the money invested in this system before the child is fifteen years old is greater than in the other method, his condition, both mentally and socially, will compare very favourably with that of a child who, educated to use only the finger-alphabet in conversation, is isolated in life except in his intercourse with other mutes and those who have acquired their mode of speaking. The subject is one of much interest, and the system deserves a fair and full trial in this country. At present, the only public school where it is taught is at 164, Euston Road, which has been conducted by Mr. Van Praagh for three or four years. The progress which the children have already made affords very good opportunities for investigating the means employed in teaching mutes by the method which we have just described. It ought also to be made known that persons who have become deaf after they have talked naturally, may at any age be taught to converse by this method in a few minutes.

AN action brought against Mr. D. H. Watson of Stockton for alleged "maltreatment" of a lying-in woman, damages £2000, was tried this week in the Stockton County Court. The action failed, and the verdict was received with applause. We shall give further particulars from a short-hand report next week.

THE General Hospital at Dudley was formally opened last week by Lord Dudley at a public ceremonial, followed by a banquet. The buildings and land, valued at £30,000, are the gift of Lord Dudley; and an endowment of £20,000 is a legacy by the late Mr. Joseph Guest of Dudley.

DR. MAUNSELL of the Hokitika Hospital, New Zealand, furnishes a very admirable and valuable report. He specially calls attention to the necessity of establishing an asylum for chronic and incurable cases; and also of obtaining government subsidies for this most desirable object.

THE Quarterly Dinner of the Edinburgh University Club will be held at St. James's Hall Restaurant, London, on Wednesday, November 8th, Dr. Sieveking in the chair.

CHOLERA.

NEWS from Constantinople, dated October 13th, states that cholera was on the increase in Michalitz, near Broussa; and that it had newly broken out in Uschak and several villages in Asia Minor in the direction of Smyrna.

TATTOOED FROM HEAD TO FOOT.

THERE is now exhibiting in medical circles in Vienna a remarkable instance of tattooing of the whole body. According to his own account, the man, a Greek by birth, had been a pirate, and had also carried on brigandage on the continent. Seven years ago, he and five companions were taken prisoners by one of the wild tribes of Asia. Three of them were put to death; but this man, with two others, was preserved alive and literally tattooed over the entire body. The operation lasted two months, and was performed by six men, who each day operated on different parts of the body. The proceeding caused horrible pain; and his two companions died under the treatment. His body is covered from head to foot with delineations of men, animals, and fabulous things. The colouring material used for the figures appears to be indigo, the ground, especially on the chest and abdomen, being vermilion; here and there, about a line's breadth of the normal colour of the skin can be seen. The hands and the soles of the feet are coloured red, but have no figures. On the face and neck are inscriptions in characters resembling Arabic. The skin has the general appearance, to the sight and touch, of bluish-grey velvet. He attends the General Hospital in Vienna; and Professor Hebra, who showed him to his class a few days ago, has had him photographed in various attitudes.

THE BRITISH MEDICAL BENEVOLENT FUND.

TWENTY-TWO applications for assistance were laid before the Committee at their meeting on Tuesday last, and in eighteen of these grants were made amounting in the aggregate to £135. The Treasurer reported the receipt of a legacy of £500, free of duty, from the late Dr. George Cursham. This sum has, in accordance with the laws, been invested and added to the annuity fund. We regret to find that the Committee are unable, from want of funds, to increase the number of annuitants this year, there being as many as thirty candidates admitted as eligible who are eagerly awaiting their election.

FACILITIES FOR CRIME.

DR. STAMFORD FELCE has once more called the attention of the Registrar-General to the facility which some of his district registrars afford for deceptions and crimes by enrolling as "certified" deaths, deaths where the certificate is not signed by a registered medical practitioner. Major Graham observes that registrars are not provided with copies of the *Medical Register*, as to do so would involve too great an expense to Her Majesty's Government. We will not stop to discuss the two sides of this question, as to which it would even be possible to point out to Mr. Gladstone three solutions; but we will at once ask Major Graham to issue to his registrars directions to require that death-certificates shall be signed as ———, M.R.C.S., or otherwise, "registered". The only legally recognised right of any medical man to perform legal acts as such, is now based on his registration. If the registrars cannot ascertain registration otherwise, they can refuse to accept as a "medical certificate" a document which does not purport to be signed by a registered medical practitioner. The false pretence to be registered is a legal offence; and thus the Registrar would provide an easy and just safeguard, such as the law indeed evidently contemplates, by preventing unregistered and unqualified quacks of all kinds from imposing on the ignorant poor the belief that their sham titles are real ones. There is no doubt that the present facility with which the officers of the Registrar-General accept these sham titles as real, and valueless

statements as medical certificates, greatly encourages the present frauds on the people, and helps the lowest kind of quacks to continue to prey on those whom they deceive. Let deaths occurring under such circumstances be entered as uncertified, and something will be done to check fraud, and, we believe, also to give a warning as to crime—such as abortion, child-murder, and poisoning. Shortly, we hope, the legislature will prohibit the registration of uncertified deaths without further precautions than are at present taken.

MR. CHRISTOPHER HEATH ON CIRCULATION.

WE publish in another column a communication from Mr. Christopher Heath, relating to our summary of his recent correspondence concerning the excess of circulation of the BRITISH MEDICAL JOURNAL over that of any other medical periodical. Mr. Heath has clearly placed himself in a very unfortunate position, in which it does not appear that the only persons who could afford him the means of extrication have come to his assistance; these are the proprietors of the journal to which he is attached. In this position, we wish to extend to him every possible courtesy and consideration; and, but for the necessity of defending the interests which he has attacked, we should feel a sincere satisfaction in avoiding to make any addition to the pain which he must feel. We fear that his present communication only adds to the jeopardy in which he has placed his reputation for accuracy and discretion. His notion of what constitutes a public matter we pass without comment. On this occasion, he might naturally be expected to differ from us, and is fully entitled to the benefit of his individual judgment. We claim, of course, the same privilege. As to what he calls his "justification", it so imperfectly keeps the word of promise to the ear, and so completely breaks it to the sense, that only a fatal perception of the necessity of saying something can have induced a man of his ability to undersign such a document. It is not even the beginning of a justification, or any part or shadow or faint image of a justification. Mr. Heath makes certain verbal additions, which, he thinks, should have been included in our summary of this long correspondence. If these be read, it will be seen that they amount to nothing more than repetitions of his "belief". We did not use those words in our summary, because we at the outset very fully stated his incorrect belief, and because these particular phrases are obviously and absurdly incorrect; the contradictions of these exaggerations of his original error are, of course, implied in the contradiction of the greater error. Our publisher proved that the BRITISH MEDICAL JOURNAL has doubled its circulation in the last five years; that it has done this while the *Lancet* has either stood still or retrograded; and that the stamped circulation exceeded that of the *Lancet* last year by about two thousand copies a week. This year it exceeds it by more than that number. He further stated that the estimated total circulation of the BRITISH MEDICAL JOURNAL exceeds that of the *Lancet* or of any other medical journal. Mr. Heath stigmatised that statement as a dishonourable falsehood. Challenged by our publisher and by ourselves to prove that charge, he replies that he has no knowledge of the essential facts necessary for such proof. As far as the facts are concerned which affect this JOURNAL, he proves himself ill informed. He declared that, after the 30th of June, we should have to print five hundred fewer copies than before. He is informed that, on the contrary, we have had to print two hundred and fifty copies more than we were then printing. For his error he makes no apology. He now states that "the BRITISH MEDICAL JOURNAL circulates only among its own subscribers". Every journal circulates among those who pay for it. But, if by this sentence he means that the BRITISH MEDICAL JOURNAL circulates only among the members of the Association, that is a statement which is, if possible, more egregiously inaccurate than the former. Finally, he admits that he does not even now, several weeks after commencing this painful correspondence, know the circulation of the journal to which he is attached, and of which he has written so much. In that matter, then, we think that his proprietors have treated him very scurvily; and that he is an ill-used, and we cannot help saying also a very injudicious person. He should never have

written so positively—not to use a stronger word—about what he does not know; and he should either insist upon the facts being authenticated by the acceptance of the challenge of our publisher to submit the books of the two journals to a public accountant with a view to the publication of the relative figures, or he should make his apology and retire from what he must feel to be an utterly false position. If his faith were as robust as his courage, we think it clear that he would do so. With his private belief we have, of course, little to do; and, if it could add to his comfort to entertain the delusion that the journal in which he writes has a larger circulation than ours, we should be sorry to disturb it so long as it was confined to his own breast. But, as he observes, publishers and others may be induced, by his publicly clinging to that belief, to share his delusion; and that, as a matter of business, concerns the members of the Association to which he belongs. That is why we desire to dispel any delusion by the open and authenticated publication of the facts in the fair and honest manner suggested by our publisher's offer. Mr. Heath overlooks—or is not aware of—the fact that the stamp-returns do not represent the entire circulation of the *BRITISH MEDICAL JOURNAL*; inasmuch as, for years past, several hundred copies have been weekly distributed to subscribers and others in London by hand, not to mention the copies which are sold. A very small part of our circulation passes through the hands of the trade; for we have every reason to desire to save publishers' commissions, as far as may be. As to Mr. Heath's position and duty as a member of the Committee of Council, we have no doubt that he will fully consider that matter, and little fear but that he will arrive at a right conclusion. He evidently forgets that he referred to that position in his very first letter opening the correspondence. He has done his duty—perhaps rather overdone it—to the proprietors of the journal to which he is attached; and we entertain the opinion that, as his duty to the Association, he ought to insist on the facts being furnished which can alone repair the injury and affront which his first statements—made, as he confesses, without facts—were and are calculated to convey. He will, however, be the best judge whether he prefers to leave his statements unsupported; his affronts neither withdrawn, justified, nor excused; and his injuries unhealed by any kind of reparation. We have a much better opinion of his judgment and character than to suppose this. We believe that he has not yet done justice to himself in this matter. In any case, however, we feel sure that he is safe from the "personal abuse" which he seems unnecessarily to fear; and that, if final judgment be recorded against him, it will be with courtesy and regret, and without a shadow of personal ill-feeling.

HOSPITAL SUNDAY.

AT the annual meeting in connexion with the Hospital Sunday movement in Liverpool, it was stated that one hundred and ninety-five congregations co-operated in the effort, and that £4,869 was collected. The sum of £4,500 was distributed to the fourteen medical charities, leaving a balance of £140:7:1 to meet expenses and to be carried over. The collections next year will be made on January 14th. It was stated by the Mayor that the Corporation funds were so low, that he feared that they would be unable to make their usual contributions to the public charities next year. A similar collection was made at Newcastle on Sunday last. We do not know what amount was raised.

MEMORIAL OF MR. SOLLY.

A FUND is now being raised for the purpose of marking by some memorial the esteem and respect felt for the late Mr. Solly by his friends and students of St. Thomas's Hospital. Already upwards of three hundred pounds have been subscribed to the fund. At a meeting of the Committee on the 13th ult., it was resolved that the fund should be applied to the establishment of an annual prize of some shape bearing Mr. Solly's name; that a bust of him should be presented to the medical school of that hospital. Those desirous of subscribing to the fund may communicate with Dr. Rayner, Bethlem Hospital; or with Messrs. W. Anderson and W. W. Wagstaffe, St. Thomas's Hospital.

SUBCUTANEOUS DIVISION OF THE NECK OF THE THIGH-BONE.

ON Wednesday last Mr. W. Adams divided the neck of the thigh-bone subcutaneously at the Great Northern Hospital, in a case of bony ankylosis of the right hip-joint, with extreme deformity. The patient was a young man aged 18, who had suffered from fever (probably rheumatic) when eight years of age, and the joint afterwards remained contracted. Mr. Adams first made a punctured wound, a little above the top of the great trochanter, by an enlarged tenotomy knife, which was then passed directly down to the neck of the bone, and the muscles were freely divided and the capsular ligament opened. Mr. Adams then passed his small saw down to the anterior surface of the neck of the bone, and, cutting from before backwards, divided this structure. The division of the bone occupied seven minutes. After the neck of the bone had been divided, some resistance was still offered, apparently by some bone which had been thrown out in front of the joint. This had been felt at the commencement of the operation; but, on flexing the thigh, it rapidly gave way, and the limb then moved freely in all directions. Mr. Adams then divided the tendons of the rectus and adductor longus muscles, and also the tensor vaginæ femoris muscle. The patient was put to bed with the limb in a much improved position. The details of the case will be given in a future number.

AMENDMENT OF THE LICENSING SYSTEM.

WE have already expressed the opinion that the first and most practical way of opposing the spread of brutalising intemperance amongst the poor, is to afford them the same facilities or inducements for avoiding resort to taverns and gin-palaces, and drinking in public-houses, as have been extended with the happiest effects to the upper classes. It is no longer necessary for the man of moderate means to go to the tavern to get his bottle of wine, or to enjoy what is known as moderate conviviality. With the habit of tavern-drinking among the better classes, the habit of intemperance has died out. Mr. Gladstone's bill for facilitating the introduction and sale of light wines and pure spirits has been a great temperance measure. The grocer is the natural enemy of the publican; and the practice of drinking what wine or spirits the consumer requires or desires at home, where inducements to restraint abound, instead of in the tap-room, where inducements to excess are always in operation, is the most potent means of attacking general intemperance among the lower or the higher classes. These arguments, which were placed before Mr. Bruce by the Parliamentary Bills Committee of the Association last autumn, have, we are glad to see, been adopted and advocated by an able correspondent of the *Times* of Oct. 26, whose arguments have been left unanswered. Let the poor man have the same facilities as the rich for comfort at home, but let the practice of drinking on the premises be restricted in them to the narrowest possible limits, and we believe that a severe blow will be struck at the habits of debased and destructive intemperance among the poor.

THE ELECTION OF GENERAL SECRETARY.

THE Committee of Council, at a full meeting held on Tuesday last, elected Mr. Francis Fowke, House Governor and Secretary of the General Hospital, Birmingham, as General Secretary of the Association. The Secretary will henceforth reside in London, and will give his whole time to the duties of the post, taking charge of the business of the JOURNAL office. There were, we believe, nearly 200 applicants for the vacant position, including a number of highly qualified candidates. The Committee of Council had previously appointed a subcommittee to facilitate the carrying out of the resolutions of the General Meeting at Plymouth; and this subcommittee had met both in Birmingham and London, carefully entered into the questions of business detail, and examined the testimonials of the candidates. The Committee of Council had before it the fullest information as to all the facts and details; and, on the recommendation of the subcommittee, approved and adopted a series of regulations for the improved conduct of business. The election of Mr. Fowke from among the large number of candi-

dates was almost unanimous. His qualifications were attested in the strongest manner by a large number of persons, including most of the best known names among the medical profession in Birmingham; and the testimony as to his energy and business capacity was especially strong. There is thus the fullest reason to anticipate that the wisdom of the course taken at Plymouth, and of the choice made by the Committee, will be amply justified by the event. The terms offered by the Association proved very attractive; and the Association will now have at its disposal, in the office of General Secretary, the services of a gentleman specially trained to business duties and of highly attested capacity, who will be able to devote his whole time to the conduct of its affairs. The reorganisation thus completed has involved, for the more active members of the Committee of Council, an amount of labour and anxiety, and an expenditure of time, and a number of distant journeys, during the last year, which have by no means appeared on the face of the facts. Their labour claims, however, the warmest recognition from the members of the Association; and in that, and the success of their efforts, they will find their best reward.

"MAYNE'S LEXICON" AND THE NEW SYDENHAM SOCIETY.

WE learn that the course of the Sydenham Society in reference to their announced new edition of Mayne's *Lexicon*, is not quite so clear as was expected. The edition, as published by Messrs. Churchill, is not yet exhausted; and there are other interests concerned besides those of the late Dr. Mayne's representatives, with whom alone the Society has thus far been in treaty. It would appear, therefore, that this valuable work is not likely to be issued in any other than its existing form for some time.

THE SURGICAL AID SOCIETY.

THE Annual Meeting of this Society was held at the Terminus Hotel, Cannon Street, City, on October 30th, 1871, at 3 P.M., Roger Eykyn, Esq., M.P., in the Chair. The Ninth Annual Report of the Committee was read, showing that 5,550 cases have been relieved since 1863; and 1,465 of these during the past year. Of which number, 506 were men, 692 women, 153 boys, and 114 girls. Nearly 6,000 appliances, including 286 elastic stockings and leather knee-caps, 1,723 trusses and belts, and 577 leg-instruments have already been supplied by the Society. Votes of thanks were given to the Treasurer, William Gray, Esq.; and to the Surgeons, Messrs. Allingham and Davy, for their services rendered to this important charity.

FORGED DIPLOMAS.

A STRIKING illustration of the want of a public prosecutor has just occurred, and we think that the profession and the public generally will give due credit to the authorities of the College of Surgeons, and the respectable tradesman by whom the transaction was brought under the notice of the College. A few days ago, a law-stationer, of Holborn, received a visit from a "doctor," who wanted his name entered in a diploma from New York, in which the names of the examiners appeared, with the large seal of the College affixed. After his visitor had left, however, the stationer thought there must be something wrong, and at once called on Mr. Trimmer, the Secretary of the College of Surgeons. Here it was seen that the signatures were lithographed facsimiles, touched up with ink. Mr. Stone, accompanied by his informant, called on Mr. Moran, the Secretary to the United States Minister, and explained all the circumstances, pointing out not only the injury inflicted on the New York College by the sale of a false diploma, but also on the public generally, adding that an Institution in Scotland had been so imposed on by a non-professional person who had purchased this spurious document, as to grant him its diploma, in virtue of which he was now seeking admission *ad eundem* to an English Institution. Mr. Moran regretted that all he could do was to write an account of the circumstance to New York. Mr. Stone wished him to impound the document; but this, he said, he could not do, although it is plain that a forged note for the payment of a certain number of dollars would at once be seized, and the forger sent to the nearest police court. Mr.

Stone then called to see the detectives at Scotland Yard who had so successfully apprehended the Du Brange gang, prosecuted recently by the College to conviction; they were both absent. As a last resource, Mr. Stone called at Bow Street to ask the advice of Mr. Burnaby, the chief clerk; here still greater difficulties were pointed out. Finally, it occurred to Mr. Trimmer to have the diploma, seal, etc., photographed, and copies distributed to all institutions in the United Kingdom granting diplomas or licenses, and a copy sent also to the authorities of the institution upon whom the forgery has been made to take such action as may be considered necessary to stop the nefarious proceeding. The remarkable difficulty experienced in taking steps to arrest a forgery aiming at the security of life, is noteworthy when we recall the facility which would have been found had the forgery affected the disposal of a sum of money, no matter how small. It is certain that this is not the only forged diploma of the kind in existence; and we are not without hope that means will yet be found to convict and punish the persons concerned in this fraud, now that the clues are in the hands of the authorities. It is certainly a case which ought to be brought to the notice of the Home Office.

THE OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of the Obstetrical Society on Wednesday, a paper by Dr. Conrad, on Prolapse of the Female Genital Organs, gave rise to a most interesting discussion. The author contended that the vagina was first in fault, and then subsequently the uterus. Dr. Barnes asserted that prolapsus never occurred in the multipara; that rupture of small vessels in the cervix during labour, with oedematous condition following, and retarded involution, leading to ultimate hypertrophy, was the primary condition; the vagina, at a later stage, producing irritation and keeping up the hypertrophy. In old women, the uterus prolapsed from absorption of the pelvic cellular tissue around the vagina, which thus weakened the uterine support. Mr. Spencer Wells, on the other hand, thought that prolapse of the anterior vaginal wall was the first step in the process, and that tightening the ruptured perinæum was the first step in the operative direction; but removal of a portion of the cervix was also essential. Dr. Braxton Hicks considered that, when the uterus descended, it acted as a foreign body, set up reflex irritation, and the vagina was pushed down; the difficulty in defæcation and position of the bladder tending to increase the mischief. Several other Fellows of the Society also took part in the discussion.

THINGS OLD AND NEW.

WE are indebted to the accomplished pen of Dr. Cholmeley for some interesting details in the history of therapeutics. In his annual oration before the Medical Society of London just published, he has disinterred from the minutes of this aged Society (which will shortly celebrate its centenary) some valuable records of therapeutic practice in the commencement of this century. Among the subjects referred to are, the value of turpentine as an internal styptic (1799); the use of savin for keeping open blisters (Hurlock, 1797); Fowler's solution of arsenic in ague and intermittents (May, Bradley, and Sims, 1790), and in hemi-crania (Lettsom and Adams, 1813); nitrate of silver in epilepsy and chorea (Sims, 1794 and 1802); digitalis in dropsy (1790), in whooping-cough (Leese, 1806), and in palpitation of the heart (Andre, 1810); transfusion after exhaustive hæmorrhages (1818 and 1825); paracentesis thoracis (Dr. Davies, 1830); tracheotomy in croup (1817). In 1815, Dr. Lettsom reported that, during a professional visit to Hertford, he found "that in that neighbourhood carbonate of ammonia was considered quite as a sovereign remedy in scarlatina. Physicians there were astonished at its success. It was given in five-grain doses every four or six hours." Again, in 1816, Mr. Edwards said "that he had always given the carbonate of ammonia in scarlatina, and never knew it fail. He gave five grains every four hours; to an infant or child, two grains. It generally subdued the fever in forty-eight hours, after which he gave bark." This, therefore, is one of the rediscoveries of medicine. Another is the opium treatment of rheumatism. In 1812,

Mr. Bateman reported that "he had seen Dr. Pearson at St. George's Hospital use large doses of opium with diluents and doses of salts, with good effect, in acute rheumatism;" and Dr. Lettsom in 1814 reported that he had lately given opium very freely in cases of acute rheumatism, after having well cleared out the bowels, with infinite advantage. Yet another "modern mode of treatment", in which our ancestors at the Medical Society of London had the start of us, was the treatment of dysentery by ipecacuanha, which was employed and warmly recommended, after the now prevalent mode of administering, by Mr. Balmain and Mr. Wentworth, in January 1797. It is interesting to notice, as bearing upon the much debated question of change of type, that the carbonate of ammonia and bark treatment of scarlatina was carried on side by side with the treatment by venesection; for Mr. Houghton of Huddersfield reported at the same meeting that he in all cases bled once or twice to six ounces, and gave salines; and that he, too, was uniformly successful. It will be seen that Dr. Cholmeley's skilful and well considered search in the minutes of the Medical Society have been far from fruitless; and we recommend his *brochure* as one of greater interest than anniversary orations of the kind are usually found to be.

THE MEDICAL SCHOOL OF LISBON.

THE session of this school commenced on October 5th. As is his custom on such occasions, King Luis was present, and, in reply to an address from the director of the school, expressed the pleasure which he felt in taking part in the proceedings, and his interest in the promotion of education. The prizes having been distributed, Senhor Magalhães Coutinho, director of the school, delivered an introductory address. He noticed the tendencies of modern medicine, and pointed out the reforms which were necessary in the Lisbon school. The custom of some professors, to clothe their ideas in eloquent language adorned with the flowers of rhetoric, in place of giving simple descriptions of the results of observation and experiment, was censured. Their pupils, he said, in place of solid instruction, only got from such teaching incomplete or erroneous ideas, and a vain verbosity, which is always the cloak of ignorance. The lecturer expressed his belief that the prosperity of the school would be assured by the development of practical instruction. By this he did not mean such as would enable the student to dissect out artistically an aponeurosis or make a preparation of the internal maxillary artery; pathological anatomy, microscopy, chemistry, physiology, and toxicology, must all be studied practically—and for this purpose there must be a sufficient number of demonstrators. The amount of scholastic teaching, he thought, might be somewhat reduced, so as to give the students more time for clinical instruction. The address was altogether excellent; and the Lisbon school of medicine may, we think, congratulate itself on having as its director such a man as Senhor Magalhães Coutinho, who evidently understands clearly what reforms are required in the institution to which he belongs, in order to enable it to hold its ground among the medical schools of the present day.

SCOTLAND.

THE Senatus of the University of Edinburgh, since the interlocutor of Lord Gifford, mentioned in last week's JOURNAL, have resolved to relieve the Managers of the Royal Infirmary from the bargains entered into between both parties.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

AT the annual meeting, held on October 18th, the following office-bearers were elected for the ensuing year. *President*: W. Walker. *Secretary*: James Simson, M.D. *Treasurer*: John Gairdner, M.D. *Librarian*: A. Inglis, M.D. *President's Council*: Andrew Wood, M.D.; R. Omond, M.D.; J. Dunsmure, M.D.; J. D. Gillespie, M.D.; James Spence; H. D. Littlejohn, M.D.; J. Gairdner, M.D. *Examiners*: A. Inglis, M.D.; R. Omond, M.D.; J. Dunsmure, M.D.; P. D. Handyside, M.D.; J. D. Gillespie, M.D.; H. D. Littlejohn, M.D.;

P. H. Watson, M.D.; D. Wilson, M.D.; John Smith, M.D.; A. Robertson, M.D.; J. Bell, M.D.; T. Annandale. *Assessors to Examiners*: J. S. Combe, M.D.; William Brown; J. Spence; J. Simson. *Conservator of Museum*: J. B. Pettigrew, M.D. *Assistant to Conservator*: J. Grandison.

THE SCOTCH SCHOOLS OF MEDICINE.

THE winter session at the University and Surgeons' Hall, Edinburgh, commenced on Wednesday with an introductory address at the University by the Principal, Sir Alexander Grant, Bart.; and at Surgeons' Hall by Mr. Annandale. At Aberdeen, the session was opened on Thursday; at the University of Glasgow on Tuesday, with an introductory address by Professor Dickson; and at Anderson's Institution, Glasgow, on the same day, with an inaugural address by Professor Bischof, the newly-elected Professor of Technical Chemistry.

THE SENATUS OF THE UNIVERSITY OF EDINBURGH AND THE LADY MEDICAL STUDENTS.

ON Monday, the Senatus had under their consideration the following communication from the Secretary of the Executive Committee for securing a complete Medical Education to Women in Edinburgh:—"That the Secretary be instructed to write to the Senatus, in view of their approaching meeting, to state that, in the event of special lecturers being appointed by the University to give qualifying instruction to women, the Committee are willing to guarantee to them the payment of any sum that may be fixed by the Senatus for their remuneration, in case the fees of the ladies are insufficient for that purpose; and that, if necessary, they are willing further to undertake to provide such rooms and accommodation as may be required for the delivery of the said lectures, if it should be found absolutely impossible for the University to provide space for that purpose." After some discussion, the Senatus resolved, by a majority, not to recommend to the University Court any measure by which the ladies might be enabled to complete their education.

IRELAND.

THE Guinness Dispensary, Dublin, is now completed.

SMALL-POX IN DUBLIN.

SMALL-POX is steadily increasing in Dublin: the fatal cases, however, are limited to those who have not been vaccinated, or those in whom the marks of vaccination are doubtful. It is sad to think that with six months' notice no effort has been made by the sanitary authorities either to provide conveyances or hospitals for cases of this disease. The so-called Sanitary Committee of the Corporation do worse than nothing. In the *Irish Times* of October 28th we observe the following:—"The prompt and judicious conduct of Sanitary Sergeant Dagg, 8 D, in preventing the spread of infectious disease by promoting the interment of a child of destitute parents, who died of small-pox, having been brought under the notice of the Public Health Committee of the Corporation, they unanimously voted him a reward, and directed that his conduct should be recommended to the favourable consideration of the Police Commissioners." It is asserted that some of the worst tenements are either owned, farmed out, or the rents collected, by ex-policemen. A doubt was thrown out by *Saunders' News Letter* as to the existence of "The Public Health Committee of the Corporation", and Mr. Norwood came to the rescue; his figures, however, are not more convincing than those of Dr. Mapother. Disinfection, as at present carried out in Dublin, consists in a "couple of men coming with a couple of brushes and a bucket of whitewash and giving a lick and a promise": indeed, Mr. Norwood's figures satisfactorily prove that it could not be otherwise at the price; for, if his figures be correct, one halfpenny each would exceed the expenditure for cleansing, disinfecting, and inspecting, all the nuisances to which he alludes.

ASSOCIATION INTELLIGENCE.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ORDINARY MEETING.

THE next Ordinary Meeting of this Branch will be held on Tuesday, November 7th, at the Town Hall, Cardiff, at 1.30 P.M. The Council will meet at 12.30 P.M.

The dinner will take place at 4 or 5.30 P.M., as may be found most convenient; and members may introduce friends to the meeting and dinner. Tickets, 6s. 6d. each.

Members intending to read papers or notes of cases are requested to communicate the titles thereof as soon as possible to one of the Honorary Secretaries.

All members who purpose joining the dinner, will oblige by communicating their intentions to one of the Honorary Secretaries.

ANDREW DAVIES,
ALFRED SHEEN, M.D., } *Honorary Secretaries.*

October 30th, 1871.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE next ordinary meeting of this Branch will be held at the Council Rooms of the Midland Institute, Birmingham, on Thursday, November 9th, at 3 P.M.

T. H. BARTLEET, *Honorary Secretary.*

Birmingham, November 1871.

In the report of the last meeting (BRITISH MEDICAL JOURNAL, October 28th), the names of the following gentlemen, elected members of the Branch, were accidentally omitted: Mr. T. Buxton, Fazeley; Mr. E. Bicknell, Coventry; Dr. Newman, Alrewas; and Dr. Torrance, Dunchurch.

METROPOLITAN COUNTIES BRANCH.

A SPECIAL General Meeting of this Branch will be held at 37, Soho Square, on Tuesday, November 14th, at 4.30 P.M., to take into consideration certain alterations in the Laws of the Branch, proposed by the Council.

A. P. STEWART, M.D.
ALEXANDER HENRY, M.D. } *Honorary Secretaries.*

London, November 1st, 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE November meeting of the members of the above District will be held in the afternoon of Friday, November 24th, at Brighton; Dr. ALFRED HALL in the Chair.

All members of the South Eastern Branch are entitled to attend, and to introduce professional friends.

Gentlemen desirous of making communications to the meeting, will oblige by giving me an early intimation, in order that notice thereof may be included in the circular which will convene the meeting.

THOMAS TROLLOPE, M.D. Cantab., *Hon. District Secretary.*

35, Marina, St. Leonard's-on-Sea, November 1st, 1871.

REPORT OF MEETING OF COMMITTEE OF COUNCIL:

Held in Birmingham, October 31st, 1871.

PRESENT:—W. D. Husband, Esq., F.R.C.S., in the Chair; Mr. Baker, Dr. Falconer, Mr. Bartleet, Dr. Bryan, Mr. Board, Dr. Chadwick, Mr. Clayton, Mr. Andrew Davies, Mr. Fowler, Mr. Reginald Harrison, Mr. Christopher Heath, Mr. Hodgson, Mr. Nicholson, Dr. Philipson, Dr. Sibson, Mr. Heckstall Smith, Mr. Southam, Dr. Steele, Dr. Underhill, Dr. Edw. Waters (Chester), Mr. Wheelhouse, Dr. Wilkinson, Mr. Wood, and Mr. Williams (Secretary).

The following resolutions were adopted.

1. That the next annual meeting be held on the 6th, 7th, 8th, and 9th of August, 1872.

2. That there shall be two addresses—one in Medicine, and one in Surgery.

3. That Dr. Fleming be appointed to deliver the Address in Medicine.

4. That Mr. Pemberton be appointed to deliver the Address in Surgery.

5. That the Report of the Branch Secretaries' Subcommittee now

read by Mr. Hodgson, be received, printed, and circulated forthwith among the members of the Committee of Council, and taken into consideration at the next meeting of the Committee of Council.

6. That the subject for competition for the Hastings Medal for 1873, be the Pathology and Treatment of Ovarian Diseases.

7. That Mr. F. Fowke be elected General Secretary of the Association, and Manager of the JOURNAL office.

T. WATKIN WILLIAMS, F.R.C.S., *General Secretary* (pro tem.)

13, Newhall Street, Birmingham, November 1st, 1871.

SHROPSHIRE ETHICAL BRANCH: ANNUAL MEETING.

THE annual meeting of the Shropshire Ethical Branch was held at the Lion Hotel, Shrewsbury, on Friday, October 6th, at 1 P.M.; the President, A. G. BROOKES, Esq., in the chair. Nineteen members were present.

The PRESIDENT briefly addressed the meeting, and, among other subjects, suggested the desirability of quarterly meetings being held in selected districts of the county, for the discussion of papers and questions affecting the general interests of the profession.

The following resolutions were passed unanimously.

Minutes of General Council.—"That the Minutes of the last general meeting be affirmed."

Vote of Thanks.—"That the cordial thanks of the meeting be given to the late President, Vice-presidents, Council, and Honorary Secretaries, for their valuable services during the past year."

Election of Officers.—"That J. W. Procter, Esq., be elected President, S. Betton Gwynn, and F. H. Hartshorne, Esqrs., Vice-presidents, and the following gentlemen members of the Council for the ensuing year, in the place of those who retire by rotation:—James Bratton, Esq., Henry Fenton, Esq., S. B. Gwynn, Esq., E. T. D. Harrison, Esq., and J. R. Humphreys, Esq."

Representatives of Branch in General Council.—"That, in accordance with the eighth general law of the Association, A. G. Brookes, Esq., J. W. Procter, Esq., J. R. Humphreys, Esq., and Dr. Jukes Styrap, be the representatives of the Branch in the General Council for the ensuing year."

Representative of Branch on Parliamentary Committee.—"That the President, A. G. Brookes, Esq., be the representative of the Branch on the Parliamentary Committee."

Thanks to the President.—"That the cordial thanks of the meeting be given to the President for the ability and courtesy with which he has conducted the business of the meeting."

Communications.—A case of Tumour of the Uterus, and one of Punctured Wound of the Lung, were communicated by Mr. J. R. Humphreys; and two papers on a Cold and its Cure, and a Specific for Pityalism, were read by Dr. Styrap.

The announcement by Dr. Styrap that the oldest living member of the Branch—W. Thursfield, Esq., of Bridgnorth (one of the few remaining original members of the Provincial Association)—was most reluctantly about to retire from the Association, in consequence of continued ill-health and advanced age, was received with very general regret, and warm expressions of sympathy and esteem.

Dinner.—At 4 P.M., thirty-four gentlemen (twenty-eight members and six visitors) sat down to an excellent dinner, the President in the chair, supported by the Rev. J. Yardley, Rev. H. W. Moss, and the Rev. W. Bromley; the vice-chair being filled by J. W. Procter, Esq., President-elect. During the dinner, and after each toast, appropriate selections of music from Auber, Donizetti, Flotow, Mendelssohn, Rossini, and others, were played by a band of musicians under the leadership of Mr. Hulley, of Liverpool, which materially contributed to the enjoyment of a very pleasant evening.

READING BRANCH: ANNUAL MEETING.

THE sixteenth annual meeting of this Branch was held in the library of the Royal Berkshire Hospital, on July 5th; GEORGE MAY, jun., Esq., President, in the chair.

New Officers and Council.—The following were chosen. *President-elect:* R. C. Shettle, M.D. *Members of Parliamentary Committee:* N. Crisp, Esq. *Representative in General Council:* J. Workman, Esq. *Council of Branch:* N. Crisp, Esq.; I. Harrinson, Esq.; E. Wells, M.D.; R. T. Woodhouse, M.D.; J. Workman, Esq.; W. B. Young, Esq.; with the President and Secretary. *Honorary Secretary:* R. C. Shettle, M.D.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 24TH, 1871.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

LARGE BILIARY CONCRETION IN THE ILEUM.

BY F. LE GROS CLARK, F.R.C.S.

THE author gave the details of a case occurring in a patient aged 58, who was seized with abdominal pain and bilious vomiting, accompanied by constipation. A hard tumour was felt in the right hypochondrium. There was no abdominal tenderness or distension. On the eleventh day, the vomiting became stercoraceous. Two days later, the bowels were open and the vomiting ceased until ten days later, when it recurred, and continued at intervals during a week. For three weeks after this time, the bowels acted daily, and there was no sickness. The patient was then seized with severe abdominal pain and vomiting; the abdomen was tender, especially over the region of the cæcum, where a hard tumour could be felt. Death took place two months from the commencement of the first attack. At no period of her life had the patient suffered from jaundice. The *post mortem* examination revealed the existence of extensive peritonitis. Two large gall-stones occupied the ileum close to the valve. An ulcerated opening in the small intestines had permitted the escape of several small gall-stones into the peritoneum. The gall-bladder was healthy; there were no adhesions between it and any portion of the intestines. There was no trace of any ulceration either in the gall-bladder or in the neighbouring intestines. The concretions measured one inch in length and four inches in circumference. They seemed moulded to the shape of the ileum. On examination, it was found that the stones were composed of ninety-five per cent. of cholesterine, and that nothing had been added to them in the intestines. The gall-ducts were dilated and thickened. The author drew attention to the singular absence of any proof that these concretions had passed by ulceration from the gall-bladder to the abdomen, though this is the only way in which such large bodies could have entered the intestines.

Mr. DE MÉRIC asked what diagnosis had been arrived at in this case. He had seen a case in which similar symptoms were present, but in which no *post mortem* examination was made. No positive diagnosis was arrived at; but the symptoms preceding death were those of intestinal perforation. The patient sat up in bed, and suddenly died.—Dr. STEWART some years ago saw a patient in the Middlesex Hospital, who had for about a week before death obstinate stercoraceous vomiting. A round smooth gall-stone, as large as that described by Mr. Clark, was found in the upper part of the ileum. The calibre of the intestine above the gall-stone was of ordinary size; but the bowel had contracted on the calculus and was much narrowed below. As far as he remembered, there were distinct marks of ulceration having taken place between the gall-bladder and the bowel. He had believed it impossible for gall-stones of such large size to pass through the ducts. But, the year before last, he was called to a lady who belonged to a family very subject to liver-affections, especially gall-stones. She had long had hepatic dyspepsia, and was seized with severe pain, which lasted some hours; after this there was partial ease, and then intense suffering during ten hours, followed by sudden and complete relief. The next day, he found that she had passed a round biliary calculus as large as a pigeon's egg. There were no symptoms of perforation of the bowel; and he thought that the calculus could scarcely have passed into the intestine in any other way than through the ductus communis choledochus.—Dr. HABERSHON saw some years ago a case similar to Mr. Clark's, in which, after much difficulty, a wrong diagnosis was arrived at. The patient was a lady aged more than 50, who had severe pain, and bilious vomiting, without much tenderness. Death, preceded by great prostration, took place on the tenth day. A large gall-stone was found in the jejunum. There was no peritonitis. Adhesions existed between the gall-bladder and the intestine, but he could not make out that there was any communication between them. The patient had had no stercoraceous vomiting, because the obstruction was seated too high up.—Mr. LE GROS CLARK had arrived at the diagnosis in his case rather by exclusion than in any other way. Whatever the cause of obstruction was, it did not produce inflammation. There was no evidence of twisting of the bowel or of malignant tumour. In the absence of jaundice or of any history of this condition, it did not occur to him to suspect the presence of a gall-stone.

ON ETHER AND CHLOROFORM AS ANÆSTHETICS.

BY J. WARRINGTON HAWARD, F.R.C.S.

The paper commenced by stating that, it having been suggested to the author that the statements of Dr. Bigelow and other American sur-

geons showed that ether as an anæsthetic had been to our detriment neglected, he had, during the past year, practically investigated the subject, and had arrived at the conclusion that ether was, for several reasons, to be preferred to chloroform. Of these reasons, the strongest was the greater safety of ether; for by using it the chief, and in skilled hands probably the only, cause of fatal cases of chloroform-inhalation was excluded—*i.e.*, paralysis of the heart; ether being a stimulant to the heart's action, and uniformly improving the pulse. The second was that ether, from its stimulant quality, was antagonistic to the effects of the shock of an operation, which the author maintained, and quoted cases to show, was not abolished by rendering the patient insensible. A third was the greater liability of chloroform than ether to produce after-sickness. The principles and mode of administering ether were then described, and it was shown that if these were attended to, the production of anæsthesia by ether was as easy and certain as by chloroform, and required but little more expenditure of time or the drug. The only cases to which ether was not so applicable were operations upon the mouth, in which an inhaler could not be used, and where it was necessary to re-administer the anæsthetic as rapidly as possible without an inhaler. There were two appendices to the paper: the first consisting of a table of fatal cases of chloroform; the second, of a table of ninety-seven cases in which the author had administered ether, including amputations, excisions, perineal section, lithotomy, lithotripsy, staphyloraphy, operations on vesico-vaginal fistulæ, ligature of piles, and other operations. Especial note was taken of the occurrence of after-sickness, and the only approach to it was that in one case, after an operation for recto-vesical fistula, the patient vomited once, an hour after the operation.

The PRESIDENT remarked that the author had omitted to notice the recommendation of the Committee of the Royal Medical and Chirurgical Society, to mix chloroform and ether.—Mr. SPENCER WELLS thought that there were grounds for not carrying out this recommendation. In Vienna, where the plan of mixing chloroform and ether had been tried, it had been found that the patients first got the effects of the ether (the lighter fluid), and were then suddenly overpowered by the chloroform. He had long felt that there were serious objections to chloroform in operations involving the abdomen, on account of the persistent vomiting which was liable to follow its administration. He had, following the example of Dr. Keith of Edinburgh, given ether in some cases; but good ether was scarce, and the diffusion of the vapour through the air gave rise to inconvenience. After four years' experience, in more than three hundred cases, he had found bichloride of methylene to possess great advantages over both ether and chloroform. It was safer than chloroform; and after-sickness was rare. It might be administered from a graduated bottle, by having air forced through it by means of bellows. About four deaths had been reported to have followed its use; while, from the quantity sold, it was estimated that it had been given in 50,000 or 60,000 cases. Perhaps, however, even a better anæsthetic than the bichloride of methylene would yet be discovered.—Dr. W. H. DAY gave an account of the characters of bichloride of methylene, as described by Dr. Richardson. It produced less sickness than chloroform; and the patients recovered more quickly from the anæsthesia which it produced—the agent being readily eliminated. For an operation lasting half an hour, three drachms of the bichloride of methylene were generally sufficient.—Dr. C. KIDD preferred administering ether and chloroform separately. Thus it proved a good plan to place the patient at first well under the influence of chloroform, and continue the anæsthesia with ether in a separate inhaler, especially if the pulse became weak from shock or bleeding. Ether alone was very tedious; three or four ounces of chloroform would do as much as almost a pint of ether. As to the pulse, he agreed with Lister that it was very little influenced by chloroform. Sabarth gave thirty-six deaths under ether, so that it was not entirely devoid of danger. As to bichloride of methylene, it was suitable for short operations, but for long operations he considered it dangerous.—Dr. SANSOM said that there were not sufficient data for estimating the relative dangers of chloroform and ether. The statistics as to chloroform differed widely; some giving the deaths as one in 16,000, and others as one in 2,500. The rate of mortality from ether was also variously given; but there was sufficient to show that it was not absolutely safe. Chloroform was more manageable than ether; on account of its nauseousness, many persons could not tolerate the latter. The danger of chloroform, in his opinion, lay in its diminishing the power of the circulation. From experiments which he had made, he agreed with Mr. Wells as to the effect of mixtures of ether and chloroform. When, however, chloroform was mixed with alcohol, it was not merely diluted, but its volatilisation was retarded, and a more free admixture of air was allowed. In many cases, a small quantity of morphia might be injected hypodermically, and then a smaller amount of chloroform would be required.—Mr. HOLMES had tried ether some

years ago. He did not think that there was any difficulty in bringing patients under its influence, though it required about twice as much time as chloroform. There was no necessity for any diffusion of the vapour in the room; the window might be kept open. The chief reason why he abandoned the use of ether was that, when given by a sponge (as was ordinarily the case) it produced asthenic congestion and convulsive movements, especially in patients addicted to drinking. It was useless to imagine that a perfectly safe anæsthetic could be found. As to the statistics of death after the use of anæsthetics, these were of no use, unless it were shown in each case whether the agent was administered judiciously or injudiciously. If ether were given in a proper manner, there was no objection to it, and no inconvenience of importance attended its use.—Mr. R. B. CARTER had inhaled ether experimentally in 1848, and remembered that the taste of it remained for two or three days.—Mr. C. HUNTER agreed with Dr. Sansom that the danger with chloroform arose from its effect on the heart. If morphia were injected, it was necessary to look to the lungs as much as to the heart.—Mr. CLOVER was at University College Hospital when ether was first used there by Mr. Liston. He remembered that there were many cases of sickness after its use; and he had not found it so free from this result as had been alleged. It was difficult to breathe ether freely, on account of its pungency. Statistics were not trustworthy; and it must be remembered that cases in which chloroform was given in midwifery (its full effect not being produced) were not fairly comparable with those in which it was given for the performance of great operations, such as lithotomy. Much would depend, also, on the distance from the face at which chloroform was given. If the inspired air contained more than five per cent. of the vapour, there was marked tendency to produce death by syncope.—Mr. HAWARD having replied, the meeting adjourned.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, OCTOBER 21ST, 1871.

R. DRUITT, M.D., in the Chair.

MR. GARDNER BROWN exhibited and explained a new Self-acting Disinfectant for Water-closets, etc., lately invented by him. He explained how the apparatus was self-acting, how the supply of carbolic acid or other disinfectant used was regulated, and by what contrivance economy and efficiency were secured.—Dr. STEVENSON believed the invention a very useful one.

Mr. LITTLE read a paper on the Intimate Relation between Defective Ventilation and the Mortality from Tubercular Diseases, Convulsions in Children, Teething, Atrophy and Debility, with a few practical suggestions. Hitherto the local boards had bestowed their attention on epidemic diseases, but had not given that attention to the prevention of consumption and its allied diseases that their importance demanded. He next dwelt on the importance of fresh air, and the lamentable ignorance prevailing, not alone among the poor, with respect to it. The appalling mortality among young children he attributed in great measure to neglect in this respect. For the poor, it was almost impossible to get pure air while they were compelled to inhabit their present wretched tenements. He regretted that little had been expended in amending this condition. How people afflicted with bad health in these close dens were benefited in health the moment they were removed to places in proper sanitary condition, was shown by the marked superiority in the health of prisoners compared with that of the surrounding population. He was lately invited to visit the training-ship *Goliath*, moored in the river off Grays, Essex. The boys were the children of pauper parents, and had been transferred to the ship for the purpose of being trained for Her Majesty's Navy. The register of their height, weight, and breadth of chest when received on board, when compared with what it was at the time of his visit, showed a remarkable increase in all these respects. Moreover, the sullen and downcast looks had given place to an expression of intelligence and cheerfulness. Mr. Little next spoke of the means of preventing the evils of overcrowding. The Medical Officers of Health ought to do their utmost to prevail on Boards to put into execution the existing laws. In the long run their very persistency must have its effect; and with regard to the building of unhealthy houses in the future, an opportunity was afforded of remedying defects in the present law when the New Building Bill should come on next session. He concluded by urging the Association to use its utmost exertions towards procuring the insertion of effective sanitary clauses.—Dr. ILIFF suggested that the space required in front and rear of premises ought to depend on the height of the boundary walls. He considered that the Peabody and other such funds would have been better employed in sweeping away unhealthy property.—The Rev. Mr. COHEN said it was hard to call on the ratepayers to pay for people who would

do nothing to help themselves. The poor could not be prevailed upon to open their windows; they needed to be taught the benefits of ventilation.—Dr. SUTTON included insanity among the diseases arising from close and foul air, and showed the connection existing between phthisis and insanity.—Mr. GLADDEN would not have the owners of condemned property to bear all the loss, nor the ratepayers to pay full compensation; some middle course ought to be adopted.—Mr. FINLAY thought that care should be taken that no new buildings should be erected under unsanitary conditions.—Dr. HARDWICKE suggested the building of dwellings after a system which he had seen working well in Picardy. A manufacturer there had built huge blocks of tenements for his work-people; these were kept perfectly clean, not by the people themselves, but by servants specially appointed for that purpose.—The PRESIDENT remarked that, while the inordinate greed of landlords showed an unhealthy condition of the public conscience, the permitting such a state of things to exist argued great ignorance and stupidity on the part of ratepayers. Landlords for the sake of gain built houses that evidently undermined the health of the tenants, and made them a burden to the ratepayers. Why did not the latter take steps to prevent such proceedings?—Mr. LITTLE having replied, the meeting closed.

SPECIAL CORRESPONDENCE.

VIENNA.

[FROM OUR OWN CORRESPONDENT.]

Case of Ovariectomy by Billroth.—Remarkable Case of Aneurism.—Local Causes of Lung-Disease.

PROFESSOR BILLROTH has apparently quite overcome the prejudices against him as a Prussian. He is an unostentatious but most effective operator. The success in ovariectomy in Vienna has, until recently, been most limited; but some months ago Billroth determined to try vigorously to alter this state of matters, which if it had continued much longer would have removed this operation from the list of justifiable measures. By selecting his patients with great care the last six cases have been perfectly successful.

A very interesting case of aneurism occurred in Billroth's wards lately. The man complained of dyspnoea, but no signs of aneurism could be discovered. At last his dyspnoea became so intense that tracheotomy was resorted to, but the ordinary short cannula gave no relief. A much longer cannula was tried, and its insertion was opposed by a soft obstructive body. The breathing was relieved on the cannula being passed beyond this, but the difficulty in swallowing was unaltered. Aneurism was diagnosed in spite of the absence of all physical signs; and at the *post mortem* examination a sacculated aneurism at the commencement of the descending aorta was found, with a pouch extending betwixt the trachea and the gullet.

The weather here is eminently variable and trying to all lungs; and, as tuberculosis is not a disease *sui generis*, these repeated variations of temperature are provocative of much lung-mischief, which develops into tubercle. There is nothing markedly strumous in the appearance of the people to explain the fact of the excessive amount of pulmonary phthisis; it is a question of simple provocation. Already on a cold day stoves are lighted, and the temperature of the room reminds one of a Turkish bath; then without respirators the people pass into the cold air back and forwards frequently and repeatedly. The other night in a restaurant I counted seventy-seven persons seated, ten gaslights, and a sprinkling of waiters, in a room about eighty feet long and containing about 20,000 cubic feet of air. There was only one ventilator, which contained six triangular spaces about the size of the triangle which constitutes Mr. Bass's trade-mark. It was intensely cold for the time of year, and not one who went out had either respirator or other means to modify the temperature of the outside air. Nature has taken some pains to render Vienna liable to tubercle, but the habits of the people have supplemented what was wanting to insure its prevalence.

DONATIONS, BEQUESTS, ETC.—Mr. James Hatton has given £5000 to the Warrington Dispensary.—The Goldsmiths' Company have given £100 to the National Sanatorium, Bournemouth.—The General and the Queen's Hospitals, Birmingham, have each received £100 under the will of Mr. Thomas Tonks.—The General Hospital, Birmingham, has become entitled to £100 under the will of Mr. J. Evans, Moseley.

CORRESPONDENCE.

HER MAJESTY'S RECENT ILLNESS.

SIR,—A statement having been widely circulated to the effect that the Queen's recent illness was the result of revaccination, I trust you will, by inserting this letter, permit me to give the most unqualified contradiction to the report. There is not a shadow of foundation for it in facts. Her Majesty's recent illness did not commence till many months after the revaccination. There was no connection, direct or indirect, between the two.

I am, etc.,

October 31st, 1871.

WILLIAM JENNER, M.D.

P.S. I should not have contradicted so foundationless a statement had I not heard that, in consequence of the positive terms in which the assertion is made, it has received a certain amount of credence, and is so causing harm to the public health.

THE INTRODUCTORY LECTURE AT THE MANCHESTER MEDICAL SCHOOL.

SIR,—I did not, until yesterday, read the strictures on my introductory lecture, contained in a paragraph in page 420 of the JOURNAL of October 7th, headed "Manchester Medical School." The anonymous contributor implies that the lecture consisted of "a series of carplings and warnings against such advances of modern science as the microscope and ophthalmoscope, and which vaunts the education of the past as contrasted with the present, is little adapted to the requirements of the present day." I must complain against the unfairness of these remarks. My observation was, "that I feared the attention of the students of the present day was too much devoted to minute or microscopic anatomy before having thoroughly acquired a knowledge of elementary anatomy"; that "I did not at all wish to discountenance minute anatomy; but during the course of medical study, it was much more material thoroughly to acquire the elementary knowledge before the student attempted microscopic examinations, *except under the direction of his teacher*." While appreciating in your work the value of such mechanical assistance as the microscope, stethoscope, and ophthalmoscope, you must not place too much reliance upon these aids, to the neglect of your own natural means of acquiring information in the science of anatomy in *post mortem* examinations, etc."

The correctness of my remarks is much confirmed by your statement of the number of students rejected at the preliminary examinations held during the period from July 1870 to May 1871 (BRITISH MEDICAL JOURNAL, p. 418). I believe most will coincide with my general remarks on theories, and I believe that I am not altogether singular in my opinion of those of Darwin and Huxley.

I now leave it to the readers of the BRITISH MEDICAL JOURNAL to decide between my statements and those of an anonymous contributor, whose remarks are founded at least upon misconception, if not upon wilful representation, and with whom I cannot be expected to enter into controversy.

Those who feel any further interest in the subject, will find a longer abstract of the introductory lecture in the *Medical Times and Gazette* of October 14th, page 487.

I am, etc.,

R. T. HUNT.

Manchester, October 28th, 1871.

* * * There is a full abstract of the lecture in the JOURNAL for Oct. 14th, page 448.

MR. CHRISTOPHER HEATH ON CIRCULATION.

SIR,—I regret to find that you have belied the opinion I expressed to your publisher when he threatened to place our correspondence in your hands; viz., that you were "too intimately acquainted with the ethics of journalism to publish documents not intended for the public eye." As you have invited me "either to justify or retract my injurious imputations," I proceed to take the former course, with your permission.

Your quotation from my first letter respecting the circulation of the BRITISH MEDICAL JOURNAL and *Lancet* stops in the middle of a sentence, which in the original is completed as follows: "since the *Lancet* is distributed through the publishing trade, whilst the BRITISH MEDICAL JOURNAL circulates only among its own subscribers." This is a simple fact, which cannot be gainsaid. I applied the word "fallacious" to the Government stamp-returns because they are so, if employed to gauge the circulation of any paper the major part of whose issue is

unstamped. The "utterly surprising anticlimax," as you are pleased to call it, of my ignorance of the *Lancet's* precise circulation, would not have seemed so surprising to your readers had you finished the sentence as I wrote it: thus, "though I have every reason to believe that it (the circulation of the *Lancet*) exceeds that of all its London medical contemporaries *put together*." I am still of that opinion, and I think if you refer to the leading publishing firms, you will find my opinion confirmed.

To return to the circular. As I stated in my second letter, my complaint was not respecting the stamp-returns, but regarding the statement that the BRITISH MEDICAL JOURNAL "is now by far the most widely circulated of medical journals"—a statement which, up to that time, had not appeared in the JOURNAL itself. I observe that, within the last fortnight, a notice in almost the same terms has appeared in the title-page of the JOURNAL, which, therefore, now claims on its face the "largest circulation."

Your personal remarks upon myself I am content to leave unanswered, except where misstatements have been made. I nowhere stated that I wrote "in my new character of member of Committee of Council," my words being "I addressed you simply as a member of the Association, whose honour I hold to be involved in your proceedings." In my first letter, I had said, "As I happen to be a member of the Committee of Council of the Association, I shall take the earliest opportunity of bringing these fallacious statements under the notice of my colleagues, as I consider them dishonest and dishonourable to the Association of which I am a member." I am still of the same opinion, and have taken the earliest opportunity of bringing the subject before the Committee of Council. With respect to my seat on the Committee, which I am stated to have "somewhat anomalously accepted," I have only to remark that no one was more surprised than myself when my name was announced as a member of the Committee of Council at the Plymouth meeting; that I had no opportunity of either accepting or refusing the honour; and that I am not to be frightened out of doing my duty as a member of that Committee by personal abuse.

October 31st, 1871.

I am, etc.,

CHRISTOPHER HEATH.

EPIZOOTIC APHTHÆ.

SIR,—I have seen recently in the daily papers, reports of several cases of epizootic aphthæ occurring in the human subject; and, as I am much interested in this matter, I should esteem it a favour if any of your numerous readers could supply me with full particulars of any cases that they have met with in their practice. For several months this disease in cattle, sheep, pigs, etc., has been traversing the length and breadth of our isles, thus giving medical men opportunities of studying one of the many diseases which are capable of being transmitted from the lower animals to man. It is to be regretted that medical teachers and practitioners (with some few exceptions) have been so apathetic in the study of comparative pathology. A study of this long-neglected department of science would furnish many facts which would help to place pathology upon a broader basis. It is a large field for research, and one that would amply repay any scientific observer.

I am, etc.,

JOHN A. MCBRIDE,

Lecturer on Veterinary Medicine and Surgery in the Royal Agricultural College, Cirencester.

TREATMENT OF RETROFLEXION OF THE UTERUS.

SIR,—I have just perused with great interest the paper read by Dr. Beatty at the Association meeting at Plymouth on "The Radical Cure of Retroflexion of the Uterus". On thinking over the very ingenious plan devised or practised by him to obviate the difficulties and probable dangers attendant upon the mobility of the body of the uterus during the various movements of the patient, somehow there appeared before my "mind's eye" the simple and beautiful arrangement of the vertebral column in the ophidian reptiles. In this class of animals, the head and anterior half of the vertebral column can be raised and twisted about in all directions while the remaining portion is motionless.

This is effected by means of a ball-and-socket joint, the convex extremity of one vertebra fitting into the concave surface of the next. It has occurred to me that a hint might be taken from Nature, and a similar arrangement adopted in the instrument recommended by Dr. Beatty, by having a somewhat expanded concave surface on the vaginal end of the stem, applied so as to move smoothly over a pessary having the upper surface convex instead of flattened. My impression is, that the uterine stem would be enabled by this arrangement to move more smoothly and equably than on a flat surface. However, you can take the idea *quantum valeat*.

I am, etc.,

Bath, October 1871.

A. B. BRABAZON.

OBITUARY.

RICHARD TONSON EVANSON, M.D.

WE have this week to record the removal from among us of a distinguished member of the medical profession and a most worthy colleague in our Association. Dr. Richard Tonson Evanson died on October 26th, at his residence, Torquay, in his seventy-second year. He had been suffering for some years from irritability of the bowels and chronic diarrhoea, and from fatty degeneration of the heart, which was the immediate cause of his death. Notwithstanding these ailments, his spirits never flagged; and he maintained his interest in everything that concerned his profession, whether scientific or social, as warm and lively as the youngest and strongest among us. On the night previous to his death, he was restless, and had determined to remain in bed somewhat longer than usual; but about midday he was found to have passed away tranquilly, without a struggle, and as if in sleep.

Dr. Evanson was a native of the county of Clare in Ireland, and received his education in Trinity College, Dublin, of which he was a distinguished *alumnus*. He commenced his medical studies as an apprentice to the late Sir Philip Crampton, then Surgeon-General to the Army in Ireland; and in due time became a Fellow of the Royal College of Surgeons. He soon, however, turned his attention to medical practice; and, having graduated as Doctor in Medicine in the University of Glasgow, he settled in Dublin as a physician, and undertook the office of Lecturer on *Materia Medica* in the Park Street Medical School. There he was associated with the late Sir Henry Marsh, Dr. Arthur Jacob, Dr. Beatty, Dr. W. Stokes, and other teachers whose names brought an European reputation to the Medical School of Dublin during the second quarter of the present century. From Park Street School, Dr. Evanson was subsequently transferred to the Chair of Medicine in the Royal College of Surgeons; and he was rapidly rising into eminence as a practitioner when the affection of the mucous membranes, under which he suffered to the last, obliged him to seek health in warmer climates. For many years he was a wanderer upon the continent of Europe; but during all that time he never abandoned the practice of his profession, and many English persons of distinction enjoyed the benefit of his skill and were his patients in the cities where he sojourned. The last of these was the late Duke of Northumberland, whose medical adviser and confidential friend he was for some years. After the Duke's death, he retired from private practice; but, as we have said, his love for his profession never diminished, and he continued in close and friendly intimacy with a large circle of its members, by whom his kindness of heart, comprehensive charity, and never-failing benevolence, were warmly estimated.

Dr. Evanson's literary abilities were very considerable. He was a frequent contributor to the current medical literature of his time. In 1836 he published, in conjunction with his early and never forgotten friend Dr. Maunsell, a *Practical Treatise upon the Management and Diseases of Children*, which was at once recognised as a standard work, was reprinted in America, translated into German, and rapidly passed through five editions. He did not, however, confine his labours within professional limits. As he said in a very recent letter to an old companion, he had early formed a habit of rhyming, and never abandoned it up to the close of his life. So lately as 1868, he published a poem under the title of *Nature and Art*, with a number of "occasional verses and elegiac stanzas", the latter of which teem with the tenderness and affection which characterised his gentle nature. The motto which he selected for the title-page of this book was indeed the key of his whole life:

"He prayeth best who loveth best
All things, both great and small;
For the dear God who loveth us,
He made and loveth all."

Many of our associates had the good fortune to share in the last public act of Dr. Evanson's life, when he presided at the splendid entertainment given by the medical men of Torquay to the members of the British Medical Association who attended the annual meeting at Plymouth in August last. On that memorable occasion, Dr. Evanson was unanimously chosen by his brethren at Torquay as the most fitting person to take the chair; and all who had the happiness of being present can bear testimony to the highly efficient manner in which he discharged the duties of his office. Although evidently suffering and weakened by the disease that was preying upon him, it seemed as if his former vigour and eloquence, for which he was always remarkable, had returned for the occasion, and he spoke with the energy of youth and the elegant diction of a Christian philosopher and poet. His bright, genial, social, warm-hearted character, never showed more clearly than

it did then, placed as he was at the head of a brilliant assembly of the *élite* of the profession, among whom were his ardent admirers, and one at least of his oldest and most loving friends. We have reason to know that the success of that day was most gratifying to that amiable and good man; and it would seem as if Providence had afforded him that opportunity of taking leave of a profession in which he had so long laboured and which he so well loved.

LANGSTON PARKER, F.R.C.S., BIRMINGHAM.

It is with much regret that we announce the death of this eminent practitioner, which took place from bronchitis, on Friday, the 27th ult., in the 67th year of his age, at his residence, Paradise Street, Birmingham. Mr. Parker was born in that town in 1803, and there commenced his professional education; he thence proceeded to London (St. Bartholomew's), concluding his curriculum by a visit to the hospitals of Paris. His membership of the Royal College of Surgeons dates from 1828, and two years later he commenced practice in his native town, as successor to his father. The active character of his mind soon led him to engage with ardour in various schemes to promote the scientific and professional education of Birmingham. He was associated with Mr. W. Sands Cox in the establishment of Queen's College, in which, for a quarter of a century, he occupied the chair of Anatomy. His services to Queen's Hospital date from the foundation of that important charity, of which, for a like period, he discharged the duties of Honorary Surgeon. On his retirement from that office he became Consulting Surgeon, which appointment he held to his death. He was also Consulting Surgeon to the Leamington Hospital for Diseases of the Skin. Of the Birmingham Philosophical Institution he was likewise an active promoter, and delivered to its members a remarkable course of lectures "On the Effects of Certain Mental and Bodily States upon the Imagination." These were subsequently reprinted in the *Analyst*, a quarterly journal conducted by W. Holl, F.G.S., and Neville Wood, and are contained in five consecutive numbers, the last appearing in the issue for January 1837. They were greatly admired for their elegance of composition and felicity of illustration; and it is much to be regretted that their author never published them in a substantive form. The contributions of Mr. Parker to medical literature were numerous and important. Of these, one of the earliest was a volume of 300 pages, *The Stomach in its Morbid States, being a Critical Inquiry into the Nature and Treatment of Diseases of that Organ*, 8vo, 1837. This, although called for, never went into a second edition, the author preferring to condense the subject in a smaller work, *Digestion and its Disorders, in reference to Dietetics and Diseases of the Stomach*, 8vo, 1849. We may also mention his paper on *The Nature and Treatment of some Painful Affections of Bone*, published in 1852; his *Course of Lectures on Clinical Surgery*, 1855 (ASSOCIATION MEDICAL JOURNAL); and his elegant monograph on *The Modern Treatment of Cancerous Diseases by Caustics or Enucleation; An Inquiry into the Effects of many new Remedies in Arresting the Progress of Cancer*, being the substance of the Annual Address on Surgery, read by Mr. Parker at the twenty-fourth annual meeting of the British Medical Association in 1856.

But, as it was in the successful treatment of a special class of disorders that the deceased gentleman obtained a more than European reputation, so it is as a Syphilographer that he must rest his claim to be remembered by posterity. His *Clinical Lectures on Infantile Syphilis*, published in 1858; his monograph on *Primary and Secondary Syphilis of the Uterus*, 1859; his papers on *Latent Syphilis*, published in 1863; and *On Some Diseases and Accidents to the Sexual Organs not of a Syphilitic Nature*, which appeared in the BRITISH MEDICAL JOURNAL in 1868; his essay on *The Mercurial Vapour Bath*, of which a second and rewritten edition appeared in 1868, and in which he advocates "moist" in preference to "dry" fumigation—all indicate the possession of a large and varied knowledge; while his classical work, *The Modern Treatment of Syphilitic Diseases*, of which he lived to see a fifth edition, embodying the results of thirty years' experience, "entirely rearranged and rewritten" shortly before his death, is a truly practical and comprehensive treatise.

It was not only in the literature of his own country and profession that Mr. Parker was versed: it was difficult to mention a continental work on medicine or surgery which was unknown to him. He was deeply read in fiction, and took to the last an absorbing interest in the drama, of which his knowledge was profound and critical. In private life few men were more respected; his kindly disposition, genial temperament, and honourable character, endearing him to a large circle of friends, by whom his loss will be long felt. He died "in harness", having been consulted by patients on the evening preceding his death. He was interred on Wednesday last, in the family vault at Aston, whither he was followed by a large concourse of friends, anxious to pay

the last tribute of respect to his memory. He leaves one son, Mr. Adams Parker, a Licentiate in Dental Surgery of the Royal College of Surgeons, engaged in the successful practice of his profession, and holding office in the hospital which his father served so long and so well.

ARTHUR KEMPE, F.R.C.S., EXETER.

It is our painful duty to record the decease of Mr. Arthur Kempe, which took place suddenly, at his residence, Southernhay House, Exeter, on Wednesday, October 25th. Mr. Kempe was the youngest son of the late Rev. John Kempe, for many years the rector of Fowey, Cornwall, at which place Mr. Kempe was born in the year 1813. He received his education at Blundell's School, Tiverton. His professional studies were commenced at the Devon and Exeter Hospital in the year 1832, under the late Mr. Samuel Barnes, one of the most distinguished surgeons of his time, to whom he was apprenticed. He studied subsequently at St. Bartholomew's Hospital, London, where he took a prize for surgery; and eventually settled in Exeter in 1839. Mr. Kempe was thoroughly a man of business, always industrious, and very painstaking; of gentlemanly bearing, and possessing much warmth of feeling and sympathy towards his patients. He soon became a favourite, and his hands became full of work. He was elected early in life one of the Surgeons of the Exeter Incorporation, also of the Exeter Dispensary, and the Lying-in Charity, which offices he held for many years, and eventually relinquished the two former appointments on his election as Surgeon to the Devon and Exeter Hospital in 1854. From this time, he rapidly rose to occupy one of the highest positions as a consulting surgeon; his judgment was good, and he performed his operations with boldness, dexterity, and celerity. Thus, his fame speedily became known through the country, and for many years his opinion was sought and valued by many of the leading families in the county of Devon.

Mr. Kempe was never married. All his energies were thrown into his professional work; and so great was his zeal, that for more than twenty-five years he never took a holiday or rest from the daily routine of his labours. This constant and unwearied attention to his profession, as might be expected, after a time began to tell on Mr. Kempe's health; and for the last four years he complained at times of indigestion, palpitation of the heart, etc. At Christmas last, he became painfully aware that he could not continue his work as heretofore; he therefore determined only to see patients in consultation. This, however, in April, he was compelled to relinquish; and by the counsel of his professional advisers, he went to Italy, subsequently seeking change and retirement in that quiet and health-giving place Chagford. On his return, he seemed in some respects improved. He was able to take his drive daily, and see some of his intimate friends. He resigned his appointment as Surgeon to the Devon and Exeter Hospital in June, and was elected Consulting Surgeon.

Up to a few days previous to his decease, his health had been much as usual; but on Sunday morning, October 22nd, a sudden prostration came on, and Dr. Drake, his physician, found him cold and pulseless, in which condition he remained for some time; he rallied, however, and was about on Monday and Tuesday as usual. On Wednesday morning, on his servant's entering the room, she came in only to hear him draw his last breath.

Mr. Kempe was distinguished during a long life of usefulness by an undeviating regard and consideration for the poor. He was unanimously elected one of the guardians of the poor, which office he filled for some years, and was, on his retirement from public life, the governor of that body, his opinions carrying always great weight in the discussions. He leaves behind him a beautiful memorial of his good works in a chapel attached to the Devon and Exeter Hospital, which he erected at a cost of £1,800. Mr. Kempe made an offer, about two years since, to the Committee of the same institution, to erect and present to them a sanatorium to accommodate thirty patients who were convalescent, having seen himself how valuable such an addition would be to the parent institution; but his offer was refused by the Managing Committee, on the plea of their doubt of the funds to support it being forthcoming. Only a few days before his death, he wrote to the Town Council, offering to erect, in any suitable place, a drinking fountain, which should also carry a lighted clock. This matter was under consideration at the time of his decease.

His remains were interred in a vault in the yard of St. Sidwell's Church, a very large number of his friends attending the funeral as a last tribute of respect to one who had been so highly valued during his life. It falls to the lot of few men to enjoy so fully the confidence of so large a sphere of persons as did Mr. Kempe; his loss is therefore lamented by many. Those who enjoyed the privilege of intimacy with him, feel that they have lost a friend whose place is not easily filled.

JAMES FAWCUS, M.D. LOND.

DR. JAMES FAWCUS, Inspector-General of Jails in Lower Bengal, was born in 1833, and died at his mother's house in North Shields, on October 11th, 1871, of pneumonia, supervening on fever caught at Calcutta. In early life he spent some years in the Vale of Keswick, and became well acquainted with the geology, mineralogy, and natural history of the Lake country. He studied at University College, London, and afterwards in Paris and Vienna, visiting also various other seats of medical learning. By his love for his profession, the sweetness of his temper and utter unselfishness of his nature, he won the love and esteem of his teachers and fellow students.

In the spring of 1856 he was appointed assistant-physician to the hospital at Renkioi on the Dardanelles, which was established under the superintendence of Dr. Parkes, in the rear of the hospitals in the Crimea and at Scutari. He also volunteered for the Crimea, and was for some time attached to the hospital of the Light Division at the front.

For his services there he received the thanks of the officers, and afterwards Sir William Codrington procured him the Crimean medal. It was characteristic of him, that he left immediately after the duties were over, that he might not in any way share the merit of his military medical friends. After returning to Renkioi, where he served till the end of the war, he was also appointed assistant-surgeon to the Land Transport Corps, which had at that time over six thousand mules at the Dardanelles and a large number of men. Here, at Abydos, he remained some time. "He discharged," says Dr. Parkes, "both sets of duties with great zeal and very ably. He was at that time only 22 years old, full of vigour, very strikingly handsome, and with a sweet, never-ruffled temper which made him a favourite with all. His service in the East was very pleasant to him, and he enjoyed greatly the active, energetic life he led there."

After studying and travelling on the Continent for about two years, he passed the competitive examination for the Indian Medical Service, in which he took a very good place; and in February 1859 he went to Bengal. He was, on April 22nd, 1859, ordered to China with the 47th Native Infantry, and after being at Canton for a short time was appointed to the charge of Stanley Hospital near Hong-Kong. After a visit of some months to New Zealand he returned to India, and then, by the introduction of Dr. Parkes, first made the acquaintance of Dr. Frederick Mouat, the Inspector-General of Jails in Lower Bengal. Dr. Mouat saw at once what a valuable man he was, and procured for him the civil-surgeoncy of Monghyr. When the Inspector-General went to visit the jail at Monghyr, he saw, to use Dr. Mouat's words, "how valuable Dr. Fawcus's work had been—how important had been his influence in introducing, and very rapidly giving effect to, changes that had the reclamation of the prisoners for their object". By the Inspector-General's recommendation he was soon appointed superintendent of the jail at Alipore, a large jail containing about 2500 prisoners, in a suburb of Calcutta; and at the same time Dr. Fawcus held the assistant-surgeonship of the General Hospital. Dr. Mouat tells stories of his slipping away from a roomful of friends to sit up with a patient, about whom he was anxious, sleeping in the hospital or the jail. In the duties of superintendent he was "wonderfully devoted and got the love of every colleague, subordinate, and prisoner. His interest was in everything that tended to make the prisoners better men".

In 1865 Dr. Fawcus was appointed Deputy Inspector-General of Jails, and since then has frequently had Dr. Mouat's duties when he was away. Throughout Dr. Mouat's able Reports of the immense prison system of Lower Bengal, Dr. Fawcus's name and work is frequently spoken of in the highest terms of praise, and at the close of the Report of 1867 "the Lieutenant-Governor desires to thank Dr. Fawcus for his energetic and intelligent administration of the department during the absence of Dr. Mouat in England".

Dr. Fawcus was for two or three years engaged with Dr. Cunningham in scientific researches into the pathology of cholera; and the Inspector-General, in his Report for 1869, says: "The only satisfactory information which I have received was from Alipore Jail. There is no reason why medical officers who have not a tithe of the duties and responsibilities of Dr. Fawcus should not investigate the diseases which occur in their jails with the care and minute attention which he devotes to the work." Of Dr. Fawcus's Reports, which show the result of long labour and great numbers of *post mortem* examinations made under circumstances more favourable for arriving at just conclusions (respecting embolism, for example) than any which could have occurred in this country, Dr. Mouat says: "It would be difficult to overrate their interest and importance in the new and right direction which the general inquiry into cholera has now taken." What efforts such labours as these would cost in the exhausting climate of Calcutta, every medical man must know.

On Dr. Mouat's retirement in 1870 Dr. Fawcus was appointed Inspector-General, and shortly afterwards went away on a visit to his jails through Orissa and Assam. But his health was now broken. The immense wear and tear of his office, and the unhealthy places which he had to visit and remain in at length told even on his strong frame. He had, with a view of improving the health of Alipore, undertaken some works of drainage in the malarious soil there; and when he began to suffer, as it was ever his way to care nothing about himself, he still went on with his work. Moreover, so much difficulty was anticipated in filling his office that he was pressed by his official superiors to stay longer than was at all right for his health. Again, he thought too little of himself, and did so. He left India in April of this year; and, after spending the summer partly in England, partly in France, he at length, when very weak, caught pneumonia at Melrose and returned to his mother's house to die, preserving his life-long sweetness, patience, and care for the good of others to the last.

Dr. Fawcus has left a widow and young family; who, with very many friends, will long lament his loss.

WILLIAM DANIEL MOORE, M.D., DUBLIN.

WE regret to announce the death of Dr. W. D. Moore, which took place on October 28th. The cause of his death was progressive muscular atrophy, with which he had been afflicted since the beginning of 1867. We hope to give a biography of Dr. Moore in our next number.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

THE USE OF STIMULANTS IN WORKHOUSE INFIRMARIES.

THE Special Committee of the West Derby Board of Guardians last Wednesday presented their report on the use of stimulants in workhouses. As the result of their inquiries, they point out that their union occupies a very unfavourable position in comparison with other parishes and unions, and recommend a "non-alcoholic treatment" wherever it can be adopted, advising that the medical officers should be required to administer alcoholic liquors with as much care as medicines of a poisonous nature. They give the following return from twenty-two unions and parishes of the consumption of stimulants in their respective workhouses, showing the total population, the yearly cost of stimulants per head, and the death-rate on an average of two years:—

| PARISHES AND UNIONS. | Total Popula- tion. | Total of Deaths. | Cost of Stimulants. | | | Cost per Head. | | Deaths. One in |
|--------------------------------------|---------------------------|------------------------|------------------------|----|----|----------------------|-----|----------------------|
| | | | £ | s. | d. | s. | d. | |
| West Derby | 4538 | 400 | 1257 | 6 | 0 | 5 | 6 | 11 |
| Liverpool.. | 22730 | 1952 | 1590 | 17 | 11 | 1 | 5 | 12 |
| Lambeth | 5950 | 350 | 1690 | 5 | 11 | 5 | 9 | 17 |
| Islington... .. | 2948 | 225 | 816 | 12 | 11 | 5 | 6 | 13 |
| St. Pancras | 6557 | 491 | 2108 | 4 | 2 | 6 | 5 | 13 |
| Marylebone... .. | 5266 | 501 | 2050 | 10 | 0 | 7 | 9 | 10½ |
| Halifax | — | 131 | 249 | 1 | 11 | 2 | 11 | 13 |
| Sheffield | 2493 | 251 | 378 | 15 | 0 | 3 | 0 | 10 |
| Chorlton... .. | 5748 | 424 | 500 | 3 | 9 | 1 | 8 | 12 |
| Leeds | 4219 | 224 | 202 | 7 | 4 | 0 | 11½ | 18 |
| Manchester Hospital ... | 8194 | 750 | 485 | 0 | 0 | 1 | 2 | 11 |
| " Crumpsall } " Workhouse } | 6093 | 160 | 273 | 0 | 0 | 0 | 11 | 38 |
| Birmingham..... | 8912 | 446 | 376 | 5 | 0 | 0 | 10 | 20 |
| Aston | — | 60 | 102 | 1 | 2 | 1 | 9 | 17 |
| Preston | 3358 | 153 | 116 | 3 | 7 | 0 | 8 | 21½ |
| Edinburgh | 4448 | 151 | 104 | 8 | 7 | 0 | 5 | 30 |
| Dublin | 6526 | 488 | 751 | 8 | 9 | 2 | 4 | 13 |
| Cork | — | — | 594 | 9 | 11 | 1 | 4 | — |
| Newry | — | 102 | Nil. | | | Nil. | | 30 |
| Armagh | 2012 | 98 | Nil. | | | Nil. | | 20½ |
| Lurgan (1871) | 2868 | 111 | Nil. | | | Nil. | | 26 |
| Glasgow (Govan)..... | 1954 | 180 | 75 | 9 | 7 | 0 | 9 | 11 |
| West Derby (1871)..... | 6581 | 693 | 2388 | 4 | 9 | 7 | 3 | 9 |

A SUPERANNUATION of £80 a year was last week granted by the West Derby Guardians to Dr. Reid, who has been medical officer of the Bootle district for thirty-two years.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A SPECIAL meeting of the Council and Members of the Poor-law Medical Officers' Association will be held at the Medical Club, on Tuesday, November 7th, 1871, at 7 P.M. precisely, when Mr. Corrance, M.P. for East Suffolk, will submit for consideration the Bill which he intends to bring forward next session, "For the better regulation of medical poor relief, and for establishing dispensaries in England and Wales", and on which occasion the sense of the meeting will be taken as to the advisability of incorporating therewith certain sanitary clauses, which have been referred by the Social Science Association to the Joint Committee of that and the British Medical Association. The questions which will be raised do not affect the Poor-law medical officers only, but will be found interesting to medical officers of health and to all social and sanitary reformers.

MEDICAL NEWS.

PROVINCIAL MEDICAL SCHOOLS.

THE annual return of the number of gentlemen pursuing their anatomical studies at the eight recognised provincial medical schools has just been made to Dr. Ogle, the recently appointed Government Inspector of these institutions, from which it appears that there are this session 368 medical students, being an increase of eleven over the number of last year, although only two schools show an increase; viz., those of Manchester and Bristol.

| | 1871. | 1870. |
|--|-------|-------|
| Manchester Royal School of Medicine and Surgery | 111 | 98 |
| Birmingham Royal School of Medicine and Surgery | 60 | 76 |
| Liverpool Infirmary and School of Medicine and Anatomy | 54 | 58 |
| Leeds School of Medicine | 45 | 46 |
| Bristol Old Park Medical School | 36 | 30 |
| Cambridge University School..... | 27 | — |
| Newcastle-upon-Tyne College of Medicine | 25 | 35 |
| Sheffield Medical Institution | 10 | 14 |

Total 368 357

Since the last report of the number of metropolitan students pursuing their studies this session, a few more have been allowed to register, making a total of 1,491 against 1,317 last year, or an increase of 174, the number of new entries or freshmen being 472.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At the ordinary quarterly meeting of the College, on Thursday, October 26th, the following gentlemen, having passed the required examinations, were admitted members.

Cook, John, M.D. Edin., Upper Wimpole Street
Glynn, Thomas R., M.B. Lond., Rodney Street, Liverpool
Payne, Edwin, M.D. St. And., Walton House, Selhurst Road, South Norwood
Squire, William, Orchard Street, Portman Square

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 26th, 1871.

Burgess, Edward Arthur, Bethnal Green Road
Cane, Leonard, Queen Square, W.C.
Gatsell, Thomas, East Street, Walworth
Harries, Thomas Davies, Llanest, Fishguard
March, Frederick Kimbell, Braunston, near Rugby
Meredith, William Henry, Netherton, Worcestershire
Rees, Albert Barnes, Swansea
Watson, John Wilcocks, Heigham Hall, Norfolk

The following gentleman also on the same day passed his first professional examination.

Godding, Charles Cane, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—Surgeon.
ASHTON-UNDER-LYNE UNION—Medical Officer for District No. 10.

AXMINSTER UNION, Devon—Medical Officers for the Colyton and Shute Districts.
BRAMLEY UNION, Yorkshire—Medical Officer for the New Wortley District.
CARDIGAN UNION—Medical Officer for District No. 3.
COUNTY OF WICKLOW INFIRMARY—Apothecary: £27:13:10 per annum.
CUMBERLAND INFIRMARY, Carlisle—Assistant to the House-Surgeon.
DEAF and DUMB INSTITUTE, Brighton—Surgeon.
DERBY PROVIDENT DISPENSARY—Two Medical Officers.
DERBYSHIRE LUNATIC ASYLUM, Mickleover—Resident Medical Superintendent.
EAST PRESTON UNION, Sussex—Public Vaccinator for District No. 3.
EXETER LYING-IN CHARITY—Surgeon.
HAMPSTEAD SMALL-POX HOSPITAL—Assistant Medical Officer and Dispenser.
HONITON UNION, Devon—Medical Officer for District No. 8.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Resident Clinical Assistant.
HOSPITAL FOR WOMEN, Soho Square—Assistant Physician; Clinical Assistant.
KILRUSH UNION, co. Clare—Medical Officer for the Kilkee Dispensary District: £100 per annum.
LEEDS GENERAL INFIRMARY—Assistant Resident Medical Officer.
LINCOLNSHIRE—Medical Officer for the County Gaol for the parts of Lindsey: £120 per annum.
LIVERPOOL INFIRMARY FOR CHILDREN—House-Surgeon: £80 per ann.
LONDON FEVER HOSPITAL—Physician.
LOUDOUN, Ayrshire—Medical Officers for the Newmilns and Darvel Districts: £30 per annum each.
METROPOLITAN DISPENSARY, Fore Street—Surgeon.
MIDDLESEX HOSPITAL MEDICAL COLLEGE—Lecturer on Materia Medica.
NORTH DEVON INFIRMARY, Barnstaple—House-Surgeon: £100 per annum, board, lodging, etc.
NORTH UIST, Inverness-shire—Parochial Medical Officer: at least £200 per ann.
OLD KILPATRICK, Dumbartonshire—Medical Officer for the Western District: £25 per annum; and Sanitary Medical Officer: £5 per annum.
PADDINGTON, Parish of—Medical Officer and Public Vaccinator for the Eastern District: £120 per annum, and Vaccination and extra fees.
PEWSEY UNION, Wilts—Medical Officer for the Pewsey District and the Workhouse.
POPLAR HOSPITAL, East India Road—Resident Medical Officer: £80 per annum, rising £10 per annum.
ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Surgeon.
ROYAL SURREY COUNTY HOSPITAL, Guildford—House-Surgeon: £75 per annum, board, residence, and washing.
SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, washing, and board.
SMETHWICK, Staffordshire—Medical Officer of Health: £25 per annum.
SUSSEX COUNTY HOSPITAL, Brighton—Surgeon; Assistant-Surgeon.
TEIGNMOUTH, DAWLISH, and NEWTON DISPENSARY and INFIRMARY—House-Surgeon: £50 per annum, and board and lodging.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CAMPBELL, W. Macfie, M.B., appointed Senior House-Surgeon to the Liverpool Northern Hospital, *vice* T. D. Chalmers, M.B., resigned.
CARTER, Sidney Herbert, M.B., appointed Assistant Medical Superintendent to the Bristol Lunatic Asylum, *vice* J. W. Day, Esq., deceased.
JACKSON, Charles, L.K.Q.C.P.Irel., appointed Medical Officer, etc., for the Ballyhaise Dispensary District of the Cavan Union, *vice* Wm. Atkin, L.K.Q.C.P.Irel., resigned.
MACMASTER, Andrew, L.R.C.P.Edin., appointed Medical Officer, etc., for the Eastern Division of the Omagh Dispensary District of the Omagh Union, co. Tyrone, *vice* Arthur C. Walker, L.F.P.S.Glasg., resigned.
***MARRIOTT**, C. W., Esq., appointed Surgeon to the Warneford, Leamington, and South Warwickshire Hospital, *vice* J. E. Male, Esq., deceased.
O'BRIEN, Daniel, elected Medical Officer for the Ennis Union Workhouse.
RUTHERFORD, David J., M.D.Edin., appointed Parochial Medical Officer for Unst, Shetland, *vice* Henry L. Saxby, M.D., resigned.
THORPE, G. E. K., Esq., appointed House-Surgeon to the Public Hospital and Dispensary, Sheffield, *vice* Algernon Taylor, Esq., resigned.
VASEY, C. Lyon, Esq., appointed Junior House-Surgeon to the Liverpool Northern Hospital, *vice* W. Macfie Campbell, Esq., promoted.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

BOWEN, David, Esq., Surgeon, at Newport, Pembrokehire, on October 22nd.
***EVANSON**, R. T., M.D., at Torquay, on October 26th.
KEMPE, Arthur, Esq., at Exeter, on October 28th.
MOORE, William, M.D., at Dublin, on October 28th.
***PARKER**, Langston, Esq., Surgeon, at Birmingham, on October 27th.
REED, Thomas, Esq., Surgeon, at Slieveroe, co. Monaghan, aged 63, on Oct. 16th.

DR. MORELL MACKENZIE has been elected Corresponding Member of the Royal Buda-Pesth Society of Physicians. Dr. Prosser James has been elected Corresponding Member of the Academy of Medicine of Lyons. Dr. James has spent a large part of his time in the South of France.

THE GRESHAM LECTURES for the Michaelmas term will be delivered by Dr. Symes Thompson, on November 10th, 11th, and 13th. The subjects will be: the Digestive Organs in Health; the Disorders of Digestion; and Cholera. The lectures will commence each evening at seven o'clock.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Lichtenberg, "Rhinoplastic Operation—Two Cases, with patients"; Mr. Thomas Bond, "Urethral Rheumatism."
TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited:—Dr. Moxon, Circumscribed Pleurisy and Pneumonia in a Syphilitic Man; Dr. Moxon, Destruction of Trachea by Syphilis; Dr. Pye Smith, Cystic Disease of the Kidney; Dr. Dickinson, Intracranial Aneurism productive of Sudden Death.
WEDNESDAY.—Hunterian Society, 7.30 P.M.: Council Meeting. 8 P.M.: Mr. Bryant, "On Insuperable Constipation and its Treatment."
FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. John Murray, "On a Case of Paracentesis Thoracis"; Dr. Anstie, "The continuation of a Case previously reported"; Mr. Christopher Heath, "A Case of Wound of the Intestine during Ovariectomy, with Recovery"; Dr. Ogle, "Notes on the Temperature in Tetanus."

EXPECTED OPERATIONS AT THE HOSPITALS.

WEST LONDON HOSPITAL, Thursday, November 9th, 3 P.M. External Urethrotomy, by Mr. Teevan.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

ERRATA.—In Dr. Hitchman's paper on Paralysis of the Insane, at page 495, column 1, line 14, for "impossible", read "possible"; and on column 2, line 22, for "ears", read "arms". The proof was forwarded to Dr. Hitchman; but the envelope containing it was by accident wrongly addressed. We regret that he was thereby deprived of the opportunity of revising his valuable paper.

CONSULTATION FEES.

SIR.—I should feel grateful if some members of our Association would inform me what is the usual fee charged by the ordinary medical attendant when he meets another practitioner in consultation. The Shropshire Branch of our Association, in their tariff of medical fees, say "not less than double the usual fee"; but, surely, is not this very inadequate recompense for a consultation extending over an hour and a half? Some practitioners, I know, charge the consultant's usual fee of a guinea. Is this usual?
I am, etc.,
October 24th, 1871. CANTAB.

DR. A. A.—Duly received.

SIR.—Where can I obtain, and what is the price of, the Thimble mentioned by Mr. Lawson Tait at the general meeting of the Birmingham and Midland Counties Branch?
I am, etc.,
Gunnislake, Tavistock, October 30th, 1871. JOHN SLEMAN.

As an L.R.C.P. London, will it be proper for me to put on my door-plate Dr. —? If not, would Mr. —, Physician, be right?

* * Mr. —, Physician, is, in such a case, technically right.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

ERRATUM.—In Dr. W. V. Lush's article on "The Duration of Vaccine Prophylaxis", published last week in the *BRITISH MEDICAL JOURNAL*, the age of the child (Case II) should be four years and nine months, not five years and nine months, as there stated.

CHLORAL IN PREGNANCY.

SIR,—In reply to a letter in your last edition, from "An Associate", on the action of chloral on the foetus *in utero*, I think he errs in supposing that the death of the foetus was caused by the chloral. He does not really state this; but I conclude it is his opinion from the tone of his letter. I find in my case-book that within this month I have given large doses of chloral to three parturient females, who have been happily delivered of living children. I constantly use chloral in such cases, without any apparent result to the children. Dr. Du Hamel, in the *American Journal of Medical Science*, October 1870, brings forward several cases of its use in child-bearing, and I am not able to find any opposing records. Leamington, Oct. 1871. I am, etc., JAMES THOMPSON, M.D.

THE DYTE APPEAL FUND.

SIR,—In addition to the £42 already announced as received for the Dyte v. St. Pancras Guardians Appeal Fund, I have to acknowledge, with best thanks, the following subscriptions. In doing so, however, allow me to add that, unless further aid be speedily forthcoming, Dr. Dyte will probably lose some hundreds in the prosecution of his just claims, admitted as such by the Guardians themselves.

| | | | | | |
|----------------------------|---|---|----|----|---|
| Andrew, Dr. James | - | - | £1 | 1 | 0 |
| Beale, Dr. Lionel | - | - | 1 | 1 | 0 |
| Byles, J. C., Esq. | - | - | 0 | 10 | 6 |
| B. C., M.D. | - | - | 1 | 1 | 0 |
| Brodhurst, B. E., Esq. | - | - | 2 | 2 | 0 |
| C. C. R., Esq. | - | - | 0 | 5 | 0 |
| Clinton, Colonel | - | - | 1 | 0 | 0 |
| Corfe, Dr. George | - | - | 1 | 1 | 0 |
| Codd, G. G., Esq. | - | - | 0 | 10 | 0 |
| Couper, John, Esq. | - | - | 1 | 1 | 0 |
| Gill, J. B., Esq. | - | - | 1 | 1 | 0 |
| Godfrey, Dr. | - | - | 1 | 1 | 0 |
| Guy, Dr. W. A. | - | - | 1 | 1 | 0 |
| Harley, Thomas, Esq. | - | - | 1 | 1 | 0 |
| H. B., Esq., M.D. | - | - | 0 | 10 | 6 |
| Lidderdale, John, Esq. | - | - | 1 | 1 | 0 |
| Mackenzie, G. W., Esq. | - | - | 1 | 1 | 0 |
| Ramskill, Dr. J. S. | - | - | 2 | 2 | 0 |
| Rayner, Messrs. (Uxbridge) | - | - | 1 | 1 | 0 |
| Sequeira, H. L., Esq. | - | - | 0 | 10 | 0 |
| — J. S., Esq. | - | - | 0 | 10 | 6 |
| Tay, Waren, Esq. | - | - | 0 | 10 | 6 |
| Wertheimer, Messrs. | - | - | 0 | 10 | 6 |

I am, etc.,

W. BATHURST WOODMAN.

6, Christopher Street, Finsbury Square, E.C., Oct. 31, 1871.

REGISTRATION OF DEATH.

DR. FELCE presents his compliments to the Editor, and begs to enclose for insertion in the *BRITISH MEDICAL JOURNAL* a letter on a most important matter which he has addressed to the Registrar-General, together with a copy of the reply thereto.

"Sir,—I beg most respectfully to call your attention to a grave defect which exists, at all events in this district, in the system of registering deaths; certain deaths being registered as 'certified', whereas the persons who certify are not legally qualified medical practitioners. The persons alluded to (three in number) profess to have received degrees from an American University recently, and, indeed, may have done so; but they have certainly not left this country for the purpose, neither do they possess any degree or diploma entitling them to have their names placed upon the *Medical Register*. I am told by the Registrar for the subdistrict of St. Mary, Paddington, that he has 'no instructions to distinguish between men legally qualified and otherwise'; that he depends on his 'local knowledge of men in receiving their certificates'; and that lately, upon a neighbouring druggist coming and telling him he had taken his degree, and was now qualified to practise, he immediately complied with his request, and supplied him with a book of forms of certificates of cause of death; and that he has since received certificates from him, and registered the same. (This is one of the men I refer to, and he possesses no legal qualification.)

"Upon my asking the Registrar if he never consulted the *Medical Register* to ascertain if a person certifying was a registered medical practitioner, I was astonished to find that he did not possess a copy of the book; and that although he had held the office for nearly six years, he had never been supplied with, or instructed to obtain a copy of, the work in question. The practice of registering deaths as *certified* upon the certificates of such persons as those I have indicated is surely fraught with great danger to the public, and is not likely to increase the accuracy of the *Register*; circumstances which will, I trust, lead to the adoption of some remedy for the evil of which I complain, the more especially as the members of the medical profession have at all times given their willing and gratuitous aid to the perfecting of this part of the work of the department over which you preside. I have the honour to be, sir, your most obedient servant,

"STAMFORD FELCE, M.R.C.P.E., etc.
"12, Chippenham Road, W., October 26th, 1871."

"General Register Office, Somerset House, October 30th, 1871.

"Sir,—I have to thank you for calling my attention to the fact that Mr. Aveling accepts causes of death written by unqualified practitioners, treating them as genuine, and writing under them on the register books 'certified.' I have this day written to him on the subject. Her Majesty's Government have gratuitously distributed amongst medical practitioners and registrars the latest nomenclature of diseases in several languages; but they do not authorise the expense of annually providing registrars with the *Medical Register*; consequently they have a difficulty in informing practitioners falsely claiming to be qualified, that what they say is untrue.

"Causes of death written by some unqualified practitioners may be held to be more accurate than some of the strange statements as to the fatal disease made by informants where legally qualified medical practitioners have not been in attendance. I have the honour to be, sir, your faithful servant,

"GEORGE GRAHAM, Registrar-General.

"S. Felce, Esq., 12, Chippenham Road."

MEDICAL ETIQUETTE.

SIR,—As my attention has only been this day drawn to Mr. C. Royston's letter, regarding my alleged want of professional etiquette towards him, in your last week's impression, I must beg that your readers will suspend their verdict until they hear both sides. In great haste, I am, etc.,
Nov. 2, 1871. DELAMARK FREEMAN.

PUNCTURE OF THE INTESTINE IN TYMPANITES.

SIR,—If Mr. J. Hancocke Wathen will take the trouble to turn up the literature of the subject, he will find that puncture of the intestine for the relief of flatulence, even amongst human patients, is no novelty. I have known of it for many years; and I find in my note-book an elaborate history of a case where I made several punctures into the intestines each day for six consecutive days, always with great relief, and the dates are from the 18th to the 24th of March, 1868. This case I published soon afterwards, but cannot at present find a reference to it. Thus, if there is any credit in priority at all, it belongs to me rather than either to Dr. Davey or my friend Mr. Teale. I am, etc., LAWSON TAIT.
7, Waterloo Street, Birmingham, November 1871.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The *Liverpool Albion*, Oct. 30th; The *Eastern Morning News* and *Hull Advertiser*, Oct. 28th; The *Newcastle Daily Chronicle*, Oct. 28th; The *American Register*, Paris, Oct. 21st; The *Dudley Herald* and *Wednesbury Borough News*, Oct. 28th; The *Newcastle Daily Journal*, Oct. 28th; The *Bristol Daily Post*, Oct. 24th; The *Argyllshire Herald*, Oct. 28th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Sir William Jenner, Balmoral; Dr. Priestley, London; Mr. Husband, York; Dr. T. E. Beatty, Dublin; Dr. Smart, Penge; Dr. Dalby, London; Dr. Patrick Jamieson, Peterhead; Dr. A. Wahltsch, Manchester; Dr. Hitchman, Mickleover; Mr. J. S. Ferris, Uxbridge; Miss Thomas, Newport, Pembrokeshire; Mr. T. H. Bartleet, Birmingham; Dr. Sheen, Cardiff; Dr. Shapter, Exeter; Dr. R. Hibbert Taylor, Liverpool; Dr. G. Buchanan, Glasgow; Dr. Shettle, Reading; The Secretary of the Royal Medical and Chirurgical Society; Mr. A. B. George, Whitchurch; Mr. J. E. Wood, Rochdale; Dr. Elliot, Carlisle; Mr. J. E. Cornish, Manchester; Mr. R. Scarlett, Thornbury; Messrs. Cowan and Sons, Barnes; A Member; Mr. T. Taylor, Birmingham; Dr. Julius Althaus, London; Dr. Alfred Meadows, London; Dr. Jukes Styrap, Shrewsbury; M.D.; The Secretary of the Clinical Society; Dr. George Johnson, London; The Secretary of the Hunterian Society; Mr. Christopher Heath, London; Mr. C. H. Roper, Exeter; An Associate, Exeter; Mr. B. Wilson, Manchester; Dr. Wolfe, Glasgow; Mr. Carter, Richmond, Yorkshire; Dr. Trollope, St. Leonard's-on-Sea; Mr. J. Sleman, Gunislake; Mr. C. W. Marriott, Leamington; Mr. Henry Taylor, Ixworth; The Medical Officer of Health, Liverpool; Mr. W. Cockin, Kincardine; Dr. Marcet, Nice; Mr. W. Adams, London; Mr. J. B. Curgenvin, London; Mr. Lawson Tait, Birmingham; Dr. Graily Hewitt, London; Mr. Wordsworth, London; The Secretary of the Pathological Society; Dr. Morell Mackenzie, London; Mr. Fairlie Clarke, London; Mr. St. George Mivart, London; Dr. Felce, London; Dr. Nicol, Bradford; Mr. Gant, London; Dr. Lush, Weymouth; Dr. Gooding, Greenwich; Dr. Algernon Norton, London; Mr. R. Eardley Wilmot, London; Dr. Woodman, London; Dr. Macfie Campbell, Liverpool; Dr. Maunsell, Dublin; Dr. Lombe Atthill, Dublin; Dr. James Thompson, Leamington; M.R.C.S.; Mr. Benson Baker, London; Dr. Percy Boulton, London; Mr. Soutter, London; Miss Jex Blake, Edinburgh; Mr. Osman Vincent, London; Mr. Richard Davy, London; Dr. Edis, London; Mr. McBride, Cirencester; Dr. Littleton, Plymouth; Mr. T. Watkin Williams, Birmingham; Dr. Lord, Crewe; Dr. Philipson, Newcastle-upon-Tyne; Dr. J. Crichton Browne, Wakefield; Mr. Waterhouse, Pontypidd; Mr. Fowler, Bath; Dr. Wiltshire, London; Mr. Dolman, Derby; etc.

BOOKS, ETC., RECEIVED.

Digitalis: its Mode of Action and its Uses. An Inquiry illustrating the Effect of Remedial Agents over Diseased Conditions of the Heart. The Hastings Prize Essay of the British Medical Association for 1870. By J. Milner Fothergill, M.D. London: 1871.
On some Points of Interest in the Medical History of the Himalayas. By William Curran, L.R.C.P. Dublin: 1871.
A Review of Darwin's Theory of the Origin and Development of Man. By James B. Hunter, M.D. New York: 1871.
Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1870. By the Medical Registrar, W. Ainslie Hollis, M.D., and the Surgical Registrar, J. Astley Bloxam, F.R.C.S. London: 1871.
Cases of Diarrhoea and Cholera treated successfully through the Agency of the Nervous System, chiefly by means of the Spinal Ice-Bag. By John Chapman, M.D., M.R.C.P., M.R.C.S. London: 1871.
Introductory Address delivered at the Liverpool Royal Infirmary School of Medicine, October 3rd, 1871. By William Carter, M.B., B.Sc. Liverpool: 1871.
Transactions of the Odontological Society of Great Britain. Vol. iii. No. 7. New Series. London: 1871.
The Fifteenth Report of the Commissioners of Her Majesty's Customs on "The Customs". London: 1871.
The Sixth Annual Report on the Sanitary Condition of Merthyr Tydfil. Prepared for the Local Board of Health by their Medical Officer, Thomas Jones Dyke. Merthyr Tydfil: 1871.
The Liverpool Medical and Surgical Reports, October 1871. Edited by P. M. Braidwood, M.D., and Reginald Harrison, F.R.C.S. London and Liverpool: 1871.
Neuralgia, and the Diseases that resemble it. By Francis E. Anstie, M.D. (Lond.) London and New York: 1871.
A Manual of Anthropology or Science of Man: based on Modern Research. By Charles Bray. London: 1871.

CLINICAL LECTURE

ON A

CASE OF EXTREME CIRRHOSIS OF THE LIVER IN EARLY LIFE.

By W. B. CHEADLE, M.D., F.R.C.P.,

Senior Assistant-Physician to St. Mary's Hospital, and Assistant Physician to the Hospital for Sick Children.

Progressive Emaciation and Debility in a Boy, aged 18.—Absence of any Drain to account for it.—Slight Enlargement of Liver and Spleen.—Gradual Aggravation of all Symptoms.—Ascites.—Wild Delirium.—Partial Paralysis.—Death by Coma.—Post Mortem Examination.—Remarks.

FREDERICK B., whom you will remember as an out-patient under my care, and subsequently in the Albert Ward, first came to me five months ago, complaining of gradual wasting and increasing debility, accompanied by a constant dull aching pain across the loins. He was a tall, ill-made lad, eighteen years of age, so emaciated that each rib stood out distinctly; the bony framework of the thorax seemed encased in skin alone. What struck one most, next to the loss of flesh, was the strange, dull look and manner of the boy. It was not the effect of mere languor and weakness; his intellectual faculties worked with difficulty. He answered questions intelligently, but very slowly, after an interval, as if it took him some time to comprehend what was said to him. Partly from himself, but chiefly from his mother who accompanied him, I learnt that he had suffered from large abscesses in the back five years previously; and that a year ago his feet had swelled a little, the swelling, however, quickly disappearing on his going away into the country. His principal complaint was of pain in the loins, which had troubled him constantly for the last two years. This had become worse latterly, and he had wasted rapidly. A careful examination of the chest disclosed no morbid signs of any kind. The abdomen was found considerably distended by flatus; no fluid could be detected there. There was slightly increased dulness over the region of the liver, and still more over the spleen, but no distinct tumour could be made out. The distension of the abdomen, however, prevented satisfactory examination in this respect. There was no tenderness anywhere. The urine was examined and found free from albumen, of normal specific gravity, and lithatic; under the microscope, it showed no casts or abnormal deposits of any kind. The boy was affirmed by his mother to be exceedingly industrious and steady, and the mainstay of the family. He had had no cough or expectoration, or diarrhoea, or acute disease—in a word, there had been no drain on the economy which could account for the extreme wasting. The tongue was clean, the pulse quiet, the skin cool, and the appetite moderately good. It was clear, at any rate, that the emaciation was due to defective supply, not to excessive consumption. The fault was that the tissues were not built up, not that they were too rapidly destroyed. The only deviation from the normal condition which could be detected in any organ was the slight enlargement of the liver and spleen; and the inference was that the interruption to nutrition was due to some fault there. The history of lumbar abscesses and prolonged suppuration pointed to amyloid infiltration as the most probable morbid condition, and the slow progress of the disease, the malnutrition without loss of appetite or marked cachectic look, and the tympanitis, all tended to give support to this conclusion; while, on the other hand, cirrhosis and malignant disease seemed almost excluded by the age of the patient, and the general symptoms and history of the case.

The treatment adopted was the administration of cod-liver oil, and iodide of potassium with steel. In spite of medicine and nourishing diet, however, the patient gradually became more emaciated, and at the end of three months' time, he staggered in his walk, and was more vacant and dull. The belly had become more distended, the superficial veins very conspicuous, and fluctuation was distinctly perceptible in the flanks. The spleen was now greatly enlarged, but no increase of dulness or hardness could be detected in the hepatic region. The urine had been constantly examined, but was always found of normal specific gravity, free from albumen or sugar. No casts or abnormal bodies of

any kind could be seen under the microscope. At this stage, being quite unfit to attend longer as an out-patient, the boy was admitted into the hospital under the care of Dr. Sieveking. A few days after his admission, he twice passed a considerable quantity of blood with the urine, but this did not recur, and the urine remained clear, showing under the microscope only a few blood-cells and crystals of oxalate of lime. Three weeks later, he lay helplessly in bed, constantly moaning, and frequently moving the left arm and the head with a succession of spasmodic jerks. He occasionally answered questions correctly, but very slowly, and usually merely replied "yes, sir," "yes, sir," "yes, sir," which he would go on repeating again and again many times. He complained, however, of pain in the left hypochondrium, where was the large splenic tumour, and of excessive thirst. Then he went on, "Mayn't I get up, sir?" "Mayn't I get up, sir?" over and over again, quite regardless of the reply. The tongue had become dry and very red, and coated with brown fur in the centre, the pulse faster (118), and he passed his fæces under him, but his appetite still remained good, and he took food freely. The signs of obstruction to the portal circulation now became more marked, the abdomen being tightly distended with fluid, the superficial veins swollen and tortuous, and the lower extremities highly oedematous. The skeleton framework of the thorax and upper extremities, reduced to the last stage of emaciation, showed in strange contrast to the huge swollen body and legs. There was no trace of jaundice at any time. A thick crop of acne appeared on the face and remained throughout.

During the next three weeks all the symptoms became intensified. The patient no longer answered questions, but seemed dimly to comprehend them, and pointed to the right side of his head as if he had pain there. He was constantly muttering, moaning, and calling out, and jerking his head and left arm; his tongue became perfectly dry and brown; sordes accumulated on the lips and teeth. At length he became so wildly delirious that his shrieks and groans disturbed patients even in the next ward, and he was removed into a separate room in a secluded part of the hospital. A few days later, he was lying on his back, unconscious, moaning faintly, the right side paralysed, and the left arm and leg moving with slight spasmodic jerks. The pupils were widely dilated, and insensible to light. This condition deepened until he died comatose a day or two afterwards.

At the *post mortem* examination, the liver was found in a state of the most extreme cirrhosis, contracted, small, and its surface studded over with projections from the size of a No. 4 shot to a marble. The prominent tubercles were soft, consisting of the proper liver-substance more or less altered, the shrunken part between being whitish, semi-translucent, and almost cartilaginous in appearance. On section, the cut surface exhibited a curious spotted look, small islands of yellowish-coloured liver-substance implanted in a mass of whitish glistening tissue, which formed the great bulk of the organ. When examined first under the microscope, the liver-cells were seen to be fatty, and loaded with bile-pigment. A thin section, hardened in chromic acid, showed a very advanced condition of cirrhosis; the fibrous tissue was seen passing in broad massive bands between the compressed lobules, or groups of lobules, while from these larger bands branched smaller ones, spreading into the lobules, and forming areolæ of various sizes. Some of those enclosed by the broadest bands contained numerous cells; others in the finer portion of the network one or two only; and others, again, the mere granular *débris* of cells. The spleen was enormously enlarged, congested, and hard, but free from any morbid deposit. The kidneys were congested, and the capsules rather adherent, but otherwise healthy. There was an unusual quantity of dark pigment over the surface of the parietal peritoneum about the pubic region. The pancreas was dark-coloured, and unusually hard. The bladder was greatly congested near the urethral orifice, probably marking the site of the former hæmorrhage. The abdominal cavity was full of reddish serum free from lymph or pus. The base of the right lung was in a state of red hepatisation, and the left congested. There was no tubercle anywhere. A few minute ecchymoses were observed under the arachnoid, which was slightly opaque. But there was no other lesion of the brain, and no trace of amyloid changes in any organ.

REMARKS.—The interest of this case lies chiefly in the obscurity in which it was involved during life, and in the fact that so extreme a degree of cirrhosis was developed at such an early age; but there are several points in addition which illustrate with unusual clearness the pathology of interstitial hepatitis, and especially as to the mode in which death is produced. The mystery which enveloped the exciting cause was eventually cleared up. The mother confessed that her son took regularly a considerable quantity of drink when in work, and especially gin. It appeared, from her statement, that the labourers in the brick-fields share the popular delusion, and believe that a large quantity of stimulant is necessary to enable them to encounter the fatigue and damp

incident to heavy work amongst the wet clay. Accordingly, it has become the recognised custom for each man to put aside a certain proportion of his wages every week for the purchase of this necessary; gin being the favourite liquor, taken, as a rule, without any dilution. Hence, after all, the case turned out to be one of genuine alcoholic cirrhosis—true gin-drinker's liver; and when these circumstances are known, there is nothing extraordinary in the fact itself that a youth of eighteen should have extreme cirrhosis. The reason why it is so rare in early life is no doubt because spirit-drinking is a vice which is naturally also rare in youth. If the cause were in operation, the effect would be as readily produced upon the liver of a child as upon that of an adult. The case affords further proof that it is not so much the *quantity* of alcohol imbibed which determines cirrhosis, as its *degree of concentration*. The experiments of Dr. Percy showed that alcohol poured into the stomach is instantly absorbed, and is found abundantly in the liver in the course of a few seconds; and Dr. Budd pointed out that cirrhosis is usually the result of drinking neat spirits on an empty stomach. We constantly meet with men who imbibe large quantities of wine and beer, and spirits freely diluted, who, although they suffer from other consequences of intemperance, never have cirrhosis. The truth is, I believe, that *dilute* alcohol, although a fruitful source of general fibroid degeneration and other morbid changes, dependent upon its constant presence and influence in the blood, does not cause genuine cirrhosis of the liver. Wine- and beer-drinkers escape the disease, because the solution of alcohol they take is never above a certain strength. It is stronger alcohol which excites active congestion around the portal vessels in the liver by direct contact, just as it excites congestion of the stomach; the dilution of it to a certain degree removes its irritant character. Now, Sir William Jenner has shewn that mechanical congestion of any organ produces induration of its substance as a regular and constant result; interstitial exudation of lymph takes place, which is converted into fibrous tissue. And I think this proposition might be extended to long-continued chronic congestion of any kind. We see this increase of fibrous tissue as a result of chronic congestion produced by an irritant, and not mechanically, in the case of gout, where the gouty poison causes fibroid degeneration of the kidney, and fibrous thickening round the joints and in the tendons and ligaments. And we may have similar results from the poison of alcohol acting on the liver, the kidneys, and even the lungs. Whether the congestion thus set up gives rise to fibroid growth by causing interstitial effusion of lymph, or whether the presence of vitiated blood in excess stimulates the connective tissue to increased proliferation, is yet uncertain. One point, however, seems to me clear, and that is, that in this case of hepatic cirrhosis, as in cirrhosis of other organs, there is an actual increase of the fibrous element. In the instance before us, the amount of connective tissue was far too great to allow the conclusion that it was merely the aggregate resulting from the compression of the normal fibrous network, by the destruction of the true liver-tissue between the interlobular sheaths which are thus massed together, as suggested by Dr. Lionel Beale. Fresh material must have been added to make up the massive bands pervading the whole structure.

Another feature of interest exhibited by this in common with most cases of cirrhosis was the complete absence of jaundice throughout.

The fact that nearly the whole of the secreting tissue of the liver may be destroyed, and yet no trace of bile appear in the blood, attested as it is by innumerable instances, affords conclusive proof that the colouring matter of the bile, at any rate, is elaborated in the liver, and that the office of that organ is to *make* it, not merely to eliminate it from the blood in which it pre-exists; otherwise the most intense jaundice would follow the destruction of its active tissue. Jaundice, then, must be a consequence of some error in the chain of physiological action later than the formation of bile in the liver. The bile must first be manufactured; it appears in the blood because it is not disposed of in the normal manner. This may be due to one of two causes; either the passage out by the biliary ducts into the duodenum may be prevented by mechanical obstruction and the bile therefore absorbed into the blood, or bile may be secreted in such excess that a portion of it is absorbed by the hepatic capillaries under the increased pressure. The former we see constantly in operation in the case of tumours pressing upon the ductus choledochus, or in occlusion of the ducts by calculi. The latter is probably the mode by which jaundice is produced by fright and anxiety. A third cause may come into action in some cases, viz., diminished metamorphosis, or consumption of bile-acids normally absorbed into the blood, either in the liver or in the intestine, and transformed into pigment to be cast out as colouring matter of the urine. This view is forcibly advocated by Frerichs, but can hardly be accepted as established; and there is one circumstance which is sometimes observed in certain diseases of the liver which shews that it is not the sole cause in ordinary cases, viz., that, although nearly the whole

liver-tissue may be destroyed by cirrhosis or malignant disease, and therefore a very small quantity only of bile be formed, yet, if any obstruction to the outflow arise by reason of increased pressure on the ducts from increase of morbid growth, jaundice at once follows. Now, why should jaundice follow the introduction of such a small quantity of bile-acid into the blood in these cases, when it does not follow the introduction of a larger quantity there in the normal condition? We know no reason why full transformation should not take place as well in one case as in the other. But to return to the example before us. A little bile was secreted, as shown by the yellow staining of the lobules, and the small quantity formed passed out by the ducts, which generally remain sufficiently pervious. If, however, as sometimes occurs in very advanced conditions of the disease, the ducts be compressed by the new connective tissue at their origin at the circumference of the lobules, slight jaundice ensues, provided the quantity of bile formed be sufficient to give a perceptible tinge to the tissues and secretions.

The curious condition of the parietal peritoneum has not, as far as I am aware, been recorded before in the case of cirrhosis. Deposit of pigment, in large quantity, in the liver, spleen, brain, kidneys, and other organs, is met with after death from intermittent fevers. It appears still further to be specially associated with congestion of the spleen. In the present instance, the deposit occurred in connection with the same condition of the spleen. The relation between the two is still obscure—but the fact of the coincidence is worthy of note.

The gradual loss of flesh, progressing to the most extreme emaciation, reached at the time of death, is more easily explicable by physiological laws. *The patient, in fact, died of starvation.* Even in temporary arrest of the function of the liver, as in simple jaundice, there is rapid loss of flesh, and often an intense craving after food. And where there is permanent and extensive destruction of liver-tissue, emaciation is always extreme. This seems to be due to several causes. First, there is the want of bile to mix with food in the intestine, and render certain portions of it fit for absorption and assimilation. Secondly, the nutriment which is absorbed and actually enters the portal veins, passes through the liver with great difficulty or not at all, owing to the obliteration of the lobular capillaries, and can only partially enter the general circulation by means of the few new direct channels developed between the portal and hepatic veins, and the normal pre-existing anastomoses between the portal system and the vena cava. But, perhaps, the most potent cause of all in producing wasting, is the arrest in the formation of glycogen. Whatever the special office performed by the animal sugar in the economy, whether it be burnt up in the lungs, evolve force in the muscles, or be consumed in other tissues, there can be no doubt whatever that the part it plays is one of the highest importance. The simple fact that the largest organ in the body is constantly engaged in preparing it, is a sufficient proof of this. Now, we know, in the case of diabetes, that if the sugar formed by the liver be of *imperfect quality*, and for this, or for some other reason, be not used up for its proper purpose, the fat of the body is rapidly absorbed to replace it as fuel, or to generate force in some form. And there can be little doubt that, in the same way, when the *quantity* of sugar is deficient, or when it is absent altogether, the fatty tissues are burnt up in the like manner. This result of the arrest of this function of the liver, and the important bearing which it must have upon the course of diseases such as cirrhosis, have not hitherto, I think, engaged sufficient attention. There were, then, three great causes for the emaciation; viz., the want of bile to digest certain food; the obstruction to transmission of nutriment from the portal vessels to the general circulation; and the non-production of glycogen, with the consequent absorption of fatty tissue to replace it. And we find, accordingly, that, in the present instance, the fat had entirely disappeared, just as it disappears in prolonged starvation.

I have shown how starvation practically did take place; and I wish to draw your attention to the identity of the symptoms with those observed in cases of starvation from want of food. The dullness of intellect, the indifference, the languor, the staggering gait which accompanied the gradual loss of flesh in the earliest stages, are exactly the symptoms met with in the early stages of privation from food. The delirium, the restless movements, the twitchings of the limbs, the hemiplegia, the paralysis of the sphincter, the brown dry tongue, the weak rapid pulse, and the death by coma at last, correspond with equal fidelity. Nothing was found in the brain after death to account for the cerebral symptoms. They were not due to cholæmia, since there was no bile in the blood, even if the experiments of Frerichs and the history of chronic jaundice did not throw extreme doubt upon the theory that it gives rise to evil effects on the nervous system. The delirium and paralysis, and convulsions, were due to deficient supply of nutriment to the brain and cord; the ultimate cause of death was starvation of the tissues.

ON MARASMUS AS AN OCCASIONAL CONSEQUENCE OF ENTERIC FEVER.*

By T. CLIFFORD ALBUTT, M.A., M.D.Cantab., F.L.S., etc.,
Physician to the Leeds General Infirmary; Lecturer on Practice of
Medicine, etc.

WE not uncommonly meet in practice with cases of general wasting which do not tend quickly to death, but which, on the other hand, are almost incurable. We can find no organic disease, but the patient loses flesh and turns sallow, until, when stripped, he seems almost a living skeleton. In this state, he may survive many years, unfit for exertion; eating food and getting no good from it; spending his substance upon physicians, and growing thereby no better, but rather the worse. Such cases of wasted, sallow, feeble frames, without any definite disease, must have occurred in the practice of many or most of us. It was not until several of these cases had presented themselves to me as riddles which had to be given up, that I ventured to guess at a solution which may be true, at any rate, for some of them.

It so happened that, in more than one instance, on writing the notes of the patient's previous history, the symptoms seemed to date from a precedent attack of enteric fever. Up to the onset of this illness, the patient had enjoyed good health; but, after it had passed by, he remained feeble, his convalescence was protracted, and, although perhaps he did regain flesh and strength in some considerable degree, yet in a few months more this new flesh fell again from his bones, and left him wan, wasted, and spiritless. Thus my attention was drawn to the question of the connection between such a marasmus and a precedent attack of enteric fever; and this question once raised, the answer to it does not seem far to seek. I am rather surprised, on turning over the leading treatises on enteric fever, to find that the chance of so severe an abdominal disease permanently affecting nutrition, has not presented itself to the writers; nor do I ever remember to have heard this disease suspected of doing more than temporary mischief. But when we look at the parts affected by this fever, when we remember how severely it falls upon a large part of the absorbent surface of the intestine, and upon the glands of the mesentery, it would seem likely, *à priori*, that in some instances absorption might be permanently interfered with.

I shall now proceed to read short notes of five cases of this kind which have occurred in my practice since my opinions on the subject were formed, and in which careful and particular inquiry was made from the present point of view.

CASE I.—Miss H. R., aged 25, had always enjoyed good health until she had a severe attack of enteric fever about two years ago. Latterly, she was believed to be phthisical, and had consulted many medical men from that point of view. She came to me on May 6th, 1870. She had lost flesh greatly, so that her bones stood out in almost startling relief; the eyes were sunken, and the complexion sallow. She had no night-sweats, and the temperature, at 11.30 A.M., was only 97.6 deg. Fahr. The tongue was clean, and the appetite was fair. Meat agreed best with her, and mutton chops in particular; fatty substances disordered her stomach, and made her "bilious." She was very liable to flatulence, though the abdomen was rather sunken than prominent, and she was much annoyed by loud rumblings in the bowels. She was unable to give much account of the appearance of the motions, but these and the catamenia were regular. This wasting in spite of the ingestion of fair quantities of food had been coming on for about a year, or probably for a longer time. Her convalescence from the fever, in fact, was delusive. Slowly she seemed to improve for about six months, then she remained at a standstill for a while, and, a few months later, the wasting steadily set in. I examined this patient most minutely; during the time she was under my observation, I saw her at home in bed, and left no organ without investigation. Every part, however, seemed quite normal, so far as I could tell. I tried various remedies, including pancreatised fats, but without success; and she left me for another adviser.

CASE II.—On July 8th, 1870, Samuel Jennings came under my care at the Infirmary for a like train of symptoms. He was twelve years of age, of good family history, and himself had excellent health until two years previously. He then suffered from typhoid fever severely; he seemed to make a fair recovery at the time, but had scarcely realised his recovery when he began to fail again in flesh and strength. On admission, he was extremely wasted and sallow. No organic disease could be made out anywhere; his temperature was slightly below the normal, his appetite was fair, and he had no night-sweats. The urine was normal, and the bowels regular. He remained under treatment by

pancreatised oil, ox-gall, and other remedies for a month, when we lost sight of him.

CASE III.—Mr. Lewis C., aged 18, consulted me on October 11th, 1870. In the previous March, he was convalescent from a severe attack of enteric fever, and went to the sea-side, where for a while he recovered strength. In June, however, he was evidently falling off again in both flesh and strength. He gradually became, as he was when I saw him, extremely wasted and sallow, although his appetite remained fair. Meat seemed to agree best with him. Like Case I, he complained much to me of loud rumblings in the belly. The motions were reported to be natural, though somewhat confined; except that he was liable to occasional attacks of diarrhoea. The temperature was natural, or a little under the mark; and he had no night-sweats or cough. The pupils were dilated; the pulse slow and weak. No organic disease was to be discovered in the lungs or in any other organ. Treatment here failed, as in the preceding cases, and I lost sight of the patient.

CASE IV.—Mrs. S., aged 50, had always enjoyed good health, and had passed easily through the change of life eight years before. Three years ago, she had a severe attack of enteric fever, and really never picked up her flesh and strength as before. Latterly, she had lost flesh greatly, and appetite, also, in some degree. Sometimes she loathed all food, but not generally. She ate mutton chops better than anything else. The urine and all the organs were normal; temperature also normal. She was sallow and much wasted. The bowels were rather confined. Mrs. S. is still under my care, but remains in much the same state.

CASE V I include with some hesitation, as the interval between the wasting and the attack of fever was a long one. Mr. Harry T. was brought to me by his father on December 17th, 1870, from a distance; he complained of wasting and loss of strength. His health was good until he had enteric fever, at the age of eleven. He is now eighteen. He apparently recovered from the fever, and remained well for three years. He then began to fall off; and, at the age of fifteen, his health had suffered very seriously, and he became wan and extremely wasted. Of late, his appetite had fallen off in some measure. After any error of diet, however slight, he suffered greatly from flatulence and rumbling in the bowels. He never had diarrhoea. His temperature, urine, and all organs were quite normal.

To these cases, I would add another. A lady, Mrs. L., has been long under my care for extreme marasmus, sallowness, and loss of strength. All her organs are healthy, and her temperature is normal. She has a fair appetite, but can only eat meat with comfort; any error from the plainest meat diet is visited upon her severely with so-called bilious symptoms, and occasional diarrhoea. The bowels are rather confined as a rule, and the motions large and pasty. All this wasting and debility date from a severe attack of diarrhoea, with blood and slime, which she calls dysentery. This attack occurred about ten years previously, when she was under homœopathic treatment. It was many weeks before she recovered; and she seems at that time to have found much benefit from fractional doses of corrosive sublimate. All her organs remain healthy up to the present date, so far as can be made out. Mrs. L.'s symptoms bear a strong resemblance to those observed in the preceding cases.

If we now look at these cases together, we find that they all agree in these points: (1) in wasting, which is not due apparently to febrile action or to organic disease, but—as it would seem—to defective nutrition; and (2) in the history of a previous illness, which fell with severity upon the intestinal canal. It appears, farther, that the innutrition consists rather in the lack of digestive power over fats. There is no tendency to absolute starvation; but, in the subcutaneous tissue, there is an utter absence of fat, and, so far as we can tell, all parts and organs have lost their adipose investment. Stomach or meat digestion, on the other hand, seems fair, and many starchy substances likewise seem to be fairly assimilated. In all cases, light puddings, corn-flour, arrow-root and the like, seem to have been digested, not only with impunity, but with advantage. In the cases where I could examine the stools, I found large pasty evacuations, but no separated fat—no diarrhoea adiposa; so that I assumed that the biliary and pancreatic secretions were duly poured into the intestine, and that they duly emulsified the fats. But the fats, nevertheless, if taken, turned rancid in the intestine, causing so-called biliousness, and, moreover, they failed to find their way into the circulation. It seemed, therefore, likely that the fault lay in the machinery of absorption. That surface of the tube which is devoted to this purpose, suffers greatly from the ulcerative process in enteric fever; and if this be partial in its distribution in the bowel, such cannot be the case at any rate with the associated system of mesenteric tubes and glands, all of which are involved in irritative action, and are likely, in extreme cases, to suffer permanent degeneration in their

* Read in the Medical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

texture. If we feed a rat on tallow, and then open the abdomen, we shall see that the whole of the mesenteric system is full of finely separated and emulsified oil-particles on their way into the blood; and this simple experiment will demonstrate to us the probable result of blocking up this system by cicatrization or destroying it by inflammation. The slow and often incomplete convalescences from enteric fever, and the liability of its victims to subsequent disease, such as phthisis, is well known. Tubercle in these patients may arise from absorption of cheesy matter from the mesenteric glands into the blood-current; but catarrhal phthisis, and other like sequelæ, may be due to the imperfect restoration of the fat-collecting machinery. It is to this cause of incomplete convalescence, of marasmus, or of chronic disease as common consequences of enteric fever, that I wish to-day to call the attention of clinical observers. Pathologically, I am not in a position to offer any evidence; but I shall be much indebted to any of my hearers who will secure for me the intestine and mesentery from any case of chronic disease which may seem to have had such an origin as I have ventured to indicate.

ON CATHETERISM OF THE EUSTACHIAN CANAL.

By R. HIBBERT TAYLOR, M.D.,

Consulting Surgeon to the Eye and Ear Infirmary, Liverpool; and formerly
Lecturer on Ophthalmic Medicine and Surgery in the Royal
Infirmary School of Medicine.

CATHETERISATION of the Eustachian canal is no new invention, but one which, like many others in medicine and the arts, was known and adopted in former times, fell into disuse, and has been again revived and practised in our own days.

Upwards of a century ago, a postmaster of Versailles, named Guyot, afflicted with deafness, and probably having some knowledge of anatomy, conceived the idea of treating it by the injection of fluids into the faucial orifice of the Eustachian canal. To effect this, he introduced a bent sound through the mouth, and by this means succeeded in at least washing the entrance of the canal, for it is not likely that he could do more by this method of proceeding, and so relieved his deafness. An account of this invention was submitted to the Academy of Sciences in Paris in the year 1724, but it does not appear to have led to any further result.

Twenty years later, an English surgeon named Cleland, who describes himself as "Surgeon to General Wade's Regiment of Horse", revived the practice, and gave it an important modification by introducing the catheter through the nasal passages instead of the mouth. The instrument which he employed, and which is figured in the *Philosophical Transactions* for 1741, p. 848, resembles a small catheter, and has this inconvenience, that it is pierced with lateral eyes at its distal extremity, which would give to any fluid injected through it a direction different from that of the Eustachian canal. Although Cleland describes this instrument and the mode of using it, and a syringe which is to be adapted to it, he does not state that he had used it himself with success. His statement regarding it is as follows. "If, upon trial, the Eustachian canal should be found to be obstructed, the passage is to be lubricated by throwing a little warm water into it by a syringe joined to a flexible silver tube, which is to be introduced through the nose into the oval opening of the duct, at the posterior opening of the nares, towards the arch of the palate. The pipes of the syringe are made small, and of silver, to admit of bending them as occasion offers, and for the most part resemble small catheters."

The surgeons of Montpellier, according to Itard, who wished, on the recommendation of Sauvages, to make use of Cleland's instruments, could not succeed in injecting the canal until they had made some modification in the catheter, probably by substituting a single opening at the extremity for the lateral eyes which Cleland describes. Antoine Petit, in the edition of Palfyn's *Anatomy* which he published in 1753, does not mention either the memoir or the operation of Cleland; and he criticises the instrument of Guyot as being incapable, as he employed it, of fulfilling the objects which he proposed.

In 1755, Mr. Jonathan Wathen, surgeon in Devonshire Square, London, published in the *Philosophical Transactions* a short memoir entitled "The Method proposed to restore the Hearing when injured from an Obstruction of the Tuba Eustachiana". In this communication, he remarks that Guyot's proposal to pass a catheter into the Eustachian canal by the mouth is impossible of execution, as any one may convince himself who takes the trouble to examine into the matter. "Convinced of this," he says, "M. Petit proposed, and that learned and skilled anatomist Mr. John Douglas demonstrated, the possibility of passing the probe, etc., through the nose into the Eustachian tube;

and this he has continually shown to those who have attended his public lectures; and to him I freely acknowledge myself indebted for the hint by which I was incited to make trial on the living subject of an operation of so much importance to mankind." Wathen made use of a silver pipe of about the size and length of a common probe, to which an ivory syringe was fitted when required. It is somewhat remarkable that Wathen in his paper makes no allusion to Cleland, whose memoir on the same subject was published in the same learned journal only fourteen years previously; but such oversights, whether by accident or intention, are not unknown even in our own times. Wathen appears to have had opportunities of confirming by his own observations those of Tulp, Valsalva, and Boerhaave, regarding deafness induced by enlargements of the tonsils. He had also noticed a form of deafness brought on by cold and congestion of the Eustachian canal; and further, in a *post mortem* examination of a man aged 35, who had been deaf during several years as a sequela of cold, and who died of variola, he could not discover any unhealthy condition of the ears, with the exception of obstructed Eustachian canals, induced by the presence of thickened mucus. Building upon these facts, he attempted to inject the Eustachian canals in cases of deafness generally; and of six persons upon whom the operation was practised, five are said to have received more or less benefit from the treatment. The details of one of the most remarkable are as follows. A. had been deaf for eighteen years, and had also an affection of the sight, which consisted in the appearance of a number of different colours floating continually before his eyes. The deafness was so great that he could hear only one person, with whose voice and appearance he had long been familiar. This patient had been subjected to a variety of treatment, more expensive than efficacious, which had induced salivation and profuse perspiration; but, excepting some slight changes, he had remained in the same condition till February 1st, 1754, when he placed himself under the care of Mr. Wathen. After the first injection made into the Eustachian tube, he heard his own voice, which he was previously unable to do. This injection was followed by four others, at intervals of one or two days. The progress towards amendment continued; and this remarkable phenomenon was induced: when the ear was subjected to sounds as loud as it was accustomed to bear before the deafness commenced, the organ experienced a jarring sensation, a sort of painful grating; and the same thing was observed when the patient spoke. However, he could now hear the voice when moderately elevated, and was able to take part in an ordinary conversation, provided that the room was quiet. It is worthy of remark, that the affection of the sight disappeared after the second injection of the Eustachian tube. This case is certainly remarkable, so far as it goes, considering the long duration and great amount of the deafness. The phenomenon adverted to, with regard to the jarring effect of ordinary sounds upon the restored organ, is one with which all are now familiar who have had frequent occasion to treat diseases of the ear.

The following case, taken from Itard's treatise on *Ear-Diseases*, is both interesting and instructive, although the treatment in this instance was not confined simply to injection of the Eustachian canal.

"Dorothy Paulet, a servant-girl in a farm near Paris, was sent to me by some charitable persons to be treated for deafness, which had reduced her to misery, and rendered her incapable of continuing her service. It was necessary to shout very loud and distinctly into her ears in order to be heard. She had been treated for a long time, and without benefit, by another practitioner. The external meatus was healthy; the membrane of the tympanum did not present any notable change; and the air, when passed into the Eustachian tube in the ordinary manner, entered the ear; for the patient was conscious of a painful sensation within the organ. In this state of things, the diagnosis was very obscure; and the more so, that there was nothing in the patient's constitution or in the history of her antecedents which could throw any light upon the cause of the deafness. It had commenced two years previously, and had continued to make rapid progress. However, it was necessary, as the girl said, either that she should be cured, or else die of hunger. A motive so urgent induced me to undertake, or rather to attempt, a very hazardous treatment. Moxas upon the head, galvanism, cupping upon the shoulders, strong purgatives, an otitis induced by irritating injections, had no other effect than to weaken and still further discourage this poor girl. At length I decided, almost against myself, to try perforation of the membrane of the tympanum; and I commenced with the right ear. The injection made the next day did not pass through; and it was in vain that I flooded the external meatus by means of a tube of the diameter of a writing-quill, to which a syringe was attached. Three days having been passed in these vain attempts, I then tried to press the injection in another direction—viz., from within outwards through the Eustachian canal. This effort succeeded, for at the second sitting the liquid came through the external

meatus. It was only at first a sort of transudation ; but the next day the water ran drop by drop, and then in a continued jet from the external ear, to the great delight of Dorothy, who perceived almost immediately that she heard much better. The same means, continued during a fortnight, improved considerably the hearing on this side. The result was still more complete on the left side—where, indeed, the deafness was a little less intense. It was not necessary to inject from the faucial extremity of the Eustachian canal. At the third attempt, the liquid flowed from the internal ear into the nostril ; and, to crown our happiness, the wound made in the membrane of the tympanum on that side closed up completely, when the injections were discontinued, after having effected all the good which they could do. To prevent the recurrence of this deafness, I advised the girl to learn to smoke, and to force the tobacco-fumes into the ears by carefully closing the mouth and nostrils."

The following case, also from Itard, shows how the hearing may be improved by the persevering use of injections through the Eustachian canal.

"A lady of Bordeaux, thirty years of age, of lymphatic temperament and very subject to attacks of catarrh, lost her hearing almost entirely, after having suppressed by sea-bathing a leucorrhœal discharge which had existed from puberty. Having been consulted by means of a written statement of her case, I prescribed mild emetics, repeated every fortnight ; resinous purgatives ; applications of warm water to the region of the uterus ; and finally a blister between the shoulders. These means dispelled the deafness entirely, but only for a few months ; at the end of which time, although the leucorrhœa, which had been recalled by the treatment, was as abundant as ever, the deafness returned as before, and accompanied with severe symptoms, which, however, varied in degree ; and as these disappeared, there were glairy discharge, thickness of the voice, and snuffling. This lady came to Paris to consult me in the spring of 1813. On examining the external meatus, I found it so filled with cerumen that I hoped to restore the hearing by the simple removal of this obstruction. In this, however, I was deceived, for it did not produce even a slight improvement ; and the deafness was such, that Mad. ——— could only hear by means of an ear-trumpet. The treatment which I had advised during the first attack of this ailment had been repeated unavailingly during this relapse, which decided me to have recourse at once to injection of the Eustachian canal. I employed warm water only, which I first injected into the Eustachian canal of the right ear. The liquid passed in ; but the deafness, instead of being lessened, was so much increased that the sharpest cries and the loudest noises could scarcely be perceived. I was not much annoyed at this result, with which I was already familiar, and attributed it to reflux into the cavity of the tympanum of the thickened mucus which obstructed the Eustachian canal. By next morning this increase of deafness had spontaneously disappeared, and Mad. ——— thought that she was even somewhat better—a fact which was no longer doubtful when a second injection had been made. The third produced a still greater change. The sounds of an ordinary voice, provided it was directed towards the concha, were distinctly heard without the aid of a trumpet ; and finally, at the end of twelve days of this treatment, the hearing on the right side was completely restored. In order to confirm the cure, I employed about an equal number of injections with sea-water heated to the temperature of an ordinary bath, and forced into the canal in a continuous stream by means of a syringe. I wished next to operate upon the left ear, but encountered an insurmountable difficulty in the narrowness of the left nostril, towards which the septum of the nose was so strongly inclined that it was impossible, after having with difficulty introduced the sound, to pass it onwards so as to place the beak of the instrument in a horizontal position. To escape this difficulty, I proposed to perforate the membrane of the tympanum, and inject the internal ear from without inwards. The patient having consented, the operation caused little pain ; but it was not so with the injection, although made with tepid water only. Vertigo came on, with headache and a certain amount of fever. I was obliged to discontinue the injections for six days, although they had only been made twice, and the liquid had not appeared beyond the orifice of the Eustachian canal. When, after the disappearance of these symptoms, I wished to renew the treatment, I perceived that the membrane of the tympanum had healed up ; and an injection which I made, in order to assure myself of the fact, left no doubt regarding it, for the water did not penetrate beyond the auditory canal, and did not induce any pain in the ear. This new disappointment made me despair of effecting a cure in this ear ; and so I abstained from any further attempt, which, indeed, the patient was little disposed to bear, as the hearing with the right ear was now so complete."

Professor Trötsch of Würzburg, who has written a treatise on diseases of the ear ; as commendable for its brevity as for its clearness

and the amount of information which it contains, says that he is in the habit of blowing air through a catheter into the Eustachian canal as a means of diagnosis in certain affections of this tube and of the inner ear ; and from the sounds produced during the passage of the air he is able to form some judgment as to the condition of these parts. He employs the same method also as a means of cure, and considers it to be useful in clearing the canal of mucus or any other removable obstruction. He says, further, that he has never observed any injury follow the blowing of air into the cavity of the tympanum, but considers the benefit of the air-bath to be in general of a temporary character. The catheter he regards as useful also as a means of applying other remedial agents to the inner ear, as certain gases ; and also for the introduction of wires, to cure by electricity. Trötsch objects to the use of fluids for the purpose of injection into the cavity of the tympanum, as likely to prove injurious ; and recommends the employment of air and gases only.

Toynbee does not believe in the utility of the catheter as a means of diagnosis in affections of the inner ear, but recommends a "fad" of his own, in which the patient, closing his mouth and nose, attempts to inflate the Eustachian canal ; while the surgeon uses a tube named an "otoscope", one end being inserted into the ear of the patient, and the other into that of the operator. As a means of cure, he thinks with Trötsch that the catheter may be used in clearing out the Eustachian canal ; but he conveys a caution to use the remedy with gentleness, as fatal effects have followed the sudden and forcible introduction of a stream of air into the cavity of the tympanum. Toynbee relates a case, occurring in his own practice, in which inflation of the Eustachian canal by means of a catheter, in conjunction with other means, effected the cure of deafness.

Wilde of Dublin, in his treatise on *Diseases of the Ear*, says that he uses the Eustachian catheter as a means of diagnosis when the patient is unable, by closing the mouth and nostrils, to inflate the membrane of the tympanum. He does not believe that washes or vapours, when introduced through the catheter, ever reach the cavity of the tympanum ; and as to the treatment of what is termed "nervous deafness" by injections of ether or anything else, he has no faith in it.

As to the mode of introducing air into the Eustachian canal, Trötsch and Wilde employ an "air-press"—a machine in which the air, after being forced into a strong cylinder, is gradually introduced by turning a stopcock into a tube communicating with the catheter, and so into the Eustachian canal. This mode requires the use of a rather complicated apparatus, and, besides, is open to the objection of possibly admitting a strong current of air to flow suddenly into the ear ; and, if the point of the catheter slip from the opening of the canal, the air may be driven into the cellular membrane of the throat or directly into the larynx—an accident which is supposed to have happened in one of the fatal cases which occurred in London some years ago.

The cases above recorded as having occurred in the practice of Wathen and Itard, if worthy of credit—and I see no reason why they should be called in question—sufficiently attest the benefit which may in some instances be derived from injection of the Eustachian canal with tepid fluid, and appear to controvert the statement of Wilde that fluids so introduced can never reach the cavity of the ear. They afford, at all events, sufficient grounds for making trial of this mode of treatment in any case in which there is reason to suspect occlusion of the Eustachian, as evidenced by the patient's inability to inflate the membrane of the tympanum. My own experience—which, however, has not been very extensive in catheterism of the canal—would certainly incline me to this decision. I have observed benefit to result in several instances from inflation of the Eustachian by blowing air into it through a catheter. The introduction of the instrument into the faucial orifice of the canal is by no means difficult, requiring, no doubt, the possession of a certain amount of dexterity, which, however, lies within the compass of almost any one to obtain ; and, as I think the air is best introduced by applying the mouth to the wide end of the catheter and blowing through it with varying force, all complicated apparatus is thus dispensed with, and the operation is neither alarming to the patient nor unreasonably difficult to the operator. I have not myself tried the injection of water or any other liquid into the Eustachian by means of a catheter ; but I see no valid reason why it should not be done, if conducted with caution ; and, by means of a moderate sized syringe fitted by its nozzle to the wide extremity of the catheter, it could be effected without difficulty.

In conclusion, I beg to commend the subject to the consideration of my brethren in the profession. It seems to merit their attention ; for a mode of treatment which, in the hands of others, has in some instances been productive of such excellent results, may not improbably, in similar cases, prove equally successful in theirs.

ON THE PATHOLOGICAL AND THERAPEUTICAL RELATIONS OF ASTHMA, ANGINA PECTORIS, AND GASTRALGIA.

By F. E. ANSTIE, M.D., F.R.C.P.,

Senior Assistant-Physician to Westminster Hospital; Lecturer on Medicine in Westminster Hospital School; Physician to the Belgrave Hospital for Children; etc.

DURING the last three or four years my attention has been drawn to an interesting pathological and therapeutical connexion between three nervous affections which are individually reckoned among the anomalies and the difficulties of practical medicine, and which, so far as I know, have not usually been directly associated with each other in the classifications of writers on nervous diseases. I refer to spasmodic asthma, angina pectoris, and gastralgia. It is true that Kneeland some years since indicated the fact that there was some connexion between asthma and angina pectoris; but, so far as I know, no author has distinctly classified these diseases as depending essentially on neurosis of the vagus; and certainly no one has yet advanced the theory that both of them, and also gastralgia (or neuralgia of the gastric nerves), are essentially dependent on neurosis of the vagus which is of central origin, and in a large majority of cases is mainly or entirely due to inherited peculiarities of the central nervous system. Such is the proposition which I now submit to you.

In so short a communication as can alone be received by this Association, it would be impossible to bring forward sufficiently detailed evidence to establish positive proof of this doctrine; nor do I pretend myself to possess such positive proof. It will be sufficient to indicate to the members the chief of those facts which, to my judgment, make the hypothesis exceedingly probable, and certainly worth following up.

The evidence arranges itself under five sections:

1. Inferences from the known physiological functions of the vagus;
2. Evidence of the interchangeability of asthma, angina, and gastralgia, in the same individual;
3. Evidence of the pathological connexion of these neuroses with neuralgia of the fifth nerve;
4. Evidence of the common dependence of asthma, angina, gastralgia, and neuralgia of the fifth, on peculiar inherited neurotic tendencies;
5. Evidence from the similarity of effects produced by certain remedies on all these maladies.

1. As regards the physiology of the vagus, there is no need to deliver a class-room lecture to the present audience. It will be enough to remind you that, besides its other offices, the pneumogastric acts as the great afferent of sensory impressions from the stomach and from the mucous surfaces of the lungs and trachea, and as the main, if not the sole, organ of cardiac sensibility; that its ramifications form an integral part of each of the various nervous plexuses in the cardiac, gastric, and respiratory territories; and that its deep origin is placed within the medulla oblongata, and united by the most intimate connections with the sensory nucleus of the fifth nerve. There are thus *primâ facie* reasons for presuming that the three neuroses, asthma, angina, and gastralgia, would all depend upon irritation of the vagus. As regards asthma, there is, I suppose, a pretty general adhesion among the best recent authorities to the theory of irritation of the pneumogastric, which is well expressed by M. Sée of Paris in an article on the Treatment of Asthma in the *Practitioner* for July 1869. As regards the pain of angina, and indeed as regards the sources of cardiac sensibility in general, there has been much dispute; but the facts seem to me to point very clearly to the belief that branches of the vagus, reinforced in the cardiac plexus by other spinal branches which come from the cervical and the uppermost dorsal cord-centres, through the medium of the sympathetic ganglia of the neck, fully account not only for heart-sensibility, but also for the curious transmission of pain in angina to the arm, the chest-wall, and the neck. The chief objection to this view has rested upon the belief that the sympathetic branches must also have a share in the production of the pain; but the idea that the sympathetic is capable of expressing sensations of pain seems to me to rest on an exceedingly doubtful basis, and to be supported chiefly by the apparent analogies of the pain of colic, gall-stone, etc., for which pains there is really a much more probable source in branches of spinal nerves. Everything in recent physiological observation seems to suggest that all the apparent cases of sensation in the sympathetic fibres are really due to branches of spinal nerves that are bound up with them. As regards angina, the only question as to which I feel much doubt is, whether the vagus centre or the cervical and upper

dorsal cord-centres just referred to are most prominently concerned in the origination of the disease; but, at any rate, it seems clear that, from the moment that serious symptoms of angina are set up, the vagus centre must be involved, since this must be the intermediate instrument of the reflex disturbances of respiration which occur during the paroxysms. On the whole, I lean strongly to the idea, which will be found expressed in the pathology chapter of my work on *Neuralgia*, that the irritative process in angina commences in the spinal centres which send branches to the cardiac plexus, and then involves the vagus secondarily, but at a very early period.

2. The second branch of the evidence that connects asthma, angina, and gastralgia, all with the same great nerve, is derived from the singular interchangeability of the three maladies. Kneeland long ago remarked that spasmodic asthma and angina were thus apt to pass the one into the other. For my own part, I can refer to several instances of the connexion between all three diseases, and would sum up the general results of what I have seen in the following terms. 1. Severe and protracted asthma nearly always becomes complicated, after a time, with symptoms which may not amount to what would commonly be called angina, but assuredly belong to the same category; and in not a few instances (I have myself seen three) asthma leads directly into declared and unmistakable angina. 2. Asthma is nearly always associated with gastralgia. It is true that the neuralgic character of the pain is very often overlooked, and it is attributed incorrectly to dyspepsia; but I have frequently had occasion to prove the fallacy of this idea, the only ground for which is, that asthmatic patients will not bear putting a large amount of food in the stomach at once. Asthmatic patients are not commonly dyspeptic in the proper sense of the word; and the epigastric pain, from which they almost all suffer more or less, requires to be dealt with as a part of the general nervous affection. 3. The chronic form of angina is, so far as I am aware, almost invariably associated with more or less gastralgia, which, as in the case of asthma, is continually being mistaken for dyspeptic pain, and treated, with very unfortunate consequences, from a gastric instead of a nervous point of view. Like asthmatics, these patients require to be fed in small meals; but nothing save harm can come of keeping them on a small total supply of nutriment.

3. The next branch of evidence for the essential interconnexion of the three neuroses of which we are speaking is derived from the way in which they are mixed up and complicated with neuralgia of the fifth nerve—a complication which, if it can be shown to occur with a certain special frequency in these diseases, would go far to trace home the *fons et origo mali* to that portion of the medulla oblongata in which the nuclei of the vagus and the fifth are found in intimate connexion with each other. Upon this point the evidence is, in my experience, exceedingly strong, and may be shortly stated thus: that, whereas neuralgia of the trigeminus is a more or less occasional complication or attendant of other neuralgias generally, it is an almost invariable complication of nervous asthma, nervous angina, and gastralgia. Of course it varies greatly in severity. It may amount, and indeed generally does, to nothing but an attack of migraine every month or six weeks; but there it is, nearly always. And, as regards gastralgia, I have seen numerous instances of its interchangeability with facial neuralgia, of which the following is perhaps the most striking. A watchmaker's assistant, aged 42, applied to me at Westminster Hospital, suffering from intermittent attacks of epigastric pain, which came on specially at times when he was exhausted from want of food, and were uncommonly severe and prostrating. After he had been under my care for ten or twelve days, these pains were abruptly superseded by violent neuralgia in the globe of the right eye and in the branches of the ophthalmic division of the right fifth nerve generally. This neuralgia was not merely severe in itself, but it ran on into secondary iritis, with destruction of the eye for visual purposes. This is the most severe case of trigeminal neuralgia complicating gastralgia that I have seen, but I have witnessed plenty of slighter ones; and, on the whole, I believe that true gastralgia, as distinguished from mere dyspeptic stomach-pain, is nearly always attended with a tendency to facial neuralgia in some form and degree.

4. In the next place, the close interconnexion of asthma, angina, and gastralgia, and their common dependence on an affection of the central nervous system, is rendered more probable by the remarkable history of inherited neurosis which the sufferers from them will always be found, upon careful inquiry, to present. This is a branch of investigation which has greatly engaged my attention; and in my work on *Neuralgia*, the results of a good many such inquiries as to the pedigree of neuralgic patients will be found. But I have not had space for everything in that work, and must probably reserve for a separate publication the remarkable facts which come out respecting the hereditary connexion of asthma and angina pectoris. Respecting

gastralgia, it has been, for obvious reasons, impossible to procure evidence of a precise and reliable character; but, as respects asthma and angina pectoris, I will go so far as to say that I believe there hardly ever existed a sufferer from one of these diseases in whose blood-relations, either of the same or previous generations, one or more examples of the other could not be found by proper inquiry; and occasionally one comes across families which seem to have been quite plague-stricken, as it were, alternately with these two maladies. And it is a singular fact that I have twice known these diseases to be the only nervous maladies that could be traced in a large family of two or three generations.

I may here properly introduce the reply to an expression of surprise which some of my audience may have on their lips, at the frequency which I ascribe to angina pectoris, which, on the contrary, has usually been considered a very rare disease. But I have already had the honour to tell this Association (at the meeting in 1868) that observation had convinced me of the error of that opinion, which arose from neglect or misunderstanding of all but the severest and suddenly fatal cases of angina; whereas there are, in fact, a multitude of cases in which the nervous affection—the cardiac neuralgia—which is the only essential portion of the disease, exists in all shades of severity, down to an exceedingly mild and trivial complaint. And my subsequent experience has strongly confirmed me in this belief, which is also expressed by some of the most careful recent writers.

5. The last, and to me personally the most interesting, link in the chain of evidence which connects together the three neuroses, asthma, angina, and gastralgia, is formed by the results of therapeutical experiment. There is one remedy which is supremely effective, where it can be tolerated, in all these three maladies; namely, arsenic. As regards angina, I may say that, since my attention was drawn to arsenic by a remarkable case published by Philipp in 1865, I have had a rather large number of severe cases to treat; but it is within the last twelve months that I have received the most conclusive proof of the power of this drug over the nervous symptoms of angina. Two examples especially illustrate this, the subjects being respectively aged 65 and 75. Each of these gentlemen was free from recognisable organic heart-disease; but there was much probability in both cases that there may have been a certain amount of ossification of the coronary arteries. Be that as it may, in both these cases arsenic, in five-minim doses of Fowler's solution three times a day, relieved the attacks very rapidly, and completely removed them in the course of about a fortnight. There had previously been daily paroxysms in each of these cases; and the elder of the two gentlemen was the more struck with the rapidity and completeness of the relief obtained, inasmuch as he was a medical man, and was, of course, thoroughly well aware of the intractability and the formidable nature of the disease. As regards gastralgia, the efficacy of arsenic was some years ago pointed out by Dr. Leared; and I have had several opportunities of proving the correctness of his statement. But more especially is it an effective remedy in that form of gastralgia which accompanies asthma. I have for many years been accustomed to the use of arsenic in asthma, and had seen great benefits produced by its tonic effect. I had also noticed, without thinking much about it, that the tendency to gastralgia, and also to facial neuralgia, was at the same time remarkably diminished; but at present I cannot regard the coincidence as accidental. In regard to the effects of arsenic upon asthma and angina, it seems proper to refer to the facts, long disputed, but now established as true, respecting arsenic-eating in Styria. It has been ascertained beyond doubt that many natives of that country eat arsenic, with very remarkable benefit to their power of ascending steep mountains. It enables them to do this comparatively without distress to breathing and circulation. There are, however, a considerable number of persons who cannot take arsenic in the doses and for the prolonged period which are necessary to make any permanent impression upon either of the three neuroses of which we have been speaking. These patients suffer such irritation of the stomach or bowels from it, that they cannot continue it. For the relief of such persons, I beg leave again to suggest a remedy that I mentioned in my paper on Visceral Neuralgias in 1868, and which I have since found very useful in spasmodic asthma, as well as in gastralgia and angina: I mean the subcutaneous injection of strychnia in very small doses, from the 1-120th to the 1-80th or the 1-60th of a grain. I would always try the subcutaneous administration before giving the remedy by the stomach, wherever it is possible to do so; but, if this cannot be done, strychnia should be given by the mouth in doses of 1-40th to 1-24th of a grain three times a day. I think there is little doubt that strychnia also has a physiological affinity for the tract of the vagus and the trigeminal nerves; also this is much feebler than that of arsenic; hence I should always recommend that the latter be tried first.

ABSTRACT OF A CLINICAL LECTURE ON ELEPHANTIASIS GRÆCORUM.

By ROBERT LIVEING, M.D.,

Senior Assistant-Physician to the Middlesex Hospital.

GENTLEMEN,—True leprosy, or elephantiasis Græcorum, is met with in two principal forms: the first is known as tubercular, the second as anæsthetic, leprosy. The latter differs from the former chiefly, but not solely, in the fact that the cutaneous nerves are especially affected, and consequently anæsthesia of the skin forms a prominent feature of the disease. The two forms are, however, not unfrequently (about 15 per cent.) met with in the same individual.

Leprosy is common in the East and West Indies, the Mauritius, Madeira, and other semitropical countries; but it also prevails to a considerable extent in Norway, Denmark, Greenland, and some parts of the Mediterranean coast. Happily at the present time it is unknown as an indigenous disease in Great Britain, though about four hundred years ago it prevailed over the whole of Europe, and these islands were not exempt. Statistics prove that it is oftener met with in males than in females, and that the age between 15 and 30 is that most liable to its attacks. It is certainly rare before puberty.

As to the causes of the disease we know but little; for, though it is confined to certain localities, one is at a loss to discover what malarial or other exciting influence exists in common on the coast of Norway, the Mediterranean, and the West Indies. It is undoubtedly sometimes hereditary, though never contagious.

It is to a case of *tubercular leprosy* that I propose particularly to draw your attention this afternoon.

Mary Anne Edmunds, aged 45, was admitted into Middlesex Hospital on October 5th, 1871. She stated that she was born of English parents in the West Indies, where she remained during the first twenty years of her life. She then resided in England for four years; subsequently she returned to the West Indies for one year, and at the age of 25 she went to live on the West Coast of Africa, and there remained until two years ago, when she again came to England, and has since lived in London. She has one brother and four sisters, all healthy. Her eldest son died in Africa; her other children, four in number, are all strong and well, and she is not aware that any member of her family has been afflicted with a similar disease.

She suffered from what she calls "climate fever" in the West Indies, but otherwise enjoyed good health, until she went to Africa, where the present disease commenced nearly six years ago. She firmly believes that it was produced by artificial means, some malicious person having rubbed her skin with a poisonous herb, and thus injured her for life. Nothing that we can say to the contrary dispels this extraordinary delusion. She describes the first symptoms as having consisted of vomiting and pain in the abdomen, with a sensation of numbness and tingling in the limbs, especially affecting the hands and feet; these were shortly followed by slight swelling of the upper and lower extremities, with some discoloration of the skin, and six months afterwards the face became similarly affected; at the same time she began to lose her sight, "a skin", as she describes it, gradually growing over her eyes.

Her state of health has changed but little during the last twelve months that I have had her under my observation, and may be briefly described as follows. She is a tall, well-formed woman, but emaciated; the hands, feet, face, and mucous membrane of the mouth and throat, are the parts of the body most seriously affected. The skin of the hands is of a darkish-brown colour, and enormously thickened by tubercular swellings, which are scattered irregularly chiefly on the dorsal aspect of the hand and wrist. The fingers are more uniformly enlarged, and measure in circumference round the middle as follows.

| | Right Hand. | Left Hand. |
|---------------------|-------------|------------|
| Index finger..... | 4½ inches. | 4 inches. |
| Middle finger | 4 " | 3¾ " |
| Ring finger | 4 " | 3½ " |
| Little finger | 4 " | 3 " |

The measurements were made about the middle of each finger. The palms of the hands are comparatively free from disease; on one finger there is a large and painful tubercle, which is now increasing in size, and giving evidence that active changes are going on at this spot. She is quite unable to close the hand or even to bend the distal joints of the fingers. Brown patches of discoloration are scattered over the skin of the fore-arm, some of them reaching as high as the shoulder, while here and there a small hard lump can be felt in the skin. There is entire loss of sensibility at the back of the right wrist over a patch of skin rather larger than a crown-piece; elsewhere the sense of touch is nearly perfect, although a sensation of numbness exists. The feet, like the

hands, are diseased, but in a less degree; they are of a darkish-brown colour, patches of the same hue extending up the leg. The face is frightfully disfigured by the irregular thickening and wrinkling of the cutaneous tissues, which is especially marked about the lips, nose, that part of the cheeks just below the eyes and the forehead, so as to present the well-known leonine expression.

There exist the remains of several scabbed sores and scars on the face and hands; a large one is especially noticeable in the centre of the forehead. Rather more than the lower half of each cornea is opaque; but the pupil may be seen by looking obliquely downwards through the upper part, which remains tolerably clear. The patient can perceive light, but is unable to distinguish objects. The tongue is fissured and indented; the mucous membrane of the fauces, soft palate, and epiglottis, is much thickened and tuberculated; she speaks in a hoarse whisper, and is troubled with a harsh persistent laryngeal cough, showing that the larynx is seriously involved. The skin of the trunk is tolerably healthy; the senses of taste and smell are not much impaired, and the hearing is perfect. The patient complains of general weakness, loss of appetite, and great difficulty of walking.

A few days ago, a little solution of atropine was dropped into her eyes; this enabled her to distinguish objects, so that she could count the fingers of a hand held up a yard from her face, showing that the loss of sight is due only to the opacity of the cornea.

With the exception of the above-mentioned parts of the body—namely, the upper and lower extremities, the face, eyes, and the upper part of the respiratory and alimentary mucous tracts, we are not aware that any other organs are at present especially affected by the disease.

This I take, gentlemen, to be an almost typical case of elephantiasis Græcorum: an individual, born in the West Indies, healthy until she was upwards of 30 years of age, then attacked with leprosy, ushered in with the usual premonitory symptoms, such as general debility, numbness and tingling in the limbs, followed by swelling and general discolorations of the skin, first of the hands and feet, and subsequently of the face; gradual development of morbid growths in the skin of the same regions; general emaciation and loss of power, especially in the lower extremities; blindness, local anæsthesia, and a diseased state of the mucous membrane of the fauces, exactly similar to that of the hands.

If we could carry on in imagination the history of this unfortunate woman, it would probably be from bad to worse; the mischief gradually extending itself down the larynx and trachea, and thus leading to suffocation; or perhaps an accidental inflammation of the lungs or some other important visceral organ may cut short a life of helpless misery.

I have already said that we know but little of the general pathology of this remarkable disease. The chief predisposing cause is, no doubt, an hereditary taint, which, however, is not applicable to the case before us, inasmuch as our patient was born of healthy English parents. We must look, then, to the exciting causes alone, to account for its appearance. Amongst them, those most generally believed in are malarial poison, fish diet, putrid food, and bad general hygiene; but leprosy sometimes occurs without any of these attendant circumstances; all, no doubt, promote this form of elephantiasis, just as they promote many other maladies, but the real origin of the disease remains yet to be discovered. The disappearance of leprosy from England under improved hygiene merely proves that the disease, like the plague, is nursed and fostered by poverty and filth.

Against the hypothesis that it depends on some malarial poison, we have the fact that it is common in some well-drained and otherwise healthy districts, and that the whole course of the malady, its morbid anatomy, with the growths of new and adventitious tissue, ally it much more closely to such diseases as lupus, cancer, and syphilis, than to ague and tropical intermittent fevers, which we know to be of malarial origin.

We may sum up what is known of its general pathology in three short sentences. 1. It is a widespread malady, though confined to certain countries which differ much from each other in race, climate, and geographical configuration. 2. It is more or less hereditary. 3. It is a disease of young adult life.

With the morbid anatomy of leprosy we are pretty well acquainted. There are two points in reference to this part of my subject which I would particularly impress upon you: the first is, that elephantiasis Græcorum is not simply a disease of the skin, but of the whole system; for, although it is classed in our text-books amongst cutaneous affections, and first shows itself in the superficial tissues of the hands and face, yet in protracted cases almost all the organs of the body may become involved; moreover, the general constitutional disturbances at the outset, and which are never absent during the whole course, point to the fact that it is not simply a local affection. Secondly, the local evi-

dence of the disease is manifested by distinctly *new growths* invading the healthy tissues of the body. If we make a section of the leprosy tubercle in an advanced stage, and examine this under the microscope, we find that the normal tissue of the true skin is replaced by a new cell-growth, which seems to destroy the connective and fatty tissues, though it is not confined to the district of the true skin, but extends deeply into the subcutaneous layer, the epidermis remaining comparatively unaffected. Besides the corium, the perspiratory and sebaceous glands are destroyed, and the growth of hairs arrested; the nerves are often invaded by the cell-growth, and become atrophied; the cells composing the new tissue are for the most part very small, generally about the size of pus-corpuscles.

One rather characteristic feature of the disease, and which a few months ago we had ample opportunity of observing in our patient, is the formation of open sores, which are sometimes due to a degenerative change and ulceration in a leprosy tubercle, or more commonly to the appearance of bullæ, like those of chronic pemphigus, which burst and leave an unhealthy ulcer, and ultimately a whitish scar. When our patient first came under treatment she was suffering severely from these open sores; but now, under the use of tonics and local applications, she is free from this troublesome complication.

With regard to the treatment of leprosy I am afraid there is little to be said, and that little far from satisfactory. I have had no experience of the late Dr. Beauperthuy's method, said to have been successful in the West Indies, and therefore I have no right to express an opinion on the subject; nevertheless, the nature of the disease must check a too sanguine expectation that any treatment of individual cases is likely to be permanently successful. Improved general hygiene, with moral checks upon intermarriages amongst those affected, is the only plan that will produce permanent and useful results.

ABSTRACT OF CLINICAL LECTURES ON OPHTHALMOLOGY,

Delivered at St. Thomas's Hospital, London.

By R. LIEBREICH, M.D.,

Ophthalmic Surgeon and Lecturer to the Hospital.

LECTURE IV.—*Atrophy of the Optic Disc.*

GENTLEMEN,—The atrophy of the optic disc may be the consequence of a variety of affections of the retina, of the optic nerve, of the brain, of the spinal cord; and I need scarcely mention how important it is to recognise the nature and the course of the disease which gave rise to the atrophy of the papilla.

To obtain a general survey of the different forms of atrophy, let us look at the cases depicted in my *Atlas*.

These drawings appear so different, that you can scarcely designate the general characters of the atrophy otherwise than vaguely as a diminution of redness in the colour of the papilla, with a smaller diameter of the vessels. You may perhaps be astonished not to hear me speak of a diminished diameter of the papilla itself. This supposed symptom is, indeed, indicated in many handbooks on ophthalmology, but I have very often taken quite exact measures of the diameter of the optic disc in the living eye, as well as in anatomical preparations, and never could find any diminution, in cases even of the most absolute atrophy of the optic nerve. There is, in fact, a loss of substance produced by the disappearance of the nerve-fibres. The mechanical changes caused by this loss are to be found in a plane which passes through the axis of the optic nerve, and you will easily observe this circumstance by the flat, atrophic excavation seen either with the ophthalmoscope or under the microscope in a longitudinal section of the nerve. The plane perpendicular to the axis of the optic nerve, which, with an ophthalmoscope, we distinguish as the optic disc, remains in form and size unchanged even after a complete atrophy of the nerve-fibres.

If the border of the papilla—that is the, hole within the choroid (choroid limit) and the edge formed by the transition of the sclerotic and the nerve-sheath (sclerotic limit)—remain in the same place after the disappearance of the nervous substance surrounded by these limits, it is, *a priori*, necessary to suppose that some new substance vicariously fills up the empty space. This is, indeed, the case, and it is the nature of this new substance which determines chiefly the difference in the aspect of the papilla.

In all cases in which the atrophy of the nerve-fibres is produced without any preceding disturbances in the retina or in the papilla, it is the vitreous body which fills up the excavation. This body, being much more transparent than the nervous substance of the papilla, allows us to distinguish, with much more clearness than in the normal eye, the white

network of the lamina cribrosa, which now appears not only in the centre, but throughout the whole extent of the optic disc. For the same reason, the sclerotic limit and the border of the choroid appear too sharply delineated. If, on the contrary, the atrophy of the optic disc be preceded by an inflammatory process of the retina and the papilla, or the latter alone, the disappearing nerve-fibres are replaced by substance of new formation. This substance is more opaque than the nerve-fibres, and consequently covers the lamina cribrosa, which disappears more or less completely, whilst the contours of the papilla, also more or less covered, appear weaker, undecided, and irregular.

These conditions will furnish you with the most important points on which you will have to rely for your diagnosis, especially if you also consider the state of the blood-vessels. To obtain these observations it is necessary to examine the direct image. In order to be able to examine the direct image without artificial dilatation of the pupil, it is necessary to use a mirror with a sufficiently small and carefully worked hole in the centre. If the hole be nearly as large as the pupil of the patient, it is impossible to throw light enough into his eye. If the margin be irregular, containing little scratches, or if it form a channel instead of a sharp ring, the reflex of light proceeding from this border puzzles the observer by producing entoptic phenomena in his own eye.

A very small part of the mirror only throws light into the pupil—namely, that which immediately surrounds the hole. It is therefore quite useless to use very large mirrors, which are tiresome to the patient, without giving a stronger light to the part of the fundus under observation.

Since I gave these explanations, the diminution of the mirror and its central hole has often been made too great. If the mirror is too small, it cannot well be put against the supraorbital margin, and insufficiently protects the observer against the flame. Too small a hole has two great inconveniences; at first it diminishes the intensity of the light, allowing only too small a pencil of light to pass from the observed to the observer; secondly, it acts as a stenopaic apparatus, and deprives us of our judgment on the refraction of the patient by suppressing the circles of dispersion.

I therefore propose to make the hole not smaller than two millimètres, and the mirror not smaller than three centimètres, and to use in preference a thin silvered glass mirror, the centre of which is not perforated, but only deprived of the silver covering. The focus of the mirror may be of eight or ten inches.

ON THE PATHOLOGY AND TREATMENT OF INTESTINAL WOUNDS.*

By T. D. GRIFFITHS, M.B.Lond., Swansea.

THERE is an interesting case of wounded intestine at present under the care of Mr. Andrew Davies at this hospital, of which the following is a brief history.

L. K., a Belgian, aged about 30, was stabbed in the belly on the evening of the 17th of June last. I and Mr. Jabez Thomas of this town were in attendance on him shortly after the occurrence. The patient was found propped up in a chair, violently sick, with his face ghastly pale, and bedewed with perspiration. He was immediately placed on his back on a table in the room, the head being supported on pillows, and the knees flexed and drawn up, when the small intestines were observed to protrude about two feet through a vertical aperture two inches in length, half way between the umbilicus and the pubes, and a little to the left of the middle line. The protruding gut was distended, greatly congested (a large portion of the mesentery corresponding to the protruding intestine being partially strangulated), and wounded in two places, in the transverse direction. The wounds were in the same transverse line, and evidently made by one thrust of a sharp-pointed knife, transfixing the gut; the larger wound admitted the end of my index finger as far as the root of the nail; and the smaller, the point of an ordinary grooved director. The wounds in the intestine presented a peculiar appearance. They resembled fungous excrescences, circular in outline, and of darker colour than the surrounding serous membrane. The lips of the wounds were everted, and the mucous membrane protruded, giving rise to the fungous appearance, and closing the apertures in the intestinal wall. On introducing the end of my index finger into the larger opening, and afterwards the end of the little finger, with the object of reducing the distension, which appeared to me to be caused by flatus, the walls of the intestine, to my surprise, remained in the same distended state, the reverse of what happens in the distended intestines of a dead subject when punctured. After stitching the wounds in the

intestine, it was found necessary to extend the opening in the abdominal wall from half to two-thirds of an inch, to enable the protruding mass to be returned; some difficulty was afterwards experienced in closing it (the intestines seemed to be more than the peritoneal cavity could contain), which was done by three hare-lip pins and one suture; and, to lessen the tension, two or three long strips of plaster were passed over the hip-bones and round the trunk. After taking thirty minims of laudanum, the patient was removed to the hospital.

Mr. Lloyd, the house-surgeon, with Mr. A. Davies's permission, has kindly furnished me with the following notes of the case since admission to the hospital. "Two ounces of brandy were given to the patient on the night of admission; one grain of opium every three hours for the first three days; one grain every four hours from the third to the seventh day; and one grain every night from the tenth day (June 27th) to the present date (July 5th). The patient was put on barley-water and ice for the first four days; on barley-water, ice, milk (from 1½ to 2 pints), and one egg daily from the 4th to the 17th; and, on the 17th day, rice and minced meat were ordered for the first time. The bowels acted after an enema on the tenth day after admission; also on the tenth and twelfth days; and of their own accord on the fourteenth day. The patient suffered from bilious vomiting for the first five days. With the exception of this sickness, he has had no unfavourable symptom. The wound in the abdomen is nearly healed over, and the patient feels comfortable, but is still confined to his bed."*

This case suggests three special points, to which I desire to call your attention, and from which some conclusions as regards treatment may be drawn.

I. *The Appearance and Character of the Wounds in the Intestine.*—

The wounds presented the appearance of fungous excrescences, produced by the protrusion of the fibrous and mucous layers, thus closing the openings and preventing the escape of the contents of the intestinal canal. On thinking over the subject, it occurred to me that the division of the longitudinal muscular layer, which is exterior to that of the circular muscular fibres, might probably account for this peculiar appearance. To satisfy myself on the subject, I made some experiments on a spaniel dog on July 3rd, being kindly assisted by Dr. John Williams. The animal having been put under the influence of chloroform, the peritoneal cavity was opened, the omentum turned aside, and some coils of the small intestines were drawn out. One cut was made by thrusting a sharp-pointed dissecting knife into the intestinal canal, dividing the coats in a transverse direction, to the extent of three-eighths of an inch; immediately the serous membrane began to retract, and in a few seconds the wound assumed the appearance, as remarked by Dr. Williams, of a stoma; the eversion and the protrusion of the fibrous and mucous layers kept the opening closed, and prevented any escape of the contents. The semi-distended condition of the gut was the same before and after the opening was made. The bowel was next opened half an inch in a longitudinal direction; the edges of the wound in this case remained in apposition, or, rather, were inclined to invert; one lip seemed to turn in more than the other. The latter opening was stitched in the way recommended by Mr. Erichsen, by passing the needle through the serous coat some distance from the edge of the wound, and out through the same near the edge, and afterwards passing the needle under a similar portion of the serous membrane on the opposite side of the wound, so as to bring the two serous surfaces into contact. The transverse opening was not stitched. The gut was returned, and the abdominal wall closed by hare-lip pins. The animal having recovered from the influence of chloroform, was given thirty minims of laudanum; the dose was repeated twice during the day; no anodyne was administered the next day. The dog had been well fed up to the time of the experiment, but only water was allowed afterwards. On the morning of July 5th, the dog was again put under the influence of chloroform, and the peritoneal cavity was opened on the right of the middle line, corresponding to the opening made on the opposite side on the 3rd instant. A coil of the small intestine was opened half an inch in a diagonal line; by this section, the longitudinal and the transverse muscular fibres were divided; the whole thickness of the edges retracted equally—that is, without any eversion or inversion; and the wound gaped, allowing the fluid contents to escape. The experiment over, thirty minims of Scheele's prussic acid were poured down the throat, and breathing ceased in two minutes and a half. A *post mortem* examination was made forty-eight hours after the first operation, to ascertain the condition of the wounds. The longitudinal opening, which had been stitched, was covered with a layer of semitransparent lymph; but over the stitches it was more abundant, and of softer consistence, in appearance resembling thick pus. The transverse wound appeared, upon the whole, healthier

* The substance of a paper read before the South Wales and Monmouthshire Branch of the British Medical Association, at Swansea, July 5th, 1871.

† The patient has been reported as "convalescent" since the above notes were given.—T. D. G.

than the other; it was also covered with a semitransparent layer of lymph, which extended over the parts in the immediate neighbourhood; there was no evidence of any of the contents of the intestinal canal having escaped through it. On opening the bowel, it was found to contain a quantity of soft substance where the transverse opening had been made, none of which had found its way between the edges of the wound. It is evident from the above observations, that the appearance and character of the wounds depend upon the direction in which they are made. When transverse, the longitudinal muscular fibres, being divided, retract, evert the edges, and pull upon the fibrous and mucous layers, and thus cause the fungous appearance already described, and fill the opening, and prevent any of the contents of the intestinal canal from passing through. When the wound is longitudinal—that is, parallel to the longitudinal muscular fibres—the transverse muscular fibres are divided, and, by their retraction, keep the edges in apposition, being partly inverted. And when the longitudinal and transverse muscular fibres are both divided, as they must be when the wound is in a diagonal direction, the edges retract and the wound gapes, allowing a free exit to the intestinal contents.

These remarks are only applicable to wounds of the intestines not exceeding half or three quarters of an inch in length.

2. *Distension of the Wounded Intestine.*—It is evident from the history of L. K.'s case, and that of the dog, that, although only partly filled with food undergoing digestion, the intestinal canal may retain a distended appearance before and after it is opened. The peristaltic action observed in the intestines consists of an alternate dilatation and contraction, as well as elongation and shortening of the successive portions of their coat. The dilatation and shortening are produced by the longitudinal, and the contraction and elongation by the circular muscular fibres; the two muscles are antagonistic in their action, and hence the explanation of the dilated or partially distended appearance after the intestinal canal is opened in the living subject. The partial strangulation of the protruding gut and its mesentery may possibly account for the excessive distension observed in L. K.'s case.

3. *The Mode of Stitching the Wounds of the Intestines.*—The method recommended by Mr. Erichsen, and which was adopted in the dog's case, may be objected to on the ground that it materially diminishes the calibre of the intestinal canal, in case of a longitudinal wound, by the folding in of the coat in bringing the serous surfaces into contact; and in case of a transverse wound, the gut is bent by the folding in of the wall on one side, and a transverse projecting ridge is formed in the interior of the knuckle thus formed; all these conditions would obviously render the patient liable to constipation, colic, and intestinal obstruction. The plan that commends itself most to my mind is the interrupted suture. The needle should be passed down through the whole thickness of the intestinal coat, about one-eighth of an inch from the edge on one side of the wound and up on the opposite side. The silk should be tied tolerably tight, so that the soft part included in it may ulcerate more readily, to allow the stitch to drop into the intestinal canal. By this method the wound is closed, the edges are kept in apposition without interfering with the calibre of the gut, and the sutures are removed in the course of a few days.

The continuous suture, and the ligature passed round so as to include the edges of the wound, are methods which, for obvious reasons, need only be mentioned to be condemned.

From the foregoing arguments it may be fairly concluded, that longitudinal and transverse wounds of the intestines not exceeding half or two-thirds of an inch in length need not be stitched, their edges being kept in apposition by the action of the muscular coats—nay, more, that stitching in these cases is a meddlesome interference with nature, which is capable of repairing the breach without the surgeon's aid; and that the only wound which requires stitching is that which is gaping, and is diagonal in direction to the transverse and longitudinal muscular fibres.

THE TRAINING, QUALIFICATIONS, AND DUTIES, OF NUISANCE-INSPECTORS.*

By DAVID DAVIES, M.R.C.S.,

Inspector of Health for Bristol.

No medical officer of health can be ubiquitous; nor can he by himself, however small the district under his superintendence, be thoroughly and always acquainted with the condition of every place in his district—a knowledge which is absolutely necessary for the due performance of the duties of his office. To be always possessed of this knowledge, he must

be assisted by a number of non-medical assistants, who are commonly called "nuisance-inspectors", with whom he should be in personal communication at least once daily. As the success of every health-officer must depend to a considerable extent on the character of his assistants, I will endeavour to describe in brief outline what that character should be, as it appears to me from personal experience.

A nuisance-inspector should be free from all organic disease. He should have passed through small-pox, or have been well vaccinated and also revaccinated, before he commences his duties. He ought also to have passed through scarlet fever, measles, and maculated typhus; and it would be an additional recommendation if he has suffered from a well-marked attack of enteric fever, as I find that one attack of even this disease is to a considerable extent protective from future attacks. He should be largely endued with good health and the natural courage arising from good digestive powers; and, above all, he must possess that "something", indescribable in language, and upon the possession of which we as Englishmen pride ourselves, which impels us under adverse circumstances to do our duty irrespectively of the probable result.

This may be considered a high standard for the mere raw material of a nuisance-inspector, and possibly too high to be found every day or in every place; but I can venture to state that the watch committees of our large towns have always within their knowledge many such characters, whom, however, they are loth and tardy to recommend for promotion, for the simple reason that they do not wish to lose their services as thief-catchers. I may here add that the only literary qualifications requisite, are ability to speak the vernacular language of the district with fluency, and to enter on their journals in intelligible language the most prominent points of their daily occupation.

Such a man having been found, and appointed to office, his special training commences. He must not think that the burden of his duties consists in making himself disagreeable to everybody; in racing after every stray pig or half-starved donkey that may have found (very inappropriately, I confess) lodging in our crowded cities; or that he is to waste his time in listening to the querulous statements of rich old maiden ladies who think they perceived "a smell", as on their way to church on Sunday they passed a street inhabited by poor people, who may have been at the time cooking their potatoes and herrings for a late breakfast. He must not be the handle by which one neighbour can revenge himself on another on account of some petty quarrel between the wives or the children. He must, if taken from the police-force, once and for ever forget that he was a thief-catcher; he must shut his eyes to all that in his former vocation would have roused his inmost spirit, and by so doing he will acquire the utmost confidence of the people among whom his duties chiefly lie; he must learn to believe that the sole object of his duties is to aid in prolonging the lives of the people, regardless of how those lives may be spent. I feel strongly that the duties of a police-officer are totally incompatible with those of a nuisance-inspector. I could substantiate my assertion by facts, but time forbids.

If taken from the police on the recommendation of the Watch Committee, the nuisance-inspector will have learned not to believe all he hears, and at the same time to treat with civility every person making a statement to him. But he must go further than this; as he is no longer a policeman, he should try to prove himself a friend to every one in his district. He should have a great deal of human nature in him; he should acquire the confidence and respect of the clergyman of the parish and of the dissenting ministers; he should be on terms of intimate friendship with the Scripture-reader and the city missionary (most valuable and productive sources of information); he ought to be acquainted with the relieving officers of his district; and, when opportunity offers, he should endeavour to acquire the confidence and good will of members of our own profession practising in his district. They have it in their power to aid him beyond all others when they have the good will to do so. He should make himself acquainted with the owners of all the small tenements in his district, and with their character. His eye should watch every doctor's carriage, every closed shutter, every funeral procession. In friendly conversation with the people, he should find out all that is going on; and in his daily interview with the medical officer, he should report all he has learned and take his advice on it.

He will find on his appointment that he is deficient in many points of special knowledge. He should acquire at least a smattering of natural philosophy. He should thoroughly understand the construction of a good eject or gas-trap; the management of a heat disinfecting apparatus; the nature and application of disinfectants. He ought also (as I think) to be acquainted with the rough outlines and the mode of propagation of the principal zymotics. I am afraid I am treading on tender ground here; but I cannot call any man a nuisance-inspector without this knowledge, as the chief and most dangerous nuisances are the zymotics. This knowledge is easily communicated where there is

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Plymouth, August, 1871

a medical officer of health. To illustrate the necessity of this, I may say that I have often, when cases of fever have prevailed in a quarter not accessible to me, or deaths from it have been ambiguously reported in old-world nosology, ascertained through the inspectors, to my own satisfaction, what the disease was—whether typhus or enteric fever; diphtheria or scarlet fever; small-pox, erysipelas, or measles; Asiatic cholera or diarrhoea; and upon such conclusions I have taken my measures. It would certainly interest the profession to learn how these trained detectives can tell the name of the culprit by the style of the mischief done, although they have never seen the patient. For instance, the duration of the disease, with the presence or absence of diarrhoea, with other points ascertained in quiet gossip with a neighbour, will enable them to distinguish between maculated typhus and enteric fever. The character of the locality, the absence of infection, the age of the patient, the duration of disease, with minor points easily ascertained, will often point to “tubercular meningitis” and not to “typhus”, which may appear as the cause of death on the return made to the Registrar-General. My measures have always been taken according to my own conviction on the reports of the inspectors when the case was not accessible to my own inspection, or reported to me by a member of the medical profession.

The inspectors should be well paid, so as to be able to live generously, and so become less liable to be affected by any of their unpleasant and dangerous duties. They should not be expected to do any menial work, but each should be allowed to have at his command two labourers for the immediate removal of minor nuisances not requiring constructive work, for whitewashing courts and alleys and for the application of disinfectants.

The district under the charge of each inspector should not be too extensive. The extent might vary according to the character of the locality. Where the population is poor and the district contains many courts and allies, a population of 20,000 would give ample work to an able man; for fashionable localities, with well-to-do residents, it might be extended indefinitely.

The nuisance-inspector should be thoroughly acquainted with all the sewers and drains, so as to be able to give advice for remedying any defect in the connecting drains. He should walk through the whole of his district daily; and twice a week at least, either through himself or the men at his command, inspect every privy in the courts and alleys easily accessible. These privies should be disinfected each time they are inspected.

Although not expected to do any menial work in a general way, he must be prepared, in case of a sudden outbreak of Asiatic cholera, to take disinfectants in his own hands; in the absence of his men, to visit the affected premises; and, under the guidance of the medical officer, not to leave them until every particle of the choleraic poison has been destroyed.

To sum up his duties, they are as follows:—To see that there is no escape of sewer-gas in any part of his district; to see that the surface of the ground surrounding houses is hard and impermeable to water; to see that there is no unnecessary accumulation of dirt in any place within his district; to find out and report every case of infectious disease to the medical officer; to take his instructions on every case and see them carried out; to give instructions and to superintend the men at his command for doing menial work; to enter on his journal daily a summary of every day's work.

I have not dwelt on the large amount of unnecessary trouble given to the nuisance-inspectors by timid old ladies and sometimes timid old gentlemen who have in their walks passed a garden with some rotten cabbages in it, or have seen a dead cat or dog where such should not have been found, or have smelt a little ammonia from their neighbour's stable. These complaints being of an æsthetic rather than of a sanitary import, I have paid but little attention to them.

There are also other duties imposed on nuisance-inspectors by their employers—such as finding out the addresses of parties to be summoned and serving notices on them, inspecting the watering of the streets and the scavenging, checking the water used for street-watering, etc.; but with these duties I have had nothing to do. Such duties should not be too numerous; and, in my opinion, it would be better to employ a special officer for some of these, so as to leave the nuisance-inspectors free to perform only sanitary work.

I have thus attempted to sketch out in faint outline what a nuisance-inspector ought to be. With men more or less like the pattern I have drawn, it has been my good fortune to work for six years. Without them, I could have done but little. They are my *antennæ*, by whom I can probe the most hidden arcana of a large city. Many of the measures recommended by and attributed to me were originally suggested by them.

In concluding, I may say that on one or two occasions, under the panic of a threatening epidemic, other bodies and private associations

have sent out amateur inspectors. These, with the zeal of new recruits, have reported imaginary nuisances by hundreds, and have so done much more harm than good by calling away the trained men to confute their reports. There have been some exceptions to this; but, on the whole, amateur nuisance-inspecting is like some other amateur work—very indifferent in character, and often injurious. The duties of a nuisance-inspector are to an able man simple enough, but they must be learned.

Nuisance-inspectors are indispensable assistants to health-officers—qualified members of our profession—but still only assistants. Unless guided, supported, and assisted, by the experience and influence of medical officers who can command the respect of the public, they will fall easy victims to the thousand and one theories of self-made sanitarians who abound among the unoccupied and affluent residents of our large cities, who have been the victims and supporters of all the mischief-producing theories which, like a blight, have blown over scientific medicine.

In conclusion, let me tender a sincere apology for the meagre and imperfect character of this paper, which was written only at the earnest, and, I may say, importunate, entreaty of our respected chairman, who is one of the most devoted votaries of Hygieia.

ANOMALOUS SYMPTOMS IN A CASE OF MORPHIA-POISONING.

By JOHN SPENCER FERRIS, M.B.Lond., etc., Uxbridge.

DR. GUY, in his book on *Forensic Medicine*, after stating that the symptoms of morphia-poisoning are those of opium and its preparations, relates two or three anomalous cases in which tetanic spasms were prominent symptoms, and throws out a suggestion that the three grains of acetate of morphia that Palmer gave Cook were the real cause of the latter's death, and not strychnia, as was generally supposed. On this ground, and on the similarity of the symptoms to those of strychnia-poisoning, I think the following case important.

Sarah V., aged 60, cook, who was just recovering from a severe attack of bronchitis, took at 2 P.M., March 19th, twenty-five drops of a solution of muriate of morphia for a bad cough and diarrhoea. She was then left alone; but at 4 P.M. she rang the bell. The nurse went up and found her lying on her bed bathed in perspiration; the face was swollen, and the eyeballs protruding; both sides of her mouth were twitching; the arms were bent, and moved backwards and forwards convulsively. In a moment the movements ceased, and she complained of great pain in the chest, and could not take a long breath. She said she could not see anybody or anything. After a time, the convulsive movements in the arms and face returned. She had great pain in the back and partial opisthotonos, with delirium, and fainted several times, so that she was thought to be dead. A large quantity of warm water was given her, and she was very sick at 5.30 P.M. I saw her at 6 P.M. I found her complaining of great pain in the chest, principally in the middle of the sternum; the breathing was short and quick, and she sighed often; she also had pain in the bowels. Her legs were twitched up, and she begged that they might be held as she could not keep them quiet, and said it felt as if there were worms in them. She had also pain and twitchings all down her spine. The pupils were very much contracted, not being so large as a pin's head, and she saw red and black spots floating before the eyes. The pulse was about 60. She had no disposition to sleep; the cough had entirely ceased since taking the morphia, though incessant before. All the pains and convulsions then left her, and she was quite easy for two or three minutes, when they returned again; the nurse told me that, ever since she was taken, there had been distinct intervals between the paroxysms. The patient afterwards told me that she first felt the effects about half-an-hour after taking the morphia; that the first symptom was violent pain in the chest and inability to take a deep breath, and then pain in the bowels; and that she never had any disposition to sleep, and she could always open and shut her mouth freely, and therefore had nothing like locked jaw. I gave her sal volatile, brandy and water, and strong tea, which she swallowed without difficulty. Warmth was also applied to the bowels and chest. The convulsive movements and pains gradually left her; and when I quitted her house at 9 P.M., she was only complaining of slight sickness and pain in the head. She could not see distinctly, though the pupils were still much more contracted than usual. The twenty-five drops of morphia were dropped out of a four-ounce bottle, labelled “Solution of Muriate of Morphia, ten to sixty drops per dose,” obtained from a chemist in Reading, so that I cannot exactly tell the strength, more especially as these were almost the last drops in the bottle, and very probably there was some undissolved alkaloid in them. How is it a chemist, now that the Phar-

macy Act has come into operation, dares to sell to an unprofessional person four ounces of morphia solution? I may say that fourteen years ago, when she broke her leg, she had tetanus. On March 20th, at 10 A.M., she had been easy all the night and had no twitchings, but slept only about an hour. Pulse 60. The pupils were still contracted. She said that her legs and arms felt as if they were alive, and as if they were going to jump up. She complained of a stiff neck, and of being "sore all over". She had passed but a very little urine with great difficulty. The tongue was foul. The bowels had not been open. There was no cough. On the 21st, she was much better, and had none of the feelings of which she complained on the previous day in her limbs. The cough had returned. The pupils were normally dilated, and her eyesight was as good as ever; in fact, she seemed to have no relic of the morphia-poisoning.

CLINICAL MEMORANDA.

MR. ELLIS'S MODE OF VACCINATING.*

I HAVE had favourable experience of the plan of vaccination advocated by Mr. Robert Ellis, of Chelsea, in January 1871. It seems to me, indeed, that its value in revaccinations can scarcely be overrated, as it proves more certain than any other plan. Thirteen cases in which I have adopted it have all "taken" decidedly, although eleven of them had, during the previous few weeks, been operated on repeatedly by myself or others, both with lymph from ivory points, and with fresh lymph direct from arm to arm, without any effect. I would suggest it should be recognised and established generally in the profession, as the most eligible mode of revaccinating; for although too troublesome (requiring two interviews with the patient) for common use, it offers under certain circumstances—as in persons about to go abroad, or compelled to submit to exposure to small-pox infection—advantages, in its certainty of effect, apparently unattainable by other methods. The very unsatisfactory observation "not taken", and the equally unsatisfactory inference of "not susceptible", often made after other modes of operation, may hereby be rendered almost obsolete.

Mr. Ellis's plan consists simply of applying, with a very small brush, to some spots on the arm, enough acetum cantharidis to cause in each place a blister about the size of a pea to have risen by the next day. This vesicle is to be punctured (at top), and, the fluid having been pressed out, an armed ivory vaccine point is to be inserted, and left there for a few minutes. As large and energetic pocks result, two (or at most three) will suffice. It is essential to success to first procure a good little blister; therefore, to ensure the action of the acetum cantharidis, it is well to previously free the skin from its natural greasiness by a thorough washing. Some ether on a dossil of rag is very effectual to this end.

GEORGE F. HODGSON, Brighton.

VARIOLA CONFLUENS AFTER RECENT REVACCINATION.

I HAVE just attended the following case of variola confluens, which proved fatal on the morning of the fifth day of the eruption, in a young man who had been very recently revaccinated.

George B., aged 22, A.B., of H.M. ship *Narcissus*, was seen by me first on Sunday afternoon (29th ult.) at Cawsand; he was staying with his relatives there, having been granted leave of absence for a few days. I found him very feverish, with severe lumbar pains, sickness and extreme prostration. On inquiry, I learnt that he began to feel ill only on the previous Friday evening, and, attributing his symptoms to a feverish cold, he did not seek advice before. He was immediately ordered to bed, and placed under treatment. The following day, the symptoms continued unabated, although he had had some sleep during the night. On a careful examination of his skin, no efflorescence or eruption was detected, except on his left arm, where I saw the remains of a full-sized recent vaccine pustule, with fading areola. The next morning (31st ult.) his body was covered with a deep purple erythematous rash, in crescentic patches, very deep on the lower extremities; this in the course of the day was covered with imperfectly developed pustules, all running into each other, except a few on the wrists and the back of the hands. The pocks on the face were small, thick, and very confluent, the skin being very livid, but not much swollen; on the day previous to my patient's death it was of a very dark hue.

The low typhoid symptoms, attendant on this condition, rapidly increased; deglutition becoming very difficult, from the fauces, velum, etc., being extensively affected, and he sank early on Saturday, the 4th instant. There were no hæmorrhages or diarrhoea.

* Note read at a meeting of the West Sussex District, held at Worthing.

It was ascertained that George B., had been revaccinated, with some of his shipmates, on Oct. 20th, and, as stated above, one large pustule was the result.

EDWIN J. WORTH, M.R.C.S. Eng., etc.,
West Anderton, Millbrook.

CASE OF MULTIPLE MALIGNANT TUMOURS.

I BRIEFLY record an unusual case of multiple malignant tumours. The patient was a gentleman, aged 60, who had led an active and temperate life, and who had retired from business to the country four years ago. With the exception of occasional attacks of dyspepsia, he had enjoyed good health till the close of last year. He then began to suffer from loss of appetite and nausea, with a thickly furred tongue, and great pain over the region of the sternum; and he complained of what he termed "blind boils" on the back. On examination, I found a subcutaneous tumour, about the size of a hazel-nut, presenting all the character of scirrhus, below the second rib near its junction with the sternum. On the back were several dense well-defined cutaneous tumours, in different stages of development, and varying in size from a threepenny-piece to a half-crown. These were of a bluish colour, due to the presence of numerous minute veins converging towards the centre of the tumours. On the largest of them a crop of vesicles appeared, which gradually enlarged and coalesced; slight oozing of blood occurred, and ultimately the tumour greatly resembled a large ripe mulberry. On the forehead, also, was a conical tumour about half an inch in height. The growth of these tumours was slow; but pain, which had been very great from the beginning, became excruciating about the month of May. The constitutional symptoms also increased in severity about this time, and Mr. Bickersteth of Liverpool visited the patient with me. On passing the hand over the skin, a great number of small tumours could now be felt, which, however, were confined to the trunk, none appearing on the extremities. Death, from sheer exhaustion, took place in the beginning of August.

Treatment was, of course, chiefly palliative, by the local application of extract of belladonna, and various other anodynes, and by the hypodermic injection of acetate of morphia—at first a quarter of a grain, gradually increased to one grain or more twice daily. If the effect of this happened to pass off too soon, the patient's sufferings were very great. Mechanical appliances were also required to protect the tumours from friction, even of the patient's night-dress. A *post mortem* examination was not obtained, but there were no symptoms indicative of the development of tumours in the internal organs.

GEORGE HILL, M.D. Edin.

The Elms, Hooton, Chester, November 1st, 1871.

THERAPEUTIC MEMORANDA.

ABDOMINAL PUNCTURE IN TYMPANITES.

IN the latest issue of the JOURNAL, I find that, besides myself, there are several claimants for priority in the practice of paracentesis of the intestine in tympany. Mr. Lawson Tait of Birmingham thinks it belongs to himself rather than to Dr. Davey or Mr. Teale. On reference to my communication of the same date, it will be found to belong to neither. The quotation mentioned by Dr. Littleton in the same issue, from the lecture of the late Mr. Teale, given before the Provincial Medical and Surgical Association in 1845, shows clearly that we are all so far late in the field that priority of performance cannot be claimed by any of us. But perhaps some of us may lay claim to an advance onward from the single operation, to press and employ it as not only a desirable, but a judicious operation. I cannot find that Mr. Teale did more than mention the practice favourably; certainly from that time down to the reading of the paper in March 1868, has the plan been received by the profession as a legitimate operation. In the remarks in the paper just mentioned, I did not much more than state the cases and the results; but before this, in my classes, I had, as occasions occurred, laid down the advantages of the operation; and at one of the Association district meetings, had narrated the cases and recommended paracentesis. But, in point, Mr. Thomas Smith (see *Transactions of the Clinical Society for 1869*), in describing a case where the treatment was adopted, after alluding to my cases, enlarges upon the question, and, without insisting strongly upon the operation, believes that one day it will be of more extended application. Dr. Allbutt's (of Leeds) case was brought out in the *Practitioner* the following month. Then Mr. Wathen, in the paper which has brought forth such interesting correspondence, from totally independent sources, urges its value and instances five more cases.

I am not in possession of the dates to show when the Paris paper was read; but it was somewhere about the time of Mr. Wathen's paper. As twenty cases were quoted, it is clear that Mr. Wathen's four out of five are to be added, as also is that described in the last number by Mr. G. D. Brown of Ealing.

But what is the practical inference to be gained from the appearance of so many independent claimants? Is it not that each one is a separate testimony in favour of a plan which, to say the least, removes one of the most distressing accompaniments of abdominal diseases, thus rendering the later moments of life endurable, and probably, as now many instances show, removing a source of much danger which the increasing pressure of the gas produces.

At present, we can say that, in cases of extreme tympany after failure of other remedies, it is highly desirable to tap the intestines. But, perhaps, when we know more of the operation, we shall find the risk of extravasation less than supposed, and then we may say that, in such cases, the operation is not only highly desirable, but necessary.

J. BRAXTON HICKS, M.D. Lond., F.R.S.

9, St. Thomas Street, S.E.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

CLINICAL REPORT OF CASES UNDER THE CARE OF DR. MURCHISON.

IN the course of a visit to the wards with Dr. Murchison on October 30th, we noted the following points of interest in connection with cases under his care.

General Gout: Unsuccessful Treatment by Veratrum Viride.—The subject of the affection was a beer-drinking carman, 53 years of age, who had frequently suffered from the disease before. When admitted for the present attack, the hand was chiefly affected. He was ordered veratrum viride, with alkali, under which treatment the symptoms became aggravated. Colchicum in an alkaline mixture was then prescribed, and after the first dose the patient began and has continued to improve. His diet has been, during the treatment, beef-tea and milk.

Obstinate Ascites treated successfully by Elaterium.—The patient, a careworn but temperate man, had been admitted with all the symptoms of portal obstruction, the cause of which appeared to be somewhat obscure. It was uncertain whether the ascites was due to cirrhosis of the liver or to malignant disease, but it was most probably the latter. From the large amount of fluid which was present in the abdomen, it was found impossible to make out accurately the size of the liver; but, so far as the examination went, this organ appeared to be enlarged, and this enlargement, as well as the tenderness over this region which had been present from the day of admission, was on the increase. He was treated, in the first place, with a pill containing squill, digitalis, and blue pill, under which the ascites increased. He was then ordered iron and digitalis, and afterwards copaiba for a week, but with no better result. Elaterium was prescribed on two occasions during the following week, the copaiba being continued; and the result was that the circumference of the addomen at once diminished from thirty-six to thirty-three inches, and his breathing was greatly relieved. The patient had not been ordered the purgative previously, as he had at first been suffering from diarrhoea; and Dr. Murchison remarked that the elaterium could not safely be repeated frequently, because of the weakening effect on the patient. He would now return to the iron and digitalis, and would repeat the elaterium occasionally, if the ascites increased.

Syphilitic Right Hemiplegia, with Aphasia and Agraphia, followed by Paraplegia.—The patient, a painter, 29 years of age, had been seized with right hemiplegia and aphasia six years ago. The power in the leg began to return before that of the arm, as is generally the case in hemiplegia. The use of the lower limb had, four months after the attack, so far recovered as to enable him to return to his employment, but the arm had, to a considerably less extent, regained its power, and was still wasted. His speech remained little changed for the better. Early in June, while at work, he suddenly lost the use and feeling of his legs, and fell down. With the paraplegia he had retention of urine—a common occurrence in this affection—but this symptom lasted only for a few days. He was now considerably improved, but more so in the left than the right leg. Dr. Murchison pointed out that the patient presented not only an example of aphasia, the loss of the power of expressing his ideas and words by articulate language, but also

agraphia, in so far as in writing he omitted verbs and substituted pronouns in their place. There was no reason to suspect embolism, and no cardiac disease was present; but the patient had suffered from syphilis some years before. From the character and history of the attack, Dr. Murchison looked upon the case as syphilitic, and accordingly had prescribed iodide of potassium, which the man was taking with benefit to the extent of a drachm daily, in combination with tincture of ergot.

Incurable Disease of Knee-joint: Phthisis: Question of Operation.—Physicians are frequently consulted by surgeons in cases of disease which require operative interference, but in which the patient presents symptoms of pulmonary consumption. It becomes often a matter of difficulty to decide whether the benefit likely to ensue from removal of the surgical disease, which is affecting the health of the patient, will in any degree outweigh the risk of increased pulmonary mischief. Such a case was brought under Dr. Murchison's notice by a surgical colleague, and the patient was now in the ward. The patient was the subject of painful swelling of the knee, without sinuses. He had a history of rather copious hæmoptysis, and presented a decidedly phthical aspect. Moreover, there was dulness on percussion, with moist sounds over the apex of the left lung; and he perspired freely at night. Although the pulse was slow and the temperature normal, at least during the day, Dr. Murchison still considered that, so long as the active mischief was going on in the left lung, it would not be expedient to operate for the disease of the knee-joint. A small blister, two by three inches, was accordingly ordered to be applied under the left clavicle; and cod-liver oil was prescribed in addition.

Acute Rheumatism treated successfully by Veratrum Viride.—The effect of veratrum viride in diminishing the temperature, pulse, and pain in acute rheumatism, was well shown in the case of a girl aged 14, who was admitted suffering from this disease, with pericarditis. The remedy was given in the form of tincture, ten minims three times a day; but with no improvement until it was taken every four hours, when the pulse, temperature, and pains became at once reduced. Slight sickness after a few days began to accompany the employment of the drug—a not infrequent occurrence; but this at once ceased on diminishing the amount taken.

Chronic Rheumatoid Arthritis.—A marked example of this affection was presented in a woman aged 42, who five years previously had been seized with an acute and very painful and general affection of the joints, which, although less severe in its character, had never since ceased to afflict her. The displacement of the joints, characteristic of the disease, was well marked in her hands and knees. Since her admission, she had lost the pain in the joints, and could now move them more freely, under treatment by iodide of iron internally, and tincture of iodine externally. The wasted muscles of the limbs were now ordered to be rubbed with liniment.

Pyæmia following Pregnancy.—A case presenting many symptoms common to typhoid fever and pyæmia, rendering the diagnosis obscure, had just been admitted into the ward. The patient was a woman, aged 29, who had been delivered on the morning of October 6th of a seven months' child. She lay on her back, pale, rather emaciated, and with an expression of anxiety on her countenance. Her mind was perfectly clear; she was somewhat nervous, and her respiration was hurried and irregular. She was said to wander sometimes at night. She had had rigors and a good deal of pain in the right leg, referred chiefly to the knee and ankle, there being also tenderness in the leg between these two joints. These symptoms in the leg were still present, and there was distinct puffiness around the knee. The temperature was 104, and the skin was dry. There were a few small petechiæ on the chest, face, and arms, but they presented no specific character. The pulse was 108. The apex of the heart was imperceptible; the transverse dulness measured three inches; and over the cardiac region a systolic murmur was heard distinctly at the base and apex, and pericardial friction over the third left costal cartilage. The physical signs of the lungs anteriorly were good; the back was not examined. The tongue presented the appearance not unlike that found in typhoid fever—dry, brown, and with a tendency to fissure. The abdomen was not tender, but somewhat distended. The bowels had not been opened for two days; but subsequently to admission there was diarrhoea, with light-coloured motions. Dr. Murchison remarked that until the history of this case was completely obtained, it would be difficult to form a certain diagnosis; but the pain and tenderness of the joints, the rigors, the pericarditis, the endocarditis, and the fact of the woman being taken ill suddenly one week after her confinement, were all in favour of puerperal rather than enteric fever. Pericarditis and endocarditis were complications almost unknown in enteric fever. The pain in the right lower limb might suggest thrombosis of the femoral vein; but the absence of œdema, and of tenderness or hardness along the vein, the

fact that the pain was chiefly in the joints, and perhaps the fact of the right limb being affected and not the left, pointed rather to purulent deposit in the joints. He believed that the case would turn out to be an example of blood-poisoning connected with the uterus. Dr. Murchison ordered the patient a quinine and acid mixture and a dose of opium at night; but remarked that, before long, there would be an opportunity of testing the diagnosis.

UNIVERSITY COLLEGE HOSPITAL.

OPERATIONS, WEDNESDAY, NOVEMBER 1ST, 1871.

Extraction of Large Calculus: Unforeseen Tumours of the Prostate.—

A man named Walklate, aged 66, was brought into the operating theatre to have a large stone removed, which sometimes completely prevented his passing urine, and was the source of constant annoyance and disturbance to him. The symptoms of stone were first observed by him six years ago. Mr. Erichsen, in performing the ordinary operation of lithotomy, met with several difficulties which were quite unforeseen. The bladder lay so deep in the wound made by his knife that he could not get his finger into it. He passed a pair of forceps, however, easily enough, and seized the stone; but with a considerable amount of force he could not extract it. He tried a larger pair of forceps, but failed also with them. He passed the first pair again, and brought away what he at first thought was a piece of the prostate gland, but which proved on examination to be an enchondromatous tumour growing from the gland. The stone came after it, but required great force in its extraction. It measured in circumference $5\frac{1}{4}$ inches, and weighed $3\frac{3}{4}$ ounces. It was irregular on the surface, evidently phosphatic, greyish, and slightly yellow. The prostatic tumour was an inch and a half in diameter—about one-third, or more nearly one-half, of the size of the stone. In the operation, there was comparatively very little hæmorrhage. Mr. Erichsen particularly called attention to the passing of the forceps along the upper side of the staff, which was left in the bladder, when the finger could not reach the viscus. After the bladder had been syringed out, the patient was removed.

Scirrhus Nodules.—After several other operations, Mr. Heath extracted a number of scirrhus nodules from a man's head and face. The patient had previously had the hand amputated, and subsequently a part of the arm on account of scirrhus ulcer. Two years ago, these scirrhus nodules appeared, and it was thought desirable to remove them before they acquired great size.

NEWCASTLE-ON-TYNE SMALL-POX AND FEVER HOSPITAL.

CORYMBO-CRYSTALLINE SMALL-POX IN AN UNVACCINATED SUBJECT: CATALEPTIC COMPLICATIONS: DEATH.

FOR the report of this case, we are indebted to Mr. H. E. Armstrong, the Resident Medical Officer.

M. A. C., a woman aged 24, having a child four months old, was admitted on August 12th. She had had small-pox nine days; the eruption was vascular and almost confluent on the face, less so on the arms, and discrete, but close, on the trunk and lower limbs. She had been delirious the previous night, till about 11 A.M. on the day of admission, when she fell into a state of profound stupor. At 8 P.M., the stupor continuing, she was lying on the left side, saliva flowing from her mouth. The respirations were 24; the temperature 100. The arms remained in whatever position they were placed; and, on placing the thermometer in the axilla and drawing the fore-arm over the chest, there was a slight spontaneous pressure of the arm against the ribs. She could not be roused; but at times coughed or swallowed saliva. While being watched by the house-surgeon, she turned suddenly on the back, and a slight movement of the ribs became apparent during respiration. She then became perfectly rigid; so that her whole body could be lifted on the bed by the left leg, which she had extended. This rigidity passed off in two minutes. In five minutes afterwards, she opened her mouth widely by convulsive jerks, causing bleeding of the upper lip. The tongue was retracted; the lower lip quivering, the upper one rigid. Shortly afterwards, she sprang out of bed, calling for her husband. At 10.30 P.M., she had the use of her limbs, and was rational, though somewhat confused. She said that during the attack just described she had been quite conscious, and remembered being lifted by the leg. She had felt no pain, except when her mouth was widely opened. She said that in the morning she had felt herself "going wrong;" and found that she had no power to speak or move. She denied being subject to hysteria.

On August 13th, she had slept tolerably well; but complained of sore throat and stiffness of the mouth. There was a copious flow of thin saliva. Pulse 120; temperature (in the morning) 100; respirations 24, tranquil. She took food and medicine up to 1 P.M., when she again fell into stupor. Her right arm was noticed at 3 P.M. to be extended, and it remained in this position four hours. Pulse 120, rather feeble; temperature (evening) 100.5; respirations 24.

August 14th.—About 2.30 A.M., she rose from bed, calling out that she was the Holy Ghost, and could save every one. She was very loud, and greatly disturbed the rest of the patients. At 4 A.M., she was in a religious fervour, and for a quarter of an hour kept repeating a formula of praise to the Holy Ghost. Gradually her utterance became more rapid and less distinct, till finally her voice was inaudible, and the movement of the lips was alone perceptible. During this ecstasy, the salivary discharge caused some interruption to the above ejaculation. On the nurse remarking this, the patient made an obscene reply, and again resumed her formula. At 8 A.M., she had become filthy in her language, and spat at those about her. She made hideous faces, and uttered horrid imprecations, songs, a "jig-tune," and shuffled (as though she would dance) with the feet, which had been strapped down. She refused all food. Half a glass of brandy with water was syringed into the stomach by the nostril; and a quarter of a grain of acetate of morphia, with sulphuric ether, was ordered to be given by the nostril every hour until sleep was procured. Beef-tea and milk were also ordered to be given by the nostril. At 3.30 P.M., she had slept for three hours; waking, took willingly half a pint of milk. Pulse 128; pupils dilated.

August 15th.—She had been shouting during the night, and still required restraint. She had rubbed her cheeks against the pillow; her face was raw and bloody. Pulse 132, feeble; pupils normal.

August 16th.—She had been quiet all night, requiring the morphia mixture only once. At 9.30 A.M., she was lying quite still. Respirations 16, tolerably full; pulse small, almost imperceptible. Viscid saliva worked out at the mouth. The patient did not show any sign of intelligence.

August 17th.—She recognised those about her; and complained of cramps in the legs and back. The bowels were open. The pulse was imperceptible at the wrist, neck, or temple. As the patient lay supine, the heart-beat is not to be felt by the hand; with the stethoscope, a faint sound (apparently diastolic) was audible, 128 per minute. She had since the previous day taken food. At 7.30 P.M., she died.

At the necropsy, twenty-four hours after death, rigor mortis had passed off. The under surface of the body was hypostatically discoloured. The brain was small and soft, having the superficial veins somewhat distended. There was no appearance of variolous eruption on the brain, cord, or membranes.

REMARKS.—When the patient was first seen, the eruption was noted as somewhat corymbous, irregular patches appearing on the arms. There were also some petechial vesicles about the shoulders. These latter have been observed as a very unfavourable, and generally fatal, sign during the present epidemic. They have been more often met with in adults than in the young; and few persons that had them recovered. They are, for the most part, flat and broad—the edges only appearing above the surface of the surrounding skin—and are of a bluish-white hue. Removal of the upper wall of a petechial pock discloses a cell, containing sometimes a little fluid, generally none. The interior of the cell is of a pinkish-white colour at its circumference. In the centre of its base is a little dark blue prominence, apparently a tuft of loaded venous blood-vessels. The larger these tufts, the broader and more blue the pock, and the more malignant the case.

At a later period of this case (tenth day), the eruption on the hands and arms was pearly and globular. This condition corresponds to the crystalline small-pox of Mead and Friend, and has proved fatal in every instance in this hospital.

In this form of variola, the pocks are distended by clear fluid, and are very prominent, the central depression being absent; in some instances, even replaced by a distinct circular elevation superadded to the apex of the vesicle. The contents may turn milky, but do not suppurate. Dissection shows a dark spot or tuft of blood-vessels in the centre of the base of the pock, resembling that of a petechial vesicle. The most frequent seat of petechial vesicles is on the lower limbs; whereas the crystalline pocks have generally been most copious on the upper. The petechial vesicle has been frequently observed; the crystalline small-pox has been comparatively rare. The two kinds have been almost equally fatal; but whilst death has in the former been due to other causes, coma or some allied condition has invariably preceded the mortal termination of the crystalline small-pox.

The case under notice is chiefly interesting for the nature and sequence of the nervous complications. Catalepsy, with waxy mobility

and afterwards rigidity of limbs and continuance of consciousness, followed by ecstasy passing into obscene delirium, are of themselves of rare occurrence in the same individual; and their appearance during an attack of small-pox is probably unique.

REVIEWS AND NOTICES.

INTRODUCTORY NOTES ON LYING-IN INSTITUTIONS, ETC. By FLORENCE NIGHTINGALE. London. Longmans, Green, and Co. 1871.

It is certainly a very remarkable thing, and not creditable to obstetrics as a science, that in 1871 the normal or ordinary, or every-day death-rate of lying-in women is not pretty well or approximately settled. When, during last year, the great discussion on Maternity Hospitals flourished in Dublin, every one must have felt the want of this piece of knowledge. Indeed, from want of it, the labours of the disputants were almost nugatory. Plenty was said, and plenty is known, of the high tides of mortality; a little was known, and much was said, of the low tides of mortality; almost nothing was known, and almost nothing was said, of the average tide. There was no standard of comparison by which to measure.

When Dr. Matthews Duncan took up the subject, he placed this point as the first to be settled, the first chapter of the work to be done. Now Miss NIGHTINGALE enters the same field, in the valuable little book before us, and starts with the following words. "The first step to be taken in the discussion is to inquire, What is the real normal death-rate of lying-in women? And having ascertained this to the extent which existing data may enable us to do, we must compare this death-rate with the rates occurring in establishments into which parturition cases are received in numbers." Had these two authors written so and been listened to when the discussion on the value of hospitals began, we should have been far advanced towards settling these disputes, and, besides, we should have been spared a deal of pointless, useless, and occasionally acrimonious talk.

The natural and simple plan of arriving at the normal death-rate of lying-in women, is to consult the reports of the Registrar-General. In Norway, it is given as 1 in 135; in Paris, 1 in 160; in St. Petersburg, 1 in 149; in Dublin, 1 in 114; in England and Wales, 1 in 189; in Edinburgh, 1 in 162; in Prussia, 1 in 108. But these data have never been regarded, within the obstetrical department of the profession, with any confidence. No doubt they have a certain value; but their value for the purposes of Miss Nightingale's book has never been admitted by the obstetrical world, and never asserted even by Registrars-General themselves. Several authors have given good reasons for doubting the accuracy of the registers, and the reasons have been invariably evidences that the registers made the mortality of women within four weeks after childbirth and during it, less than it really was. But, so far as we know, Dr. Duncan is the only author who states that he has searched the public records, scrutinising them so as to search out all the deaths during and within four weeks after childbirth. This he did for 1855 in Edinburgh and Glasgow; and he found a mortality of 1 in 107. Tarnier probably did something of the kind for the twelfth arrondissement of Paris, a poor district, and deduced a mortality of 1 in 322; a result sufficient of itself to show the inefficacy of the search, even if it had not been put out of court as fallacious by such authorities as Dubois and Danyau, who said that there was no such luck for lying-in women in the healthy and comfortable parts of that great city.

If, then, the public registers are not to be trusted, as Barnes and McClintock and others have shown, what is to be done? Every available source of information is to be sought and scrutinised; rejected or received as of some value. The authors who have attempted to do this are Le Fort and Matthews Duncan, in their respective works on Maternity Hospitals. But we fear there can be no doubt that Le Fort did not scrutinise all and reject some. He accepted all; and in doing so he has made his results of little value. To accumulate figures whose *prima facie* aspect is false, and without giving the slightest reason for crediting or discrediting them, is not a good mode of procedure. Le Fort made the normal death-rate of lying-in women 1 in 212; that is, lower even than the death-rate of any Registrar-General. That cannot be accepted. Dr. Matthews Duncan, on the other hand, took only the data that appeared to him to be credible, as he says; rejecting those which were highly improbable or utterly incredible; and his conclusion

is, that the normal death-rate is about 1 in 120. There appears to us no way of evading the evidence which this gentleman has afforded. It is, as he says, very unsatisfactory; but it is the best that has hitherto been adduced. It is, to some extent, based on his views as to credibility; and this element in the decision should be eliminated as soon as possible. By all means, let us have facts.

Now comes the redoubtable Florence Nightingale, a host in herself; a historic medical woman, to use one of her own phrases; a great woman truly, and yet a woman; for we think we can perceive her sex even in her way of settling this knotty point, what she calls "the first step to be taken in the discussion." Women have much to do with our first steps.

Our authoress settles this first step in a very free and easy—we might say perfunctory—manner. After all the Le Fort and Matthews Duncan books and the many-toned Dublin discussions and various arrays of figures, she, without reasons given, assumes a sublime simplicity, and throws herself into the arms of Dr. Farr, the well-known English statistician, accepting, without reserve, his latest yearly result—5.1 per 1,000, or 1 in 196. Fractions at this stage of the question are over-refinement. Now, we recommend all who are interested in this great question to turn to the statements of Dr. Farr, in the fourth part (on "Developmental Diseases") of his letter to the Registrar-General of England on the causes of death in England in 1867. (*Thirtieth Annual Report*, 1869, p. 222). In this paper the reader will find that Farr does not agree exactly with Miss Nightingale. Farr gives the mortality as 1 in 200, not 1 in 196. But he adds that it varies in different years from 1 in 164 to 1 in 238; and this within recent times: an amount of variation which, considering the vastness of the figures, almost demonstrates a great amount of error, or untrustworthiness of the whole data. Dr. Farr has not entered critically on the subject of the normal death-rate of lying-in women. We are sure that, when he does, we shall have something valuable bearing on the discussion in which Miss Nightingale has joined. Her normal death-rate is not Dr. Farr's. It is simply the accidental death-rate of 1867. But Miss Nightingale shows farther want of due consideration. It is distinctly seen in the following passage taken from her judicial summing up. "In estimating (says she) the probable accuracy of statistical data in which there may be both excesses and deficiencies, sources of error are diminished by largeness in the numbers employed in striking averages." Now, the data she employs are no doubt large, and this condition adds enormously to their value, if we could get the proper key to their sources of error. Miss Nightingale has, however, quite misconceived the value of the largeness of the numbers here. It has a great value—is, indeed, invaluable, for the making of good averages. But here there is a special difficulty in attaching value to the average, for there are no excesses; there are only deficiencies, and these are certainly large deficiencies, as any one who consults the writings here referred to can indisputably prove. Miss Nightingale evidently thinks that the common rule is here good, that excesses balance deficiencies, and truth comes as the result. But there are here no excesses. Almost no deaths are entered as after childbirth, while there are many such. Many deaths after childbirth are not entered as such, intentionally or through want of care, or ignorance of what is desirable. There are numerous deficiencies. We happen to have a large acquaintance with obstetrical practice and with obstetricians, and we believe that enlightened obstetrical opinion guides us to regard 1 in 100 as much nearer the normal mortality than the English registered mortality for 1867, 1 in 196, adopted by Miss Nightingale as the normal.

But the weakest argument, yet one highly creditable to the kind womanly heart, which our authoress advances against Dr. Matthews Duncan's estimate, is the following purely sentimental one, yet ingenuously urged as if it were a logical thunderbolt. "On considering these figures" (says she), "the first impression they convey is not that either the Registrar-General or Le Fort is wrong. But it is a very painful impression of another kind altogether. One feels disposed to ask whether it can be true that, in the hands of educated accoucheurs, the inevitable fate of women undergoing, not a diseased, but an entirely natural condition, at home, is that one out of every 128 must die? If the facts are correct, then one cannot help feeling that they present a very strong *prima facie* case for inquiry, with the view of devising a remedy for such a state of things." To which good remark we respond sympathetically, with all our heart. But this does not alter the facts.

We take leave of Miss Nightingale's work, recommending it to our readers. It is everywhere well worthy of careful perusal; and the hints which it throws out as to hospital construction and management demand the most careful consideration.

It is interesting to observe that, after all her studies and experience, this great lady does not utterly condemn maternity hospitals.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 11TH, 1871.

THE HAMPSTEAD INQUIRY.

ALTHOUGH this inquiry has now ended, it may be some time before the decision of the Local Government Board can be made known on the points at issue. When it is published, it will still, of necessity, leave untouched many of the points which are of the largest public and professional interest. The absurd length of the inquiry will, we hope, act as a caution to the Local Government Board not again to involve themselves in a method of procedure which implies a tedious, costly, and unnecessary waste of public time and money. Mr. Henley and Dr. Buchanan were two highly qualified inquirers, and might with ease have settled the matter to their own satisfaction, and that of everyone else, by freeing themselves from what was after all little more than a parody of judicial form. It was not a trial; for there was neither judge nor jury present, nor judicial summing up. The able speeches made were little else than appeals to the public imagination; and a large part of the evidence was of the same character. Had the two commissioners felt authorised to adopt the more apparent and simple procedure of proceeding themselves to the hospital, reading over the depositions, and summoning such of the witnesses as seemed necessary to throw light on the facts, in order to submit their statements to scrutiny, the whole matter might have been disposed of in fewer days than it occupied weeks. As it is, the repetitions of the first part of the case so disgusted the public mind, and the tediousness with which the case was spun out so wearied public attention, that the latter part of the evidence received comparatively little attention, and very false and injurious impressions have prevailed.

The first set of witnesses included a long list of patients who had complaints to make of the meat, the milk, of the use of restraint, and of want of linen. To hear their evidence, one would have believed that the meat supplied was simply scandalous and uneatable; that the general dietaries were wholly insufficient; that there was no shadow of proper hospital arrangement or administration; that the wards were "not fit to be inhabited by a dog." In short, so black a picture of a hospital interior was never before traced. It is not a little surprising that Messrs. Greaves, Kynaston, and Aikman, should have thought fit to give to such statements an implied support, by producing them as part of their case. They must have known well how utterly faithless and unjust was such a sketch of this really admirable hospital. Their own evidence fell far short of it; and amongst the many causes of regret which the retrospect of this case must afford them, this injustice to which they have been parties can hardly be the least poignant.

Of their own course we find it difficult to say anything which shall be just, without being too severe to please us, when we consider that they are very young men, and that a stern judgment on a public error of so grave a kind might affect mischievously the prospects of their professional career. At the

very outset of their case, it was plain that they had erred very grievously in not laying any complaints which they had to make as to matters affecting the comfort and welfare of their patients before the Committee of Managers at the hospital, while the patients were still there, and while they themselves were still in active function, and capable of rendering service to those whom they represent to have suffered from neglect. The case is the stronger, in that not only did the Managers hold weekly meetings in the building in which the medical officers were lodged, but several of them were medical men, and they spent a large amount of time, sometimes many hours a day, at the hospital. If the medical officers entertained a mysterious dread of Mr. Wyatt, they need have been under no such apprehension as to Dr. Brewer; or, if they had a fear of unbosoming themselves to Dr. Brewer, they had frequent opportunities of stating their opinions, wishes, and fears, to Surgeon-Major Bostock—a man so widely and favourably known in professional circles in London, that it seems unnecessary to mention that he is not only one of the most experienced of voluntary hospital managers, but one of the most amiable and courteous of men. Failing these, there remained Dr. Jarvis, a type of polished and amiable courtesy, and Mr. Harvey, whose aspect is certainly in no way terrific. It is to us, therefore, nothing less than incomprehensible that these three gentlemen—if they really entertained the belief that their patients were suffering for the want of anything whatever, during their long period of office, and if they thought that the Medical Superintendent, Dr. Grieve, was averse to giving a just effect to their wishes—did not at any time, by word or sign, invoke for the benefit of their patients the assistance of the Managers, whose officers they were, and whom they knew to be responsible for the proper conduct of the place. It was abundantly evident that they knew of their power to invoke such aid, and of the proper means of doing so, by a brief note on the back of their daily reports, or by any other written report, supposing that they were too bashful to speak a word to the individual Managers. They even stated, in their communications to the *Times*, that they had made such reports: that statement, however, proved, at the inquiry, to be virtually incorrect. The few reports which they had made were of trivial matters, and bore no relation either to general insufficiency of dietary, to defective quality of food, to insufficiency of nurses, to the use of restraint, or to any of the grave matters which, after being called upon to resign, they charged against the administration in their letters to the daily press.

This being so, they would stand self-accused of a neglect of duty, of a violation of medical responsibility, in not exerting themselves to do justice to their patients, so grave, if these charges had been proved, that we cannot but congratulate them hardly less warmly than the public that the mass of evidence produced by the Managers showed beyond question that, read in any general sense as a description of the state of things in the Hampstead Hospital, their charges were groundless. They impaled themselves on the horns of a distressing dilemma; but we are disposed to think that they will suffer less in general estimation by the wound inflicted by this particular horn. As a matter of fact, their own admissions in cross-examination so weakened their prior statements, that it left little for the Managers to justify. Their letter was written in August, but they admitted that their complaints referred chiefly to a period which ended in June. Their complaints as to insufficiency of dietary lost all significance when they were found to be unable

to state the dietary of which they complained, and could not deny it to be one of the most liberal in existence in any hospital. Their objections to restraint, which they had set forth publicly as having been used generally in the hospital, they subsequently applied to the cases of delirious and violent patients, showing a manifest ignorance of the ordinary and necessary modes of restraining delirious persons.

As to the number of nurses, Mr. Kynaston displayed an ignorance alike of the actual proportion of nurses employed at this and at any other hospital. Mr. Greaves thought, next day, it should be one for each seven patients, as at Guy's. This was the number actually employed, when it was not one for every five or six patients.

As to the occurrences at particular dates ; whether the milk-supply was on any particular day deficient ; whether, by additional exertion, the Managers could have completely overcome in March the enormous difficulties with which they contended, and have supplied a fuller quantum of linen to the convalescent wards—the Commissioners must decide. All other special points we leave also untouched.

On the question whether the Hampstead Hospital, which received five thousand patients in seven months, was a good and well-conducted hospital, the evidence was completely reassuring. Dr. Bridges stated that, at eight different visits of inspection, he had found the hospital always in exceedingly good order ; the wards clean and tidy ; the linen of the patients as clean as was possible under the circumstances of the case ; the food abundant and of good quality ; and the nurses sufficient. He felt confident that the Managers discharged their duties with promptitude and energy. He had gone through the wards in company with Dr. Grieve and Mr. Greaves. Mr. J. Netten Radcliffe described the wards as excellent. His own opinion was one of unmixed admiration at the condition of those wards—particularly in February, when patients were admitted in immense numbers, and the difficulties of the Managers could only be known to one like himself. He had the same opinion as to the state of the patients and that of their linen.

Mr. Ernest Hart gave a detailed account of the result of a minute inspection on the 6th of February, and produced the notes taken at the time. The hospital had excellent general accommodation ; had the great advantage of being entirely on the ground floor ; had from 1,800 to 2,000 cubic feet of air for each patient, 120 square feet of floor-space for each bed, and a window between each two beds. The nurses in each ward had a nurse-room with proper cooking apparatus. Each ward had a ward-scuttery with hot and cold water laid on, and a bath of excellent construction. There were reception-rooms, also, with hot and cold water, and each fixed basin in the ward lavatories had hot and cold water, and a sink. There was a detached mortuary, and detached disinfecting apparatus. He found the food excellent. The beef-tea was so good that, not having had his lunch, he finished a basin of it. The bread was the Aërated Bread Company's, and was exceedingly good. The dietary was more liberal than any that he was acquainted with. The cleanliness of the wards was admirable ; the linen on the beds was exceedingly clean, and the general state of the linen very good. A stain on a sheet, which appeared to be a blood-stain, was from carbolised oil, and would not wash out. The nursing in the hospital was singularly in accordance with Miss Nightingale's plan. The proportion of one nurse to

seven patients was liberal, considering the large number of convalescent inmates. He believed that the balance of medical opinion was in favour of tying down delirious patients with a folded sheet where restraint was necessary. The mortality at Hampstead was identical with that of other well-managed institutions. In all his experience, there was no hospital in this country that had admitted or had had to deal with so large a number of patients in the time, or in double the time. This hospital treated a larger number of patients in eight months than St. Bartholomew's in twelve months ; and these were not equally distributed through the time, but the bulk of them were in the centre of the time. He believed everything was done that could be done by the authorities. The hospital was in every respect a model hospital ; but as to the medical treatment, of course he knew nothing. He had heard nothing in this inquiry that shook his confidence in the managers.

Dr. C. A. Gordon, C.B., deputy inspector of hospitals in the army medical department, said that he was one of the commissioners appointed by the Government to observe and report on the French army. He had visited this hospital, and examined it as a non-official person would do. He formed a most favourable opinion of the cleanliness of the wards, the linen, nursing, and dietary, and could certainly say that great care was taken of the sick patients. The convalescents appeared extremely cheerful and contented. He would say that the hospital was a picture of discipline and efficiency.

Dr. John Murray stated that he had had considerable experience in hospital management, was a visiting physician of the Middlesex and Children's Hospitals, and acted as hospital reporter for the BRITISH MEDICAL JOURNAL. Whenever complaints of official mismanagement were made, he visited the hospitals before reporting upon them. He was frequently obliged to report unfavourably. He had had experience of the hospitals of France, North Germany, Switzerland, Austria, and North Italy, and had studied in Paris, Vienna, and Berlin. On seeing the letter in the *Times* he went to Hampstead Hospital, and went over it with Dr. Grieve. He questioned every nurse, servant, and assistant whom he met. He had paid many previous visits to the hospital. His opinion before these charges were brought was, and still was, that this was one of the best managed hospitals he had ever seen. In the history of hospitals, he believed no case was recorded where such perfect accommodation was afforded at such limited notice. He convinced himself that there was no ground for saying that the nursing was inefficient. The food appeared to be abundant and good.

Mr. Perry, of the Guards' Hospital, gave similar evidence.

This evidence really sets at rest all doubts as to the general state of things in the Hampstead Hospital, and leaves little more to be said. We have already expressed the opinion that, had a visiting physician been appointed in addition to the resident staff, it would have been impossible for anything to have occurred which could have given a colour to these charges. We now repeat that opinion. But we add the expression of deep regret that charges so exaggerated were ever brought forward ; and that young members of our own profession should have been the means of disturbing mischievously and groundlessly the public mind, and of throwing a most unmerited odium on the managers of this great public charity, among whom were some most distinguished and self-sacrificing members of the profession to which they belong. The services rendered by this hospital have been great beyond precedent. They were ren-

dered under circumstances of extraordinary difficulty, and it would be hard to praise too highly the skill, humanity, courage, and devotion, which the managers of the Asylum Board showed in the discharge of a most arduous and protracted responsibility.

PROPOSED BILL ON POOR-LAW MEDICAL RELIEF.

ON Tuesday night, a meeting was held at the Medical Club in Spring Gardens, convened by the Poor-law Medical Officers' Association, to consider a Bill which Mr. Corrance proposes to introduce into Parliament at the opening of the next session, for the purpose of practically placing the system of medical Poor-law relief in England and Wales on the basis of the Irish system. Dr. Joseph Rogers occupied the chair. There were present Mr. Corrance, M.P., Mr. Fairlie Clarke, Dr. Thomas, Dr. Welch, the Rev. Mr. Kitto, Mr. Safford, Dr. Stallard, Mr. Benson Baker, and many other gentlemen interested in such questions.

Letters were read from Mr. W. H. Smith, M.P., who deeply regretted his inability to be present; from Dr. Lush, M.P., who said that he felt so much confidence in Mr. Corrance and Dr. Rogers, in respect to their practical views on the subject of amending the Poor-law medical relief system, that he could promise to support the proposed Bill; and a third from Mr. John Holms, M.P., who also deeply regretted he could not attend.

The Chairman stated that a letter had also been received from Dr. Rumsey, who had been consulted with regard to the proposed Bill; and that gentleman had given the promoters of it the benefit of his practical experience. The scheme which was about to be proposed required that a case should be made out showing its necessity. In the first place, it was about to be proposed that some other authority than the Local Government Board should have the direction of the medical relief in England and Wales; and to prove the necessity for this, he enumerated statistics showing that the central authority did not even carry out its own orders so as to check the very great evil of giving most extensive districts—districts of vast area and large populations—to one medical officer. This evil, he said, was largely on the increase under the present authority of the Local Government Board; and districts extending to distances exceeding seven miles from the medical officer's house, with populations of more than fifteen thousand persons, were very numerous. All this was contrary to the Local Government Board's own regulations; and there were fully a third of all the appointments contrary to the Board's general orders. He then entered into other statistics to prove that where medical relief was at its lowest, there pauperism was at its highest; and he deduced from these figures that it would be advantageous to the country at large to have a different system with different administration.

Mr. Corrance, M.P., stated that for two months he had been working at the Bill, and had received much aid from the practical experience of gentlemen in the medical profession. The measure he proposed would not by any means be complete, or all that some gentlemen desired, but still it would cover some of the most radical defects of the present system of medical relief in England and Wales, and if he could accomplish that he should be very glad. He then proceeded to read over some of the clauses of the proposed Bill; in most of them, he said, it was similar in character to the Irish measure. He proposed that commissioners should divide the country into dis-

pensary districts; that committees should have the working of each of the districts; that the relief should be given by the issue of tickets, this issue being in the hands of a committee, generally and conjointly, so as to prevent that abuse of the system which was said to prevail in Ireland, where members of the committees, it was declared, gave the tickets to the members of their own families and to their domestic servants. He also proposed to punish persons who obtained relief without being in the position of necessitous persons. In cases of contagious disease, and in other like cases of urgency, the issue of tickets could be made by a relieving officer, but would have to be supervised by the committee within a week of the issue; otherwise, all the tickets were to be issued by the committee.

A lengthened conversational discussion ensued upon the proposals; and this was carried on by the Chairman, Dr. Stallard, Mr. Corrance, Mr. Benson Baker, Mr. Safford, and other gentlemen. In the course of it, recommendations were made in favour of, if possible, encouraging provident habits, or, rather, not discouraging such habits, by rendering medical relief altogether easily to be obtained; and Mr. Benson Baker urged, with considerable force, that the medical service under the Poor-law should, as a State service, be placed on a footing analogous to the Army and Navy Medical Services, inasmuch as there should be a competitive examination for posts, and promotion following ability and service. It was quite as important to the country, he urged, that the population should be under proper medical care, as that the soldiers and sailors should have that attention now so ill bestowed upon our poor population.

Ultimately, Mr. Corrance pointed out that all details could not be entered in the proposed measure; and the proceedings concluded with thanks to him for the Bill, which was approved, and to the Chairman.

This subject will now be taken up at an early date by the Poor-law Committee of our Association.

THE Queen's progress towards health has been uninterrupted.

THE yearly average of births in St. Petersburg is 19,000, and that of deaths 24,000. Of the latter, one-half occur in the hospitals.

DR. SHORTT, the Superintendent of Vaccination in Madras, has trained a number of women as vaccinators to attend on native ladies.

PROFESSOR HUXLEY is delivering an elementary course of lectures on Physiology at the London Institution to a crowded audience, on Mondays, at four o'clock.

WE direct attention to an important communication which appears to-day from a member of the Joint Committee of the British Medical and Social Science Associations concerning the reform of our sanitary system.

MR. DONALD DALRYMPLE, M.P., who has gone to America with a view to the examination of Transatlantic Asylums for Inebriates, has, we are sorry to learn, been attacked by intermittent fever.

MR. ANTONIO BINI, an Italian surgeon, aged 55, was found dead in bed on Saturday last at his lodgings near Leicester Square, having, in consequence of pecuniary difficulties, poisoned himself with strychnine.

THE sanitary cordon established at Hasskend, near the Arsenal, Constantinople, has been removed, and the English engineers who dwell there are at liberty to quit the infected neighbourhood. The cholera is decreasing in virulence.

PROFESSOR PARTRIDGE commenced his annual course of lectures on Anatomy to the pupils and Royal Academicians in the new theatre at Burlington House on Monday last, and will continue the same every Monday evening up to December 11th inclusive, at eight o'clock.

It is proposed to give a Course of Lectures on Diseases of the Brain and Spinal Cord at St. George's Hospital, London, this session. They will be delivered by Dr. Lockhart Clarke, F.R.S., and are optional to the students. All third and fourth year's men, however, are urged to attend.

SOME very interesting points of law and some important points of medical science have been raised in the cause of the Dublin trial of Kelly on the charge of shooting Talbot. We entirely abstain from commenting on them pending the decision of the momentous issue of life raised at the trial.

THE new part of the east wing of King's College Hospital is being rapidly completed, and a new handsome railing put round the front, with a gateway. This is a very great improvement to the old bill-poster's hoarding, which has long disfigured the front of one of our finest metropolitan hospitals. It is to be hoped the new wards will be soon occupied by needy and deserving patients, who could otherwise not obtain medical and surgical skill and attendance, and that a neatly laid out piece of ground will grace the front of the hospital.

APOTHECARIES' HALL.

AT the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were:—1. Thomas Johnson English, of St. George's Hospital, a Gold Medal; 2. Sydney Howard Vines, of Guy's Hospital, a Silver Medal and a Book.

SWINDLING DIPLOMAS.

WE narrated last week the steps by which the officers of the College of Surgeons of England were placed upon the track of a traffic in forged diplomas from American Universities, which is now being carried on in London. The pending trial of "Dr. Rosenzweig" in connection with a charge of abortion and murder, has drawn attention in New York to the tricks by which a scandalous institution calling itself the "Eclectic Medical College of Philadelphia" has been and is carrying on a sale of diplomas to unqualified persons. The *New York Tribune* and the *Philadelphia Evening Bulletin* have thoroughly exposed the character of this establishment. There exists in the State a nominal power of law to put down this disgraceful traffic; we heartily hope that it will be enforced.

ABDOMINAL PUNCTURE IN TYMPANITES.

THE practice of puncturing the abdomen in cases of extreme tympanitic distension has recently formed the subject of some interesting communications in our pages. Sir Thomas Watson, in the new edition of his *Lectures*, refers to the subject, in connexion with mechanical occlusion of the intestinal tube, in the following terms.

"There is one further expedient which I should recommend in these trying cases, which we know (no matter how) are of necessity fatal. In cattle that are 'blown' by overfeeding on wet clover, a rough procedure, that of piercing the distended bowel with a hay-fork, has often been practised by farmers with complete success. The distress from extreme distension of the intestines by wind is so intense, the craving for relief from that distress so importunate, and the comfort from obtaining it so great, that, were I the subject of such pressing and prolonged torment, I should beg to have the inflated bowel eased by puncture with a fine trochar, even if I might (what is impossible) so lose a day or two of painful life. Since this thought was forced upon me by sufferings that I had personally witnessed, I have been gratified to learn, from a communication made to the Clinical Society by Mr. Thomas Smith, that the same thought, as was natural, had occurred to others before me, and been acted on with all the success of which it was capable; by Dr. Braxton Hicks, as well as by Mr. Smith, in this country; and by more than one physician on the Continent."

Mr. McBride's letter last week explained that it is the *rumen* which is punctured in cattle and not the bowel. We have in hand, besides

the articles already published, an interesting communication on the archæology of the subject.

MEDICAL OFFICERS OF THE ROYAL HOUSEHOLD.

SIR CHARLES DILKE is shocked at the large number of gentlemen holding medical appointments in connection with the Royal Household. Addressing his constituents in a speech, he observed that nothing is more singular than the constitution of the medical department. "You would hardly credit," he says, "the number of medical gentlemen who are required for the service of the Household, but I am aware that some of them are unpaid. There are three Physicians in Ordinary, three Physicians Extraordinary, one Sergeant-Surgeon Extraordinary, two Sergeant-Surgeons, three Surgeons Extraordinary, one Physician of the Household, one Surgeon of the Household, one Surgeon-Apothecary, two Chemists of the Establishment in Ordinary, one Surgeon-Oculist, one Surgeon-Dentist, one Dentist in Ordinary, and one other Physician; while the Prince of Wales has for his special benefit three Honorary Physicians, two Physicians in Ordinary, two Surgeons in Ordinary, one Surgeon Extraordinary, one Chemist in Ordinary, or more—making thirty-two doctors in one family." On further inquiry, he will find, however, that these appointments are almost entirely honorary, and that only work done is paid for, and that at no extravagant rate. We greatly doubt whether he can expect to prove extravagance in the civil list, if his information on other subjects be not more thorough than on this. The title is a public honour, and nothing would be saved to the public funds by withholding this mark of distinction.

PROVIDENT DISPENSARIES AND THE CHARITY ORGANISATION SOCIETY.

THE Report of the Medical Committee of the Charity Organisation Society on Provident Dispensaries has just been completed, together with the rules recommended for the management of these institutions; and will be published next week by Mr. Lewis of Gower Street. A conference of hospital authorities will be arranged, in accordance with the suggestions, for an early day in December, when Mr. W. H. Smith, M.P., Mr. Stansfeld, M.P., and others, are expected to take part in the proceedings.

MR. CHRISTOPHER HEATH ON CIRCULATION.

MR. HEATH forwards, at the moment of going to press, a copy of an office letter addressed to him by the publisher of the *Lancet*, referring to his recent correspondence on behalf of that journal with our publisher, and "declining to accept the challenge" which Mr. Heath has provoked, "or to furnish such evidence as his letter suggests." The publisher, however, has admitted an agent of Mr. Heath's to a private examination, and that gentleman furnishes a statement, which Mr. Heath also forwards to us, of which the effect is to certify that, judging from a partial examination of particular pages of a book in that office—the sales' book—he concludes that the weekly issue exceeds a number stated as "between four and five thousand." So childish a stratagem we do not remember to have ever seen employed. The particular pages referred to are apparently the registers of Friday's sales: the sales on the days subsequent to that of publication take up possibly a good deal of room, but are counted, of course, by units—being the sales of chance copies. So far as this vague certificate would prove anything, it proves that the circulation of the *Lancet* is under five thousand a week, and nobody can say from this document how much under. Thus the best case that the publisher of the *Lancet* can make out even by the childish piece of mystification resorted to indicates, so far as it shews anything, that the circulation of the *Lancet* is less than that of this JOURNAL, and proves, from such examination of the books as has been permitted, the original statement of our publisher. Really, the least said about so absurd a document as that which Mr. Heath has forwarded to us, the better for him. The contest was originally one between publishers, and in its present shape was not of our seeking. It was commenced by Mr. Heath. *Ab origine*, it was certainly not dignified: it

has now degenerated into the ridiculous. For the managers of the *Lancet* to allow the private agent of their chivalrous *attaché* to inspect the first page of the books, and to shut him out from the succeeding pages, was an act of cruelty greater than to refuse him access to the books altogether. It is to make Mr. Christopher Heath the victim of a transparent artifice, and the mouthpiece of a ridiculous suggestion that the other pages were comparable in any way to the first, which we are quite sure that he would have indignantly rejected if he had allowed himself to think. The challenge of our publisher remains open; and nothing could well be better calculated to support the correctness of his statement than the information as to the smallness of the *Lancet* sales, now furnished by Mr. Heath.

THE EDINBURGH UNIVERSITY CLUB.

THE quarterly dinner of this club was held at St. James's Hall Restaurant on Wednesday evening; Dr. Sieveking, Vice-President, in the chair. A general meeting of the members was held previous to the dinner, when a handsome silver "loving cup", subscribed for by the members, was formally presented to the club by Dr. Sieveking. The new property of the club was proved during dinner to possess a practical value of no mean measure. Amongst the guests were Admiral Belcher, Mr. Callender, and others. A number of excellent songs increased the enjoyment of the evening.

THE ROYAL HUMANE SOCIETY AND THE LATE DR. CHRISTIAN.

THE Committee of the Royal Humane Society, on the occasion of the lamented death of Dr. Christian, which we had recently to regret, have expressed to his widow, by formal resolution, their deep sense of the loss which the Society has sustained in the death of their late colleague, who, by his scientific knowledge and judgment, has during the last twenty years materially contributed in carrying out the philanthropic objects of the Society, and has, by untiring zeal and promptitude of action at all hours, been the means of restoring many to health who appeared beyond human assistance.

CHOCOLATE AND ITS ADULTERATIONS.

IN the *Annales d'Hygiène Publique* for the present month is an article by M. A. Chevallier on the adulterations of chocolate. This article of diet is, he says, the object of numerous adulterations more or less injurious to health. He had long intended to call public attention to the subject; and has now been specially induced to do so by the results of the examination of a number of specimens sold for consumption during the siege, and of which the greater number were chocolate only in name. After giving an account of chocolate, the mode of its preparation, and the various forms in which it is sold either alone or in mixture with medicines, etc., he notices the manner in which chocolate is adulterated. The ingredients used for this purpose are enumerated as follows: 1. Damaged cocoa, and the *débris* of almonds; 2. Starch; 3. The flour of wheat, maize, and of the leguminous plants; 4. Dextrine; 5. Burnt sweet almonds; 6. Gum arabic; 7. Red ochre; 8. Cocoa-shells; 9. Storax, or balsams of Peru or tolu in place of vanilla; 10. Raw sugar and powdered sugar of inferior quality; oils and fats, in place of the cocoa-butter. M. Chevallier expresses the hope that the French Government will take measures for the prevention of the frauds to which he refers; care being at the same time taken to offer no impediment to the means of improving the manufacture of an article of diet in such universal demand.

SUITS FOR MALPRACTICE.

IN an able article in Hammond's *Journal of Psychological Medicine*, on the Sphere, Rights, and Obligations of Medical Experts, Dr. James O'Dea of New York discusses the frequency, said to be increasing, of vexatious and ruinous suits brought against members of the medical profession. His observations have a direct bearing on similar cases in this country. We are not aware that they are increasing in frequency here; but, like other anomalies, they have an occasional tendency to

the epidemic character; and the following passage is not without interest for the professions of law and medicine in this country.

"It is said that nine-tenths of the suits for malpractice are founded on the treatment of fractures, amputations, and dislocations; and the habit of bringing them is increasing so much, that honest and capable surgeons have seriously debated the necessity of retiring from a profession whose emoluments are so scanty in comparison with its risks, and in which the hard-earned reputation of almost a lifetime may be demolished in a day. I cannot altogether acquit the legal profession of some share in the production of this feeling of insecurity among medical practitioners. It is their duty, of course, to hear the complaints of their clients; but they should see to it that these complaints are justified by the facts; and they should acquire sufficient knowledge of these facts to enable them to judge whether, even if true, they justify an action which may entail such lamentable results. Have they such knowledge? I fear not. I fear they share to some extent—to too great an extent, indeed—the popular error that whatever deformity results from a fracture is the fault of the surgeon. I think they are not sufficiently aware of the differences in the nature and termination of fractures; that in their nature they are simple and compound; that simple fractures are transverse or oblique; that *oblique fractures are the rule, transverse fractures the exception*; that the transverse get well without deformity, provided the patient obeys instructions; but that the oblique and compound almost invariably, and in spite of the most admirable surgery, leave shortening or other disfigurement; consequently that most fractures only unite at the expense of the length or shapeliness of the limb. These, with other facts of a like character, have been established by Professor Hamilton of this city, who proved, by the results of investigations conducted in a rare and exemplary spirit of candour and impartiality, that 'in fractures of the tibia and fibula, both compound and simple, perfect results are in the proportion of only one to about three of the cases treated; and, in fractures of the femur and clavicle, complete cure results in about one case in five; in fractures of the patella, a perfect cure happens only in one case in six.' Is it not time for the legal profession to have a knowledge of these facts? Is it not a reasonable hope that, with this knowledge in their possession, they will, even apart from moral considerations, lend the weight of their great influence to discountenance ruinous and vexatious conspiracies against medical practitioners?"

SCOTLAND.

THE UNIVERSITY OF EDINBURGH.

ON Friday evening of last week, the students of the University met in the Humanity class-room to nominate gentlemen for the lord rectorship. As usual, the names of a large number of the celebrities and notorieties of the day (the Tichborne claimant included) were brought forward, amidst showers of peas and other customary demonstrations. The nomination of Sir William Sterling-Maxwell appeared to receive most favour with the students.

SIR ROBERT CHRISTISON, BART.

THE honour of baronetcy conferred by Commission on Professor Christison of Edinburgh is a just recognition of his well-earned position at the head of the profession in Scotland. Professor Christison already holds the appointment of Honorary Physician to the Queen in Scotland, and is President of the Royal Society of Edinburgh. He has received the honorary doctorate of Oxford, and has been twice President of the Royal College of Physicians of Edinburgh. He has been a Professor of the University of Edinburgh since 1822, and is the author of a work on Poisons, which, although written many years since, is still a standard authority; and of a highly esteemed treatise on *Materia Medica*. Sir Robert Christison is a Crown Member of the General Medical Council, and took a leading part in framing the authorised edition of the *British Pharmacopœia* issued by the Council. Recently, as a mark of especial esteem and respect from his colleagues in the University of Edinburgh and other friends, his bust was sculptured by subscription, and placed in the library of the University—an honour which, we believe, had not before been conferred on any professor during life.

THE MEDICAL CHARITIES OF IRELAND UNDER THE POOR-LAW.

II.—THE IRISH DISPENSARY SYSTEM.

THE area and population of the dispensary districts vary considerably, nevertheless the system is found to work with fewer drawbacks than any other system. The area of Ireland is 20,322,643 acres, or 31,754 square miles. This gives on an average 25,403 acres, or about 40 square miles, for each of the 800 dispensary medical officers. The population, taken at 6,000,000, gives 7,500 persons to each medical officer on an average. In cities, the area is much less and the population much greater. In some of the country districts, the area is from 100 to 200 square miles. In Bangor dispensary, county Mayo, the area is 230 square miles, with a population of 9,021 and a valuation of £5,622 : 11. This dispensary has no apothecary and no midwife. The whole of the visiting, prescribing, dispensing, and midwifery, registration and vaccination, is done by the medical officer for a salary of £110 : 8 : 9.

The election of Poor-law medical officer in Ireland is a complicated and unsatisfactory proceeding. The Commissioners require that candidates should possess a qualification in medicine, surgery, and midwifery, and be 23 years of age. If there are half-a-dozen candidates possessing the requisite qualifications, the election will in most instances be decided in favour of that candidate whose politico-religious sentiments are in accordance with the proclivities of the majority of the electors—in other words, the medical officer is not selected on the ground of his being the best physician or surgeon, but in consequence of his political and religious sentiments being reciprocated in that particular district. This of course does not secure the most able man for treatment of the sick poor under the care of the State: in Ireland especially it gives rise to ill-feeling and discontent. This system should be abolished. The entrance into the Poor-law Medical Service should be alone through the portal of competitive examination, as obtains in the army. The number of Poor-law medical officers in Ireland is almost identical with those of the medical service in the army—viz., 1,000. The annual number of vacancies has been estimated at 50 to 70. Two examinations annually, as in the army, would supply a sufficient number of men to fill the vacancies. These appointments would be awarded, both in order of time and value, according to the merits of the candidates. A knowledge of Hygiene and State Medicine should form an important feature in the education and examination of all future candidates for the Poor-law Service. This service should become a branch of the Civil Service, and be paid entirely—not half, as at present—out of the Consolidated Fund, for the reason that disease is not local but national, and not only national but international. It is surely as important that the health of the poor should be as efficiently protected as that of the army. The poor are exposed to every vicissitude of want and sickness: the army is composed of men in the prime of life, and every precaution is taken to maintain their health. If the cure and prevention of disease of the citizens be viewed from a politico-economic point of view, it becomes apparent that an efficient Poor-law medical service is as important as an efficient medical service for our combatant forces. It is important always to bear in mind to what extent pauperism is the result of disease, and to what extent both may be prevented. The service should be remodelled; the entrance should be by examination; there should be increased pay for length of service, promotion, and fixed and certain superannuation. A service without promotion affords no inducement or stimulus for its energetic pursuit.

The duties of the dispensary physician are exceedingly onerous and responsible. At the onset, he is made acquainted with the fact that he has at least thirty masters. The 800 dispensary doctors have close upon 30,000 irresponsible persons who issue orders for their attendance on the poor. The medical officer is constantly at the mercy of guardians, members of dispensary committees, and wardens and relieving officers. Those who issue the tickets, elect and pay the medical officer—hence the importance of not quarrelling with the powers that be, however unjustly they may exercise their prerogative. These 30,000 irresponsible issuers of tickets are further increased by the various members of their families, who also issue tickets. This is irregular and illegal; but it is not politic to fall out even with pseudo-authorities. The result is, as might be expected, that tickets are issued for attendance on persons able to pay for it. This demoralises the recipient, inflicts pecuniary loss on the ratepayer, and plays havoc with the private practice of the medical men in the neighbourhood; and in not a few instances with the dispensary medical officer, who in some cases is the only medical man

for miles round. The indiscriminate and irresponsible issue of dispensary tickets is the *bête noir* of the medical profession in Ireland. In the first instance it presses with unnecessary harshness on the dispensary medical officer, and indirectly on the profession generally.

From a careful inquiry it would appear that there are two causes which have operated in producing this indiscriminate issue of dispensary tickets. The first cause consists in the fact, that hitherto the Irish Commissioners have given no definition to the term "poor person". On careful consideration it will be seen that it is next to impossible to define this term, more especially in cases of sickness, for the reason that there is nothing that produces pauperism so rapidly among the artizan and labouring classes as sickness. The well-to-do artizan earning from £2 to £3 per week, with a family of five or six children, will in many instances, if stricken down with sickness, or disabled from working for four or five weeks, become an inmate of a workhouse, and if he die he leaves his family as a legacy on the rates. The other cause is within the province of the profession of Ireland to rectify—it is that a guinea is asserted to be the doctor's fee in Ireland. It is hardly necessary to state that this is not invariably the case. It is a fiction that is not infrequently used by those who are desirous of showing the supremacy of Irish over English practice. It is in reality a myth. Not a few of those who demand a guinea fee do not object to see for that one fee a patient three or four times—hence, practically, the fee is reduced to five or seven shillings. This system appears to have originated and been supported in large cities by certain members of the profession. It is at once apparent that the senior members of the profession would be consulted by the public rather than the junior, the more especially if the same fee were demanded. This operates unfairly to the younger members of the profession. The latter might, with advantage to the public and profit to themselves, accept a fee of five shillings or seven shillings for each consultation, as obtains on the continent; and the senior members of the profession should insist on receiving a guinea for each consultation. This would at once do away with the pretence that is urged as a reason for the indiscriminate issue of dispensary tickets, that the recipient was unable to pay a pound fee. Those able to pay a moderate fee would have the opportunity of so doing, to the manifest benefit of the dispensary medical officers, pecuniary advantage of the profession, and the relief to the ratepayers generally. The pound fee has been repeatedly used as an argument for the issue of dispensary tickets: this is in the hands of the profession to rectify.

The duties of a dispensary physician are that he shall attend at his dispensary on certain days and certain hours, and that he shall visit at the homes of the patients on whose behalf application is made, or elsewhere, as the case may require, etc. It is necessary that he should be furnished with a ticket signed by some person authorised to grant it; and he must not afford medicine or appliances, except in *urgent cases*, before the ticket has been presented. He must keep and duly enter the relief register. This is a simple duty in rural districts, where the patients average ten or twelve a day; but in London, should this system be introduced, where a hundred and fifty or two hundred patients a day will present themselves, it will practically be found impossible to trace each case, record the prescriptions, re-write them, and give the resultant. If this could be done, it is exceedingly problematical what useful result would be gained. None but those who are practically acquainted with the intricacy of dispensary practice, can understand the difficulty, nay, almost impossibility, of carrying out the details of this duty. Tickets are bought, sold, lent, borrowed, stolen, bartered, and hired to such an extent in cities, that their registry is a farce. The only cases where an accurate registry can be effected is that of the red or visiting tickets; and from them almost exclusively is any important sanitary information to be derived. It is well to bear in mind that the time spent in the endeavour to register these useless cases, is so much time deducted from the diagnosis and treatment of disease. Every particular entered in the register, with the exception of the disease, is, or ought to be, recorded on the ticket. The amount of clerical work imposed on the dispensary physician is as burdensome as it is useless. The dispensary porter should not be appointed unless he were able to write, and then he could keep the register, the medical officer merely adding the disease, and the apothecary filling in the prescription. It must at once be evident that it would be better both for the medical officer and the patients, that the former should follow his legitimate vocation in the diagnosis and the treatment of disease, than waste his time in entering absurd names in a book that it is impossible to keep accurately. The remuneration of the dispensary medical officers in Ireland is totally inadequate, and would be farcical if it were not at times tragical. In cities, it barely pays house-rent and taxes; and in country districts, it little more than pays for the wear and tear and keep of horses, which in most instances are an absolute necessity. It is not a little noteworthy that, wherever the district is poorest, the pay is least, the area greatest,

and the work most arduous. To some of the largest and poorest districts an island is attached, necessitating not only a horse, but a boat.

The average pay of the dispensary physician is £97 *per annum*. There are no fees for operations or for midwifery. The average value of the vaccination appointments is about £7 each, and that of registration about £14. The indiscriminate issue of dispensary tickets has destroyed private practice altogether in some districts, and in all it has very materially injured it. It is true that a ticket may be cancelled at the next meeting of the Dispensary Committee if issued to a person not entitled to it; but the Committee may not meet for weeks or even months; and as soon as the meeting is over, another ticket may be issued to the same person, which will last till the next meeting, so that cancelling is a farce. The number of persons who issue tickets could, with advantage, be greatly reduced, and responsibility should attach to all who do issue them. Tickets for out-door relief are not thus issued. The relieving officer is accountable. It has been suggested that tickets might be introduced with advantage, having a value of 2s. 6d. or 5s., and so on. The dispensing of the prescriptions costs from 4d. to 6d. In county districts where no apothecary is kept, this might be deducted for the cost of the medicines, and the balance be the doctor's fee. This would lead to a more independent feeling amongst the recipients of Poor-law medical relief, be a boon to the medical officer, and a saving to the ratepayers. Every dispensary ticket issued entails a cost for drugs as surely as the half-pound of beef or mutton, though it may not be so immediately apparent. A paid responsible officer to each dispensary district, to issue medical relief tickets, is an urgent necessity.

The condition of the dispensary houses is not always what it ought to be. In Dublin, the dispensaries are fairly adapted for the purpose intended; as a rule, they are convenient, and are provided with waiting room, dispensing department, and consulting room, with house-accommodation for the resident apothecary. High Street Dispensary, however, presents a marked contrast to the others in the city, and merits a passing remark.

It is approached through a narrow, dirty passage. The exterior is grimy, the windows are festooned with ancient dirt; where the glass is absent, boards and rags supply the place, and contribute not a little to the grotesque. On entering the waiting room, one is struck by its damp, barn-like appearance. The atmosphere in the morning is like that which any one who has visited ancient crypts would at once recognise. The consulting room partakes much of the same character. The walls here have been boarded round to the height of some four feet, in order to prevent the plaster from falling off. Above this board, the water-mark, like a tidal wave, is plainly seen. The cellar is unoccupied, and, as usual, refuse has accumulated, and a musty smell arises through the floor, and fills the room. The room above the dispensary is occupied by an amateur guano-manufacturer, under the title of a poultry yard. To the rear of the dispensary is an ashpit, etc., filled with every abomination. The water from the roof of the dispensary percolates through the heap of filth, and slowly finds its way through the cellars into the house of the resident medical officer. The house is, of course, exceedingly damp. "Abandon hope, all ye who enter here", would be an appropriate motto. Rheumatism and bronchitis are the frequent ailments of the residents. It is difficult to get a servant to remain; the one now there has a sepulchral cough, and the last porter died of fever of a typhoid character a short time ago. On lighting a fire in the parlour, a dense fog arises. Some idea of the dampness of the place may be inferred from the fact, that the glass shade suspended over the fanlight in the passage condenses the moisture, and it may be seen constantly dripping, like the dripping well at Knaresborough; this may certainly be ornamental in a wood, but is highly objectionable in a dwelling-house.

In the country districts, the dispensaries are often tumble-down houses, little better than cabins, with very little convenience for the preservation of medicines. The drugs consequently became mouldy and inert. This is the fault of the guardians. The drugs supplied are not always of the best description. This is due to the contract system in operation in Ireland. It has been found that the appointment of apothecaries to dispensaries has not only been of the greatest advantage to the patients, but has proved a saving in the cost of drugs in some instances equal to the cost of the salary of the apothecary.

In connection with the dispensary system, the establishment of "village hospitals" is contemplated, which will doubtless add greatly to the efficient working of the system. In the last report of the Irish Commissions, attention is directed to this question in the following paragraph.

"It is our opinion that no more effectual way of protecting this country against future invasions of epidemic disease, and of affording in ordinary times effectual medical relief to the sick poor residing at a distance from workhouse hospitals, could be adopted, than by establishing

where it may be necessary what are in England called 'village hospitals,' attached to the dispensaries, and placed under the dispensary medical officer. In other words, we would, if funds were forthcoming, advocate adding to the dispensary, in populous districts remote from workhouse buildings, a village hospital, with at least two wards, one for either sex, and containing five to ten beds in each ward. The additional cost of such an establishment to the union would consist of the salary and maintenance of the nurse superintendent, and a fair addition, if requisite, to the medical officer's salary, together with the necessary furniture and appliances. As regards the cost of the buildings, such auxiliaries to the present system of Poor-law relief might fairly be considered to have a prior claim on whatever part of the surplus of the Irish Church Fund might become hereafter available for such uses. If an advance on security of that fund could at once be obtained, it would be put to immediate use in a considerable number of unions."

The midwives employed are not nearly adequate to the work to be performed. The number is being augmented year by year, but there are only 159 midwives for 1,055 dispensaries. The duties of the midwives are not well defined; and in some instances, it appears to be uncertain whether they are the superiors or inferiors of the medical officers. This not unfrequently leads to unpleasantness and inefficiency. One thing is quite clear, that the midwife is paid for attending midwifery, and that the dispensary medical officer is not paid; but in a simple, protracted, or difficult case, he enjoys the proud privilege of being responsible for the conduct of the case, and the presence of the midwife is not any excuse for leaving until the labour is completed.

The question of superannuation has, after a long fight, arrived at a very unsatisfactory result; it is but permissive, and as religious political sentiments govern the election, so the same is seen in some cases of superannuation. Permissive superannuation in the hands of Guardians has not, and cannot, escape being jobbed. The object of the Act was to enable men to retire who, on account of age or infirmity, were unable any longer to perform their arduous duties to the poor with advantage. The permissive nature of the Act is the great drawback; it ought to be as certain as in the army and navy. About thirty medical officers have availed themselves of this boon; many others would doubtless retire and make room for younger and more energetic men, if they were sure they could obtain their superannuation from their respective boards.

In fine, I cannot conclude this notice of the Irish dispensaries without bearing testimony to the courteous manner in which I was received and informed on everything pertaining to the system, both in Dublin and the surrounding country districts. I could not fail to recognise the professional ability that characterises the dispensary physicians. They have performed every operation in surgery in the cabins of the poor with the best possible results.

From their ranks, the most eminent physicians and surgeons of Dublin have come. Presidents of the Colleges of Physicians and Surgeons, and gynaecologists of European reputation, have been dispensary physicians. These men have risen out of the ranks of the Poor-law service in Ireland. It is to be hoped that, under an improved and consolidated system, men of equal abilities may be induced to remain in the service, and rise by a just promotion to equal professional and social eminence.

BENSON BAKER,

District Medical Officer, Christchurch, Marylebone.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Royal Infirmary School of Medicine.—Vacancies at the Infirmary.

THE Royal Infirmary Medical School commenced the present session under very encouraging and favourable auspices. Thirty fresh men entered for registration in October, making a total of seventy-one students in actual attendance on the classes—a greater number than has hitherto been reached in the annals of the school. As these numbers (for the accuracy of which we can vouch) do not correspond with the figures published on the authority of the Government Inspector in the JOURNAL of the 4th November, it is necessary to explain that the returns made to the Inspector include those students only who are attending the anatomical classes, not giving a full list of new entries, nor of a considerable number of men actually on the school-books. The report alluded to represents Liverpool to have fewer students this year than in 1870—the fact being that, as already stated, there is a marked increase over the last and every preceding year.

The progress of the school, as shown by the continuous increase of

students during the past few years, indicates the success which has attended the efforts of the lecturers to develop to the utmost the abundant resources for medical teaching which exist in our large provincial towns, and shows at the same time the extent to which the rising generation of medical men appreciate and avail themselves of the facilities and special advantages which properly conducted provincial schools afford to those students who desire to pursue their studies and complete their medical education in their own locality.

The school-premises, originally spacious and commodious, have during the recess been extended by the addition of a separate class-room, fitted up with osteological specimens under the direction of Mr. Banks, the lecturer on anatomy, devoted chiefly to junior students for the purposes of study and special demonstrations; and new and more complete and convenient lavatories have been added to the dissecting-room. Further improvements are in contemplation, comprising the erection of a larger museum, a new library, an additional chemical laboratory, and a class-room for physiological demonstrations—all of which are rendered necessary to meet the growing requirements of the school. The plans for these proposed alterations are already drawn out; and it is hoped that the work may be completed before the commencement of another winter session.

Important changes have recently taken place in the medical staff of the Royal Infirmary. Dr. Inman has resigned, and is succeeded by Dr. Waters, whose experience and acknowledged ability and success as a clinical teacher while physician to the Northern Hospital cannot fail to render his appointment acceptable and valuable both to the infirmary and to the school. Dr. Vose, the senior physician to the Infirmary, has also resigned; and, although we can scarcely grudge him the repose to which nearly thirty years' active service fairly entitles him, we cannot but regret that the hospital should so prematurely suffer the loss of a physician apparently still in full health and vigour, whose gentlemanly bearing and high professional tone well sustained the dignity of his office, and whose unvarying kindness and courtesy and the conscientious discharge of his duties to his patients and to his pupils, will be long and gratefully remembered by a wide circle of friends and *quondam* students.

For the vacancy thus created at the Royal Infirmary three candidates are already in the field: Dr. Glynn, demonstrator of anatomy at the school and physician to the Northern Hospital; Dr. Dickenson, a young physician of much promise, the son of the late Dr. Joseph Dickenson, who held a high position and was very popular as a consulting-physician in the town, and who held for many years the office to which his son now aspires; and Dr. Davidson, lecturer on pathology at the school and assistant-physician to the Children's Infirmary, whose position and merits fairly entitle him to put in a claim. It is anticipated that the struggle will be between the first two candidates. With three such candidates before them, the trustees cannot fail to secure a good man. If Dr. Glynn should be selected, there will remain vacancies for two physicians at the Northern Hospital; and to many disinterested parties it seems that a satisfactory compromise might be made, which would place these three gentlemen in positions to utilise and develop the high professional attainments which they undoubtedly possess.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 27TH, 1871.

WILLIAM W. GULL, M.D., LL.D., President, in the Chair.

MR. HULKE exhibited a blacksmith, from whom, in August 1870, he had removed, in the Middlesex Hospital, by excision and cauterisation, a very large Rodent Cancer of the left side of the face. It had eaten away the whole lower eyelid and part of the upper one; it had also invaded the orbit and destroyed the eyeball, and opened the frontal sinus and nasal passages. The patient returned in August last with two small growths of the size of a threepenny-piece. These were destroyed with zinc-paste, and the whole surface now seemed perfectly healthy. There was now a large hollow, lined with healthy mucous membrane, showing the lower and middle turbinated bones, the openings into the frontal sinuses and nasal passages and the antrum. This chasm could be hidden by a mask. Mr. Hulke said that the danger of operating in these advanced stages was overestimated, and that with care the actual cautery and a chloride of zinc-paste could be safely used, even to the roof of the orbit.

MR. G. LAWSON exhibited a patient from the Middlesex Hospital on whom he had operated successfully for a Rodent Cancerous Ulceration, involving the upper eyelid and extending into the orbit and on to the side

of the nose. On account of the extent of the disease the eye was first excised, and then the whole of the diseased structure was removed with a scalpel. The bleeding having been arrested by the actual cautery, the chloride of zinc-paste, spread on pieces of lint, was freely applied to the cut surface; a layer of cotton-wool was then laid over the parts, and the whole was kept *in situ* by a turn of a bandage round the head. The patient suffered comparatively little from the operation. The pain which she had was relieved by a subcutaneous injection of morphia. Large sloughs soon came away, and portions of the bony walls of the orbit exfoliated, and ultimately the granulating surface of the wound cicatrised. There was now a large gap, showing the upper portion of the nasal cavity and some of the ethmoidal and frontal cells; but the parts were all healthy and cicatrised, and there was reason to hope there would be no recurrence of the cancerous ulceration.—MR. HULKE, in answer to the PRESIDENT, said that the zinc-paste was prepared by mixing the zinc with honey and opium.—In answer to Dr. MOXON as to whether the disease was really cancerous, Mr. HULKE proceeded to describe its minute structure. It was composed chiefly of small round spherical cells like those of rete mucosum without intercellular substance, and, although differing from epithelioma, resembled it so far that he could not draw a sharp line of distinction between the two.—MR. BERKELEY HILL alluded to a case in which the disease had been arrested by nitrate of zinc. The disease had, however, ultimately returned.—MR. HULKE remarked that there might be again and again a recurrence of the disease, but this depended on incomplete destruction of the disease.—Dr. SEDGWICK pointed out that the zinc, when used with glycerine, was apt to run, as the glycerine drew much water.—MR. LAWSON observed that a compound of chloride with oxide of zinc formed a powder, and could be applied to little spots if required.—MR. DE MORGAN said that at the Middlesex Hospital it had been found that the chloride of zinc-paste did not run, but formed a very dry surface. He expressed the opinion that we could hardly deny to rodent ulcer what we denied to epithelioma, the difference between the two in gland-affection being perhaps due only to the local condition of the disease, and not depending on the presence or absence of malignancy.—MR. HULKE remarked that the depth to which the zinc was to act could be regulated by the quantity used.

Dr. C. THEODORE WILLIAMS related three cases of Phthisis, in which contraction and rapid obliteration of cavities had taken place. The patients were two females and one male, and their respective ages were 15, 53, and 27. They had symptoms of phthisis for periods varying from six to twelve months; the disease being for the most part limited to the upper lobe of one lung, where unequivocal signs of a cavity had appeared. The first was a case of caseous pneumonia, where the cavity became obliterated in two months, and the patient has since remained free from cough for more than one year. In the second case, which, from the great prostration, excessive night-sweats, and aphthous state of the mouth, was regarded as unfavourable, the disease followed pleuropneumonia, and closure of the cavity was complete in three months. In the third case the patient had fistula, followed by scrofulous pneumonia; and a large tinkling cavity, involving the whole upper lobe of the right lung, formed, which became obliterated in two months, cavernous sounds being no longer detected. All three patients were free from family predisposition. They took cod-liver oil, with tonics, and enjoyed a liberal diet. Dr. C. T. Williams remarked that contraction had taken place with unusual rapidity in these cases; and the remarkable feature was, that it gave rise to little or no displacement of the neighbouring organs, and to no marked collapse of the chest. He therefore concluded that the vacuum created by the shrinking of the cavities must have been supplied by an expansion of the lung-tissue round the cicatrix. The obliteration in two months of a cavity sufficiently large to give tinkling sounds was an exceedingly rare occurrence.—Dr. HABERSHON expressed a doubt as to the cases narrated being examples of cavities healed up, and pointed out that there was no good reason to believe that they were other than cases of local pneumonia.—Dr. C. J. B. WILLIAMS pointed out that in the third case there was metallic tinkling, and therefore a large cavity. He had never seen a case in which the symptoms of obliteration were more manifest.—Dr. MOXON expressed himself as dissatisfied with the cases, as the report did not prove the existence of cavities to others. He had often heard cavities in the living subject, but found solid lung after death.—Dr. DOUGLAS POWELL had no doubt as to the existence of cavity.—The PRESIDENT was of opinion that we could not make a diagnosis of a foreign cavity in the lung, and alluded to a case of pleuropneumonia with cavernous sound and consonating bronchophony at one spot. The place was marked with nitrate of silver, and after death no cavity was found.—Dr. C. J. B. WILLIAMS observed that if the intensity of the sound were appealed to, the listener would be deceived; if the apex was entirely solid and led to the trachea, the sound was obtained as loud as

over the trachea itself; but it was not loudness that produces pectoriloquy, but the character of the sound. Besides, the history of the case was different from that of consolidation.—Dr. THEODORE WILLIAMS, in reply to Dr. HABERSHON and Dr. MOXON, stated that the diagnosis of the existence of a cavity in these patients was confirmed by several examinations made by his colleagues and himself.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 23RD, 1871.

ANDREW CLARK, M.D., President, in the Chair.

MR. SPENCER WATSON showed a case of Traumatic Dislocation of the Crystalline Lens into the anterior chamber. The lens was extracted through an incision in the sclerotic, at the lower and outer side. The result was good, useful vision being retained four months after the operation. He also showed a case of Congenital Displacement of both Lenses in a child, aged 14. When the pupils were natural in size, the irides were tremulous; and when the eyeball was moved inwards, the pupils became oval, and the plane of the iris near the pupil was obliquely inclined on the inner side, as if from the lens pushing it forwards at that part. There was slight divergent squint, and the child's aspect was peculiar.

Mr. HENRY SMITH related an interesting case of Lithotrity followed by Lithotomy. The patient was a healthy country gentleman, aged 70. The bladder was healthy and tolerant of the sound, the urethra capacious, and the stone of a size convenient for crushing. The stone was seized without trouble, and crushed in a few seconds. In forty-eight hours, violent inflammation came on, and his life was placed in peril. In ten days, he was free from danger. Lateral lithotomy was performed, and he speedily recovered.—Mr. BRYANT called attention to the extreme importance of a course of sounding. In stricture and stone in the bladder, especially in the latter, the passage of a sound might set up urethral fever. In a case of stone for which lithotrity was proposed, he sounded several times. On the third occasion, the lithotrite failed to detect the stone, and the operation was postponed. Rigors and much constitutional fever set in, and the patient died on the fifth day. Disease of the kidneys was present.—Mr. SMITH, two years ago, had in King's College Hospital a strong, healthy, agricultural labourer, with a small stone in his bladder. The stone was taken up with a lithotrite, measured, and let fall again, no violence having been done. Severe inflammation ensued, followed by death in ten days.

Mr. SPENCER WATSON showed an apparatus for applying Dry Cold to the Eye. Ordinary India-rubber air-balls were filled with water and placed in a basin containing iced water, and applied to the eye, being changed at intervals.

Mr. JOHN GAY read an abstract of his paper on Hypovenosity of the Lower Limbs. This has already appeared in the JOURNAL.—Mr. DE MÉRIC, Dr. ROUTH, Mr. BRYANT, and Mr. WEEDEN COOKE took part in the discussion.

MONDAY, OCTOBER 30TH, 1871.

ANDREW CLARK, M.D., President, in the Chair.

MR. DE MÉRIC related a case of supposed Fibroid Phthisis following an injury. The patient, a man aged 45, had had some of the lower ribs in the right side broken, near their angles. Some days after the accident (having up to this time apparently gone on well) he had hurried breathing, some pain in the left side of the chest, restlessness, anxiety of countenance, and abundant expectoration. On the eleventh day he was in a typhoid state; the whole left side of the chest was dull on percussion, and no breath-sound could be heard in it. At the end of two months the patient left his bed. About ten weeks after the accident gurgling began to be heard towards the apex of the left lung, and gradually assumed the character of the sound of air passing through a small vomica filled with fluid. The patient died on the ninetieth day after the accident. The right lung was found collapsed, filling about two-thirds of the cavity. It contained several circumscribed tubercular deposits of various sizes. The left lung formed a solid mass of tuberculous solid infiltration, without trace of vessels, air-tubes, or air-cells. There was no suppuration and no vomica. The heart was atrophied. There was no family history of phthisis; but it was difficult to conceive that the infiltration would be so extensive if some previous pathological change had not been present.—Dr. DOUGLAS POWELL could not understand why this was called a case of phthisis; he would consider it one of pneumonia in the grey stage.—The PRESIDENT said that if there were no cavity there was no phthisis. The specimen was an excellent example of the hard form of grey pneumonic consolidation.

Mr. JOHN PENNEFATHER read a paper on the Sense of Hearing.

Experiments with the air-pump had proved that a vacuum surrounding a body rendered it incapable of emitting sonorous vibrations; that sound was produced primarily by the vibration of a sonorous body; but that the composition of that body, and the atmosphere surrounding it, materially affected the radius to which the pulses of sound were transmitted. The pulses of sound were conveyed in undulating waves, which were fully illustrated by casting a substance into the water; the circular undulations gradually expanded until the inceptive force was expended. But, on coming into contact with an unyielding structure, the ripples leaped up and surrounded it, again uniting, but with increased force. Should there be a hollow space in the fixed object, the water rushed in with increased violence; so in the sonorous undulation of sound, as the pulses reached the side of the cranium, they surrounded and rushed into the entrance of the external ear with augmented power. Allusion was then made to the way in which the sonorous vibrations might be directed to a given point by reflectors. Mr. Pennefather traced the comparative anatomy of the organ of hearing, from its first rudimentary structure to its perfect development in the mammalian class, showing what was essential in the organic structure for the true reception of sound, and the perfect realisation of the sense. The manner in which the sonorous waves were transmitted to the internal ear was explained. The author contended that writers on this subject were in error, in supposing that the bones of the head or the air contained in the tympanum had any power of conduction, unless the sonorous body were in actual contact with the cranium. The structure of the internal ear with the rods of Corti was then explained and demonstrated, both by microscopical preparations and plates.—A discussion ensued, in which Dr. Routh, Dr. Symes Thompson, and Dr. Dalby took part.

Mr. TEEVAN then showed some instruments.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH.

A SPECIAL General Meeting of this Branch will be held at 37, Soho Square, on Tuesday, November 14th, at 4.30 P.M.; to take into consideration certain alterations in the Laws of the Branch, proposed by the Council.

A. P. STEWART, M.D. } *Honorary Secretaries.*
ALEXANDER HENRY, M.D. }

London, November 1st, 1871.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting of the members of the above District will be held at the Fountain Hotel, Canterbury, on Thursday, November 23rd, 1871, at 3 o'clock. The Chair will be taken by the President of the Canterbury Medical Society.

Dinner will be provided at 5 o'clock precisely. Charge, 5s., exclusive of wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

Gentlemen who wish to make communications to the meeting, are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

CHARLES PARSONS, M.D., *Honorary Secretary.*

2, St. James's Street, Dover, Nov. 7th, 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE November meeting of the members of the above District will be held at the Old Ship Hotel, Brighton, on Friday, November 24th, at 3.30 P.M.; Dr. ALFRED HALL in the Chair.

Dinner will be provided at 5.15 P.M. precisely. Charge (not including wine), 5s.

All members of the South Eastern Branch are entitled to attend, and to introduce professional friends.

Gentlemen who propose to stay to dinner, are requested to inform me the day previously.

Gentlemen desirous of making communications to the meeting, will oblige by giving me an early intimation, in order that notice thereof may be included in the circular convening the meeting.

THOMAS TROLLOPE, M.D. Cantab., *Hon. District Secretary.*

35, Marina, St. Leonard's-on-Sea, November 8th, 1871.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE first ordinary meeting of the session was held at the York House, Bath, on Thursday evening, October 26th; CROSBY LEONARD, Esq., President, in the Chair. There were also present thirty-eight members and three visitors.

New Member.—J. B. Fry, Esq., of Swindon, was unanimously elected a member of the Association and of the Branch.—Three other members were nominated, and will be balloted for at the next meeting.

Papers.—The following papers were read.

1. On the Use of Chloral in Puerperal Convulsions. By J. G. Swayne, M.D. Messrs. Prichard and Leonard made some observations.

2. Notes on Pneumothorax. By H. F. A. Goodridge, M.D. Dr. Budd offered a suggestion.

3. Intraocular Myotomy. By A. Prichard, Esq. This paper elicited much discussion, in which Messrs. Mason, Dobson, Smith, the President, and others, took part.

4. The Employment of Setons in Treatment of Strumous Diseases. By E. Crossman, Esq. Drs. E. L. Fox, Davey, and Spender, discussed this question.

The meeting closed with a vote of thanks to the gentlemen who had read the papers; and a special request that they would send them to the JOURNAL for publication.

CORRESPONDENCE.

OFFICERS OF HEALTH AND UNION MEDICAL OFFICERS.

SIR,—Some remarks recently made in a leading article of a medical contemporary, on "Officers of Health and Union Medical Officers," are calculated, as far as the influence of that periodical extends, to promote an entire misconception of the reforms which Mr. Hastings and the "Joint Committee" recommend.

I prefer commenting on that article in the BRITISH MEDICAL JOURNAL, as having many more readers in the provinces, to which alone the plan of the Social Science and the British Medical Associations, and the counter project of the Royal Sanitary Commission, apply. I, therefore, beg the favour of sufficient space to place the question fairly before your numerous readers.

The evidence taken by the Royal Commissioners, as also their Report, are decidedly against the unwise suggestion of your contemporary—to *debar the Poor-law Medical Officer from private practice*. So are all the best authorities on the subject, from the time when this absurd and mischievous suggestion was first put forth by official people, more than thirty years ago. Fortunately, an opinion adverse to it has been pronounced by Mr. Lambert (*Evid.* 4741), whose appointment as Secretary to the Local Government Board is a matter for general congratulation. Mr. Ceely, of Aylesbury, also a high authority on such a question, said in 1844, before the Medical Poor Relief Committee (*Rep.* p. 604):—

"I think that the union of private with public practice is desirable; first, that it is more satisfactory to the poor; secondly, that it is beneficial to them to have the advantage of the long and varied experience of established practitioners; thirdly, that it is beneficial to the rate-payers on the same grounds; it is equally beneficial to the rate-payers also to have the advantage of medical experience gained from an attendance on the poor, more particularly during the prevalence of epidemics, which generally attack the poor early, and in large numbers; and the separation of the appointment from private practice is more expensive, particularly in rural districts, if the districts are of the proper size."

No doubt the reproducer of this objectionable proposal found that the arguments brought forward by the Joint Committee, and adopted by Mr. Hastings, against the union of private practice with the duties of the superior Health Officer, were perfectly unanswerable. The only method of escaping from their conclusions, and at the same time of helping the Sanitary Commission to defeat their well-considered plan, would seem to be to impose Poor-law curative duties on the preventive functionary, and then to debar this compound officer from attendance on the remunerating classes of society.

This *tertium quid*, of course, involves the necessity of reducing the area to be committed to the Health Officer, while considerably extending the area of the medical relief district. Now, if there be one complaint against the present Poor-law Medical System better founded than another, it is that the medical relief districts, in many places, are already

too large for prompt attention to acute cases, and that the lives of the sick and hurt poor are often imperilled, if not sacrificed, owing to their difficulty in obtaining prompt assistance from a distant medical officer.

Ought, then, this serious peril to be largely augmented by a theoretical change, of a most expensive nature? That the cost of the plan would be enormous, is plain; for we may safely assume that no well-qualified medical man, debarred from other sources of professional income, and required to find the means of travelling over an extensive district, could live decently on a salary of less than £500 a-year. Now, if the medical attendants on the poor were reduced in number by one half, the cost of the 1600 who would then be employed in the double capacity would amount to no less than £800,000 *per annum*, in addition to the cost of drugs and dispensaries; for the introduction of the Irish system may now be considered inevitable. Can any one in his senses suppose that Parliament would sanction such a project?

On the other hand, for about half that sum, the plan of the Associations might be carried into effect, with liberal treatment of all the medical agents. The present 3200 district medical officers, performing certain sanitary functions, might receive each, on the average, nearly £100 a year—drugs being provided by the public; and every chief officer of health, debarred from practice, who would be required on that plan, might receive from £800 to £1000 a year.

There can be no doubt as to which of the two projects would be best for the poor, the public, and the medical profession. To reduce the cost of the former extravagant proposal to the amount of our estimate for the latter more reasonable plan, it would be necessary to reduce the number of the proposed compound officers to 800; that is, to dismiss three out of every four of the present district medical officers!

Who that knows anything about the medical care of the poor in provincial districts would suggest so cruel and unjustifiable a scheme?

Now, one of the notions of the writer whom I am criticising is, that the district placed under the care of the Medical Officer of Health "should not be a very extended area." This is a vague expression. But, if it mean that the officer should be enabled by the smallness of his district to carry out a system of domiciliary visitation, sickness, registration, and personal investigation of local causes of disease, and to report thereon—these are precisely the duties which the Joint Committee and Mr. Hastings propose to commit to the present district surgeons, acting as Deputy Health Officers; and they are duties which can be performed, efficiently and thoroughly, only by those who are backed and protected by a superior Health Officer made independent of practice.

They are duties, also, which, being performed by the proposed deputies, would enable the chief officers to undertake, with great advantage to the public, certain duties of a different kind in "a very extended area."

But, to question our opponent more closely, what does he propose as the limit of population to a district under *his* officer of health? We know what those best qualified to form an opinion on this point have said. For instance, Dr. Ballard, who has been deservedly promoted to an inspectorship, and whose practical experience is great, has suggested that a highly qualified officer of health might superintend a population of 200,000. Dr. Lankester is known to have advised ten or twelve such officers, debarred from private practice, for the whole metropolitan area, which would assign nearly 300,000 to each. Dr. Strange of Worcester, one of our oldest sanitary reformers, believes that 250,000 might be properly superintended, even in the counties. Mr. Dyke, the able officer for Merthyr, proposes 100,000 for a country district. Dr. Rumsey has given reasons for an average of 135,000. Dr. W. Budd thinks that a third or even half of a large county might be thoroughly dealt with by an accomplished officer. These are men whose opinions are entitled to some weight, and who might have been expected to influence the decision of the Royal Commission. They all contemplate the *twofold* organisation which the Associations propose. And it is curious to observe how the writer in question avoids all reference to the *two grades*; how he opposes the project of chief health-officers by arguments which properly apply only to district medical officers; and how he would convert the latter into officers of health of a single grade, either by leaving the higher responsibilities and duties unfulfilled, or by committing them to government inspectors, the number of whom would, in that case, have to be vastly increased, involving the necessity for further national expenditure. What those higher duties of the sanitary appointment would be, members of the Joint Committee have sufficiently explained; but I may mention the more obvious: 1. The collection, revision, and compilation, of the returns of sickness and mortality and of their causes, to be made by the registrars, deputy health-officers, and medical charities, in an extensive area; 2. The visitation of hospitals, dispensaries, asylums, and industrial establishments, which might be permitted, if to be performed by an independent officer over a wide district, but would never be tolerated if committed to the small

compound officer proposed in the *Medical Times and Gazette*; 3. Inspection in difficult cases referred to such an officer by the district deputies—e.g., "Nuisances arising from commercial and manufacturing processes of magnitude and involving important interests"; and 4. Advice to county authorities in cattle-murrains, to sea-port authorities in the threatened invasion of pestilences, and generally in grave emergencies affecting the health and safety of large populations. These, among others, are duties which could, with propriety, be committed only to a grade of officers of which your contemporary seems to have no idea. His project might possibly, though not advantageously, be adopted in London, and perhaps a very few other great centres of population; but to propose it for the provinces, containing nearly six-sevenths of the people of England, is merely to afford another instance of the unfitness of persons, influenced only by metropolitan views and associations, and knowing little practically of the country, to judge of what is required for the whole population.

I would notice one more advantage of the project of the Joint Committee; namely, that vacancies in the higher grade might be filled by the most deserving officers of the lower grade in each county. The same hope of promotion which leads to distinction in the army, navy, and civil service, might be beneficially extended to the local government medical staff, and tempt men of mark to enter the civil medical service. An honourable ambition as well as a sense of duty would then encourage skilful and laborious effort.

I am, etc.,

Nov. 2, 1871.

A MEMBER OF THE JOINT COMMITTEE.

THE DISCUSSION ON PROLAPSUS AT THE OBSTETRICAL SOCIETY: DECAPITATION VERSUS EVISCERATION.

SIR,—I have been unfortunate in being misunderstood upon both these subjects. In your editorial notice of the discussion on prolapsus uteri on the occasion of Dr. Conrad's excellent paper in the Obstetrical Society, you represent "Dr. Barnes to have asserted that prolapsus never occurred in the multipara." What I said, or at any rate meant to say, was very nearly the reverse. The subject-matter was hypertrophic elongation of the cervix uteri. This, I believe, rarely, if ever, occurs except in women who have borne children. Having stated this as a general fact, I thus proceeded to explain my view as to the mode in which labour acted as the primary cause of prolapsus and hypertrophy. As this will be no doubt fairly reported in your proceedings of Societies, it is unnecessary to repeat it here.

The other point for correction arises out of a note by Mr. F. W. Wright in the *BRITISH MEDICAL JOURNAL* for October 21st, entitled, "Should Evisceration ever be Performed in Arm-Presentations?" Mr. Wright quotes Churchill as condemning decapitation, and goes on to say: "Dr. Barnes, it would appear, gives the preference to evisceration, for he says that 'Sometimes perforation and evisceration are insufficient in themselves, and another step will be necessary in order to complete delivery. This ultimate step is decapitation.'" To stop here would convey an erroneous idea of my views. Mr. Wright ought properly to have completed the last sentence he quotes from my lectures on Obstetric Operations, 2nd edition, p. 217. There is no full stop after "decapitation"; the sentence goes on: "an operation of extreme importance, capable of bringing almost instant relief and safety to the mother." I then quote with full assent the opinions of Drs. Davis and Ramsbotham in favour of decapitation; and devote seven pages and three original illustrations to the description of the operation. The passage imperfectly quoted by Mr. Wright was simply the expression of some clinical experience I had had of the matter. I have been called to cases where, perforation and evisceration having been performed, delivery was still not accomplished. In these cases, I have decapitated and delivered with so much ease and celerity as literally to justify the words, "an operation capable of bringing instant relief and safety to the mother."

However, whilst according a decided preference to decapitation, I do not think that perforation of the chest, and pectoral and abdominal evisceration, should be altogether discarded. Sometimes the neck is very difficult to reach so as to fit the hook, a string, a wire, or other decapitating instrument round it; and sometimes the natural process of spontaneous evolution or doubling-up is so advanced that nothing more than perforation of the bulging side of the chest is required to facilitate the completion of the process. Sometimes, with or without perforation, the doubling up of the fetus may be promoted by cutting through the most prominent part of the vertebral column with scissors. The arch being thus broken, the body doubles up easily, or, a leg being seized, delivery, by drawing down the inferior part of the trunk, becomes a simple matter. Since these proceedings are designed in prosecution of

a course inicated, and often successfully carried out, by Nature, it seems to me unwise to condemn them absolutely. "Ni toujours, ni jamais", is an excellent maxim that finds a good application here.

I am, etc.,

ROBERT BARNES.

31, Grosvenor Street, November 4th, 1871.

MR. HEATH ON CIRCULATION.

MR. HEATH asks us to publish the following correspondence:—

9, Cavendish Place, Cavendish Square, W.

1st November, 1871.

SIR,—Certain members of the Committee of Council of the British Medical Association, which met yesterday at Birmingham, and before which I brought certain correspondence between myself and the publishers of the *BRITISH MEDICAL JOURNAL*, having expressed doubts as to the circulation of the *Lancet* being larger than that of the journal in question, I shall be much obliged if you will put in my hands evidence to show that the weekly circulation of the *Lancet* far exceeds that of the *BRITISH MEDICAL JOURNAL*, which may be assumed to circulate between four and five thousand copies per week.—Your obedient servant,

CHRISTOPHER HEATH.

The Publisher of the *Lancet*.

The *Lancet* Office, 423 Strand, London, W.C.

November 6, 1871.

DEAR SIR,—As we do not intend to exhibit our books to our contemporaries, or to enter upon a contest which at the best would be a very undignified one, we can neither accept the challenge which has been given, nor furnish such evidence as your letter suggests. For your own private satisfaction, however, the books are open to the inspection of your solicitor, who will at once see that your statements, in reference to the matter, are abundantly borne out by the facts and figures of each week.—I am, dear sir, yours respectfully,

J. CROFT.

C. Heath, Esq.

3, Langham Place, Portland Place, W.

9th November, 1871.

DEAR SIR,—According to your request we have inspected the weekly sale-book of the *Lancet*, at the office of that journal, and find that about seven pages of that book are devoted to each week's sales of the paper.

We have investigated the first page only of six weekly accounts in the present year, selected by ourselves at random, and find that each of such first pages shows sales effected to the publishing firms named therein, to an amount exceeding by several hundreds the number of copies you stated to us as the weekly circulation of the *BRITISH MEDICAL JOURNAL*.

These numbers are, of course, quite irrespective of the copies sold to firms whose names appear in the six remaining pages of such weekly sale accounts.—We are, dear sir, yours very faithfully,

C. Heath, Esq.,

LEATHES AND MAYNARD.

9, Cavendish Place, Cavendish Square.

LIP-READING BY THE DEAF AND DUMB.

SIR,—In your interesting article on "The Education of the Deaf and Dumb by Lip-reading and Articulation", several statements occur which call for remark. The system sought to be introduced by Mr. Van Praagh is by no means "new", nor was it "originally English". It had its origin in the writings of Dr. Ausman, a Swiss physician, published A.D. 1692-1700. Contemporary with him was Dr. Wallis, one of the earliest English writers on the subject. Samuel Heinicke founded a school at Leipsic in 1778, taking Ausman's works as his guide; and about the same time schools were established in England and Scotland on the sister method, as taught by Wallis and others.

"The education is commenced at the age of seven, and it extends over a period of seven or eight years." It should have been added that two preparatory years are passed in acquiring the elements of words, making a total of ten years. This is a serious disadvantage, when we consider that the greater part of the deaf and dumb belong to the poorer class, who must early begin to earn their own living. The sign- and finger-talking system requires no time for preparation; and throughout its course knowledge is conveyed much more rapidly than by lip-reading. We should thus suffer a clear loss of two years at the least in adopting the former method.

"It is not found difficult to obtain instructors." To meet with persons able and willing to undertake the arduous task is very difficult indeed. No system can do away with the fact that there are peculiar difficulties to be overcome in educating the deaf; and unless we are content to produce a speaking automaton when we might draw forth a living soul, we must conform our methods to their need, and not to our own convenience. Signs must be used in either system at the commencement; but in both they are wanted less and less as the pupils advance

in language. It remains to judge whether we should really benefit our deaf and dumb by withdrawing from them the means of a full education and giving them a fragmentary one in its room; for fragmentary it must be, to the majority, unless government aid be obtained to support the pupils through a longer term of study, provide a much increased staff of teachers, and uphold a highly expensive boarding-out system. Neither are we convinced that results will repay this greater expenditure. The voices spoken of as "not euphonious" are in reality so harsh and unnatural that teachers of articulating schools confess themselves unable to bear that distressing wear and tear produced by constant association with their pupils. It is, no doubt, a great advantage for the deaf to be able to converse with hearing persons, and those who do acquire this power will most readily find employment. Still, what a man is and has in himself is of more consequence than all his surroundings; and we must remember that only a minority of the deaf can attain to an adequate grasp of language by this means.

The system has received a "full" trial on the continent, with what result the following extract will show. Dr. Gallaudet, President of the Deaf Mute College, Washington, was in 1867 appointed to examine into methods and results, and to report on the state of education in Europe, with the view of adopting what was best for the deaf and dumb. In the course of a most exhaustive inquiry, he visited fourteen of the countries of Europe and forty-four of the principal institutions. He sums up the whole case as follows.

"Nowhere have my own examinations exhibited results sustaining the idea that 50 per cent. of the deaf and dumb can acquire a sufficient fluency in articulation to converse readily with strangers. That from 10 to 20 per cent. can do this, I have no manner of doubt. An additional 40 per cent. may aspire to converse on commonplace subjects with their teachers, family, and intimate friends. But oral language cannot, in the fullest sense of the term, be mastered by a majority of deaf mutes. Its proper position, therefore, in the system of instruction is not as a base or foundation, nor yet as the principal material in the superstructure, but rather as an adornment to certain portions of the building."

It must also be borne in mind that, except in very rare instances, persons accustomed to lip-reading are unable to follow a lecture or sermon, and that they cannot enter into a conversation between two or more persons.

I am, etc.,

TRUTH.

* * * In the article referred to, for "a few minutes," read in the last line "a few months."

OBITUARY.

WILLIAM DANIEL MOORE, M.D., M.R.I.A., DUBLIN.

WILLIAM DANIEL MOORE was born in April 1813 in Dublin, where his father and grandfather had long practised medicine and pharmacy. His father having died when he was very young, he was in 1826 apprenticed to his grandfather, and afterwards to Dr. Johnson, then Professor of Midwifery in the Royal College of Surgeons of Ireland. In 1828, he entered the University of Dublin for a time; but interrupted his university course, and did not resume it until 1840. In May 1833, he became a licentiate of the Apothecaries' Hall of Ireland; and in the following year, a licentiate of the Royal College of Surgeons of Edinburgh. He graduated as A.B. and M.B. of the University of Dublin in 1843, and as M.D. in 1860. In 1837, he became one of the Examiners of the Apothecaries' Hall, and retained the post twenty-three years, being governor in 1843-44. In 1867, he became a licentiate of the King and Queen's College of Physicians. He was admitted to the *ad eundem* degree of M.D. of Oxford in 1862, and to that of Cambridge in 1866.

Dr. Moore was distinguished for his literary abilities, and especially for his knowledge of European languages, which enabled him to make numerous valuable contributions to English and Irish medical literature in the form of translations of articles from the Dutch and Scandinavian languages. He was a constant contributor to the *Dublin Quarterly Journal of Medical Science* during the twelve years (1850-1861) in which the late Dr. Neligan was the editor of that periodical. His translations and reviews extended to books in the French, Italian, Spanish, German, Swedish, Danish, Dutch, and Latin languages, and were continued at times for several years, while his health permitted.

Among his original contributions were papers on the following subjects: "A Peculiar Corrosion of Lead in Pipes from Galvanic Action Developed by the Contact of Organic Matter", read before the Chemical Section of the British Association in 1835; a "Statistical View of the Principal Medicines prescribed in Dublin during the last Sixty Years" (*Dublin Journal of Medical Science*, 1836); "Outline of the History of

Pharmacy in Ireland"; Researches on the Coagulability of Human Milk; the Latent Period of Scarlatina; the Urine of the Crocodile; Unilateral Atrophy of the Face; etc. These were published in the *Dublin Quarterly Journal*; besides which, he contributed various papers to other medical periodicals.

In 1855, he translated, from the Norwegian of Dahl, Heller's *Pathological Chemistry of the Urine*. He also translated for the New Sydenham Society the late Dr. Schroeder van der Kolk's essays on the Spinal Cord and on the Medulla Oblongata, and on Atrophy of the Brain; and also the great work of Donders of Utrecht *On the Anomalies of Accommodation and Refraction of the Eye*.

Dr. Moore's labours in making Scandinavian medical literature known in this country led to his being elected a Fellow of the Swedish Society of Physicians, of the Norwegian Medical Society, and of the Royal Medical Society of Copenhagen.

About the beginning of 1867, the first symptoms of the disease which ultimately caused his death—progressive muscular atrophy—manifested themselves. Slowly he lost strength; and in the beginning of 1870, he ceased to be able to walk. From the end of May of that year, he never left the house, except on one or two occasions when he was carried into the garden for a short time. About three weeks ago, his little remaining strength began to give way more rapidly, and on the night of Saturday, October 28th, he entered calmly and peacefully into rest. To the end, his intellect was clear and vigorous as ever.

DAVID BOWEN, M.R.C.S.ENG.

MR. DAVID BOWEN died at Newport, Pembrokeshire, on October 22nd, of hydrothorax. He had been ailing for some months; but on the 17th, three days before his death, he drove a distance of six miles to vaccinate. He also went out a little way in his gig the next day. On the morning of Sunday, the 22nd, he prescribed for a patient, and then, after a terrible struggle with his complaint, calmly breathed his last a quarter before midnight. He was much beloved and respected for his great tenderness of heart, his truthfulness and integrity, and was trusted in for his professional skill.

EVAN CAMERON, M.D.

A YOUNG practitioner of high attainments and bright promise has been suddenly taken from among us. After a distinguished career at Glasgow University, Dr. Cameron practised with much success in Bradford (in connection with Dr. Burnie of that town), and had earned for himself by his winning manners and devoted attention to the duties of his profession, the love and esteem of all who came in contact with him. He bade fair to take a high place among his professional brethren had life been granted him. But he has been taken away in early manhood, and numerous friends now mourn his loss.

In the midst of health and a busy life he was struck down with fever, from which he was slowly recovering, when he went to Newabbey, near Dumfries, to recruit, but a relapse occurred which ended fatally on September 30th.

EDWARD NEWBOLD, M.R.C.S., OF MACCLESFIELD.

EDWARD NEWBOLD, whose death took place at Worthing on September 8th, was born at Macclesfield in 1811, being the sixth son of Mr. Francis Newbold, a surgeon. As a student, Mr. Newbold first resided at Manchester with Mr. Thorpe; at whose death he was transferred to Mr. Turner. During his residence with the latter gentleman, he was a diligent student at the School of Medicine and the Royal Manchester Infirmary, and gained some honorary prizes. He also studied in London under Sir Astley Cooper and Lawrence. After passing his examinations, he joined for some time in partnership a medical practitioner at Aldborough and Hawkshurst. At the death of his father, Mr. E. Newbold returned to Macclesfield. He there enjoyed for many years a large private practice. More than twenty years he was honorary surgeon to the Dispensary; he was also surgeon to the Union districts, comprising five populous townships; surgeon to several insurance societies, and medical inspector of factories, holding the latter appointment up to the time of his death. Mr. Newbold was well-informed in his profession, and lived a most laborious life; indeed, had he allowed himself that periodical relaxation which is needful to all hard-workers, the insidious disease, which was gradually taking root—apparently without his knowledge—might have been staved off. Last winter symptoms shewed themselves, which caused him to take a physician's advice. Entire rest was ordered, and he retired to Worthing, where, after severe suffering, relieved at times only to give renewed hope that his great natural strength would prevail against the deeply seated malady, he succumbed, to the great regret of his numerous patients, friends, and surviving relatives.

OSMER KING, F.R.C.S.ENG., GREENWICH.

IT is with regret that we have this week to announce the death of this much respected practitioner. Mr. King was descended from an old and respectable family in Surrey. Having chosen the profession of medicine, he entered as a student at Guy's Hospital, and became a Member of the Royal College of Surgeons in 1839, and an Honorary Fellow in 1859. Soon after passing his medical examinations, he commenced practice near Russell Square, and rapidly met with much success. In 1848, he joined as a junior partner the old established firm of Sutton and Sams at Greenwich and Blackheath, and soon became deservedly popular. He afterwards carried on for many years one of the leading practices in the county of Kent. For the last few years, heavy domestic trials and the responsibility and anxiety of his professional work seemed to be fast telling upon his failing health; and two years ago he chose as his junior partner Dr. Ralph Gooding of Blackheath. From this time he became gradually more feeble, and three weeks ago took cold, which was rapidly succeeded by congestion of the lungs, from which he died on October 24th, at Eccleshall in Staffordshire, whither he had retired some months before. His genial smile and kindly manner, his earnest sympathy in the hour of trial and bereavement, and his almost religious devotion to the duties of his profession, can hardly be forgotten during the lifetime of many of his patients; and all must feel that they have lost not only their medical adviser, but also a true friend. Beloved by all who knew him, and always looked up to as an English gentleman and able practitioner, he has departed at the early age of 54, leaving a widow and one son. He was interred in the family grave at Nunhead, on Monday, October 30th.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

THE DEGREE OF B.M.—The Board of Medical Studies has recommended that the following be added to the requirements prior to the third examination for the degree of Bachelor of Medicine:—"That the candidate be required to produce a certificate of having been clinical clerk for six months at least at a recognised hospital; or of having, subsequently to the completion of his attendance on hospital practice, attended to practical medicine with special charge of patients in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless he himself be duly qualified. This regulation to come into force in the Easter Term, 1872; and that 'Experimental Physics' be added to the list of courses of lectures in Section 10 of Regulations for Degrees in Medicine."

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology, at a meeting of the Court of Examiners, on Nov. 8th; and, when eligible, will be admitted to the pass examination.

Messrs. Henry French Banham, B.A. Cantab., Thomas H. Haslam, H. Selfe Bennett, Chas. W. Owen, and Alexander J. Alliot (Students of St. Thomas's Hospital); G. Boulton Elliott, W. Allan May, and Adolphus Bevan (of Guy's Hospital); Chas. F. Hutchinson and Frederick J. Sawdon (of the Edinburgh School); Chas. W. Harvey and Ebenezer J. Ramsay (of University College); C. Ayliffe Lloyd and A. Somers Ivens (of St. Bartholomew's Hospital); Alexander Harbinson and Ebenezer E. Sloane (of the Belfast School); Charles E. Piers (of the Dublin School); John C. Brady (of the Charing Cross Hospital); W. Graham Ross (of the Montreal School); James Magill, M.D. Queen's University, Ireland (of the Cork School); James Taylor Hyatt (of the Westminster School); Lawrence W. Spencer (of King's College); and A. Cockburn Collinson (of St. Mary's Hospital).

Ten candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their anatomical and physiological studies for three months.—The pass examination for the diploma of member will commence this day (Friday), and be continued throughout the ensuing week, owing to the large number of candidates.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 2nd, 1871.

Bethell, Alfred, Pelton, Shepton Mallet
Davies, Arthur Evelyn, Penner House, near Newbridge
Lang, John Messiter, Thatcham, Berks
Thompson, Henry, Hull

The following gentlemen also on the same day passed their first professional examination.

Emms, Alfred Wilson, Guy's Hospital
Kenyon, George Simpson, Liverpool School of Medicine
Townend, Joseph Henry, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

CARRICKMACROSS UNION, co. Monaghan—Medical Officer for the Raferagh Dispensary District: £80 per annum, and Registration and Vaccination Fees.
CHORLTON UNION, Lancashire—Assistant Medical Officer for the Workhouse at Withington: £120 per annum, and residence.
DERBYSHIRE LUNATIC ASYLUM, Mickleover—Superintendent-Physician: £400 per annum, lodgings and rations.
ENNISCORTHY UNION, co. Wexford—Medical Officer for the Oulart Dispensary District.
GENERAL HOSPITAL, Birmingham—House-Governor and Secretary.
HIGHWORTH and SWINDON UNION, Wilts—Medical Officer for District No. 3: £57:10 per annum.
INFIRMARY FOR CONSUMPTION, &c., Margaret Street, Cavendish Square—Visiting Physician.
KENT AND CANTERBURY HOSPITAL—House Surgeon: £80 per annum, board, lodging, and washing.
LINCOLNSHIRE—Medical Officer for the County Gaol for the parts of Lindsey: £120 per annum.
LIVERPOOL ROYAL INFIRMARY—Physician.
NORTH MAVINE and DELTING, Shetland, Parishes of—Medical Officer.
REETH UNION, Yorkshire—Medical Officer for the Muker District: £22:10:0 per annum, and extra fees.
ROYAL FREE HOSPITAL—Junior House-Surgeon.
ROYAL INFIRMARY, Edinburgh—General Superintendent: £420 per annum, and house rent.
ST. MARYLEBONE, Parish of—Medical Officer for St. Mary's Registration District: £100 per annum.
ST. THOMAS'S HOSPITAL—Two Dispensers: £100 and £80 per annum.
SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Assistant House-Surgeon: £65 per annum, apartments, washing, and board.
SOUTH STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton—Physician's Assistant: £100 per ann., with board, washing, and furnished apartments.
STRATHKINNESS, by St. Andrew's—Medical Officer.
SUSSEX COUNTY HOSPITAL, Brighton—Surgeon; Assistant-Surgeon.
TEIGNMOUTH, DAWLISH, and NEWTON DISPENSARY and INFIRMARY—House-Surgeon: £50 per annum, and board and lodging.
TOXTETH PARK TOWNSHIP—Assistant Medical Officer at the Workhouse: £100 per annum, and allowances.
VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea—House-Surgeon.
YORK—Visiting Physician to the Retreat, the Lawrence House, and the Terrace House Lunatic Asylums.
YORK PENITENTIARY—Visiting Physician.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*ANDERSON, J. Ford, M.D., appointed Medical Officer to the Postmen for the Hampstead Division of the Post Office, comprising also the Kilburn District.
BRODIE, Edward Fitzgerald, L.K.Q.C.P.Irel., appointed Medical Officer, etc., for the Lawrencetown Dispensary District of the Ballinasloe Union, co. Galway, *vice* John Barton, M.B., resigned.
CLIBBORN, Cuthbert John, M.B., appointed Medical Officer, etc., for the Kilbegan Dispensary District of the Baltinglass Union, co. Wicklow, *vice* Robert Dockeray, L.R.C.S.Irel., deceased.
*FLOWER, Thomas, Esq., appointed Medical Officer and Public Vaccinator for the Warminster District Union Workhouse and Corsley District of the Warminster Union, *vice* *P. Grubb, Esq., resigned.
FROST, Dr. E. W., appointed Medical Officer for the Newmarket-on-Fergus Dispensary District of the Ennis Union, *vice* D. Courtenay, L.R.C.S.Irel., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

DEATH.

PHILIPPS, Edward, Esq., Surgeon, at Bermondsey Street, aged 41, on Oct. 22nd.

PROSECUTION UNDER THE MEDICAL ACT.—A person of the name of J. H. Boyd, who called himself "professor", and advertised himself illegally as a medical practitioner, has, at the instance of a chemist, been fined by Sheriff Comrie Thomson, of Aberdeen, £10 in absence, with £2:2 expenses, or forty days imprisonment.

BEQUESTS, DONATIONS, ETC.—Miss M. M. H. Davies, of Brompton Square, has bequeathed to the Gloucester County Infirmary, and to the Gloucester Lunatic Asylum, £10,000, three per cent. reduced annuities, each.—The Rev. G. A. Gratwicke, D.D., late Master of Emmanuel College, Oxford, and Canon of Norwich, has bequeathed £100 each to Addenbrooke's Hospital, Cambridge, and the Commissioners for the Sick Poor for Norwich.—Mr. W. J. Myers, of Seaforth, has bequeathed £50 each to the Northern Hospital, Liverpool, and the Hospital for Consumption, etc., Liverpool, and a share of the "residue" to the Liverpool Royal Infirmary.—Mr. J. Pearson has given £100 towards the Chapel Fund of the National Hospital for Consumption, Ventnor.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Sansom, "A Case of Endocarditis complicating Phthisis"; Dr. Alfred Carpenter, "Two Cases of Muscular Anæsthesia, with Remarks."

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. A. Durham, "On the Operation of Opening the Larynx by Section of the Cartilages for the Removal of Growths and Foreign Bodies."

THURSDAY.—Harveian Society of London, 8 P.M. Mr. Berkeley Hill, "Treatment of Surgical Inflammation by Counterirritation."

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

A CONSTANT READER AND SUBSCRIBER.—The list of vacancies in the JOURNAL is, we believe, more complete than any other which is published. We shall be happy, however, to receive suggestions on the subject.

HYPODERMIC INJECTION OF MERCURY.

SIR,—Can you inform your readers how many drops of the solution of corrosive sublimate were used by Dr. Sigmund in his treatment of syphilis by the hypodermic injection of mercury? In your notice of this subject in the JOURNAL of October 21st (p. 470), the strength of the solution is given, but not the quantity used for each injection.

I am, etc., SYPHILIS.

**** Dr. Sigmund** does not state, in the paper from which the article in the JOURNAL was derived, how much was injected on each occasion. From a previous reference, however, to Dr. Sigmund's experiments with subcutaneous injection of mercury, we learn that the quantity varied from ten to fifteen minims—usually being fifteen minims.

ACTION OF CHLORAL ON THE FŒTUS IN UTERO.

SIR,—I have a patient who, having had six premature labours at the seventh month, and six dead children, has just been delivered at the full time of a living child. To this patient, for three days before her confinement, thirty grains of chloral were administered every four hours with scarce one intermission. The chloral certainly did not kill the child in this instance; though, it must be admitted, the case would be a bad one for its administration, if the drug really had any effect for evil on the unborn child.

Newport, Isle of Wight, November 1871.

GEORGE DABBS, M.D.

SIR,—In answer to an Associate, I can offer one case in which I prescribed half-drachm doses every two hours to Mrs. B., aged 24, eight months gone in her fourth pregnancy. She had her usual symptoms of miscarriage, having never been delivered of a child which lived more than twenty-four hours. After four doses, all pains left her. Since then, she has been delivered of a living child (small), now five weeks old, and apparently healthy. I may add, that five grains of camphor in emulsion did not stay the pains.

November 1871.

F. T. L. T.

DR. ROBERTSON (Glasgow).—Next week.

MEDICAL ETIQUETTE.

WE referred recently to a grievance of Dr. Royston against Mr. Delamark Freeman. Mr. Freeman offers now, in a very long communication, various explanations which are to our mind by no means satisfactory. It is a first principle in professional conduct, that patients of a medical brother, whose confidence is acquired while in charge of his practice, are handed back to him.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

MR. WALTER WHITE (Chew Magna) will find a full report of the meeting in the *Temperance Record* for November 4th (Tweedie, 337, Strand).

PROFESSIONAL ETIQUETTE.

As the result of a perusal of the correspondence which Mr. Wright of Derby has forwarded to us, we have come to the conclusion that, however just his intentions, he did not display proper courtesy to Mr. Iliffe. Mrs. Tunaley's proposition is, that Mr. Wright should see the patient *in consultation* with Mr. Iliffe; and that is the course which, under the circumstances, we think it would have been proper to adopt. We are not surprised that Mr. Iliffe should feel hurt.

TEACHING OF THE DEAF AND DUMB.

SIR,—In a leading article in the JOURNAL for November 4th, on the Education of the Deaf and Dumb by Lip-reading and Articulation, the concluding sentence is as follows:—"It ought also to be made known that persons who have become deaf after they have talked naturally, may at any age be taught to converse by this method in a few minutes." Such a statement is probably a clerical error, but none the less likely to throw discredit on the system. As the author of the paper you notice, I trust you will allow me space to correct this, and to say that children who have talked naturally, and have become incurably deaf, can be taken in hand at once, with a few months' instruction be prevented from becoming dumb, by teaching them to read from the lips; that adults who are very deaf may be taught lip-reading, and that children who have once spoken and, in consequence of extreme deafness, have become dumb, may be more easily taught than those children who have never heard.

I am, etc., W. B. DALBY.

Grosvenor Street, November 1871.

DR. E. S. THOMPSON.—The subject shall receive early attention.

LEARNING FOR GUARDIANS.

A GUARDIAN of the Dudley Union has been afflicted by observing that guardians and their officers suffer from defects of education, which prevent them from correctly pronouncing or interpreting the names of the diseases to which paupers are liable, and which are catalogued in the returns and certificates of the Poor-law medical officers. To remedy this, he has prepared a Pronouncing Dictionary, of which the prospectus lies before us. It is so full of *naïveté*, that it is worth transcribing.

"All the medical officers of the various Poor-law Unions in the United Kingdom, in giving certificates of the cause of illness of the persons applying for parochial relief, write the name of the disease in Latin, which very often puzzles both the Guardians and their officers; and the writer has known the question run round the Board-room to know what complaint or disease the applicant is suffering from. Besides, very few officers are able to give a correct pronunciation of the medical terms, even after years of practice in their calling.

"To remedy the above, and thereby place the Guardians and their officers on a par with the medical gentlemen of the various Poor-law Unions, is the object the writer has in view in issuing his Pronouncing Dictionary.

"Specimen of the Work.

ABERRATION, ab-er-á-shun. Partial insanity.

ACATHARSIA, a-ka-thár'-she-a. Impurity of the blood.

ALBUGO, al-bú-go. A disease of the eye.

ANASARCA, an-a-sár'-ka. A dropsical disease.

ANTHRAX, an'-thracks. A carbuncle.

APESIA, ap-ep'-sia. Defective digestion. See Dyspepsia and Indigestion.

ARTHRODYNIA, ár-thro-din'-e-a. Chronic rheumatism.

ASAPHIA, as-á-fia. A defect of voice.

ASCITES, as-si-tes. Dropsy of the belly."

PONTYPRIDD need only apply to the Honorary Secretaries of the Branch covering the district to which he moves.

DEATH-CERTIFICATES.

SIR,—It was only the other day that my attention was drawn to some editorial comments in your paper upon a case in which I had given a death-certificate without having been in attendance upon the patient, or, indeed, having seen him for six months prior to his decease. May I be permitted, though somewhat late in the day, to offer a few remarks upon this case, as I am inclined to think that a fuller acquaintance with the facts will lead you to soften the severity of your strictures?

In your remarks upon the case, you state that Dr. Haddon had attended the man prior to death, and that he was of opinion that death resulted from pyonephrosis; whereas I, who had not seen him for six months, stated that he died of heart-disease. This statement, sir, is incorrect. Dr. Haddon never saw the man alive, and, consequently, was no better able to judge of the cause of death than I was. Arriving when life was extinct, he volunteered the statement, however, that the man had died of heart-disease; he did not state at the time, or at the inquest, that he attributed the death to pyonephrosis; nor can I comprehend when he arrived at this conclusion, or whence you gathered such an idea without involving Dr. Haddon as your informant.

My excuse for granting the certificate is briefly this. I had attended the deceased, and known his family for many years. The poor man suffered from valvular disease of the heart; and it was solely to save him expense that I did not continue my visits up to the date of his death. I heard, from time to time, of his failing health, and was of course prepared to hear any day that he had suddenly expired. This news was at length brought to me, when I did not hesitate to give a certificate of death, as I had been in constant receipt of information as to the man's sinking condition. An inquest was held, for some reason or other, at which, as you correctly state, the coroner, Mr. Price, reflected upon my conduct for granting the certificate; but when I inform you, sir, that no *post mortem* examination was ordered, you will, I think, agree with me in doubting whether Mr. Price or Mr. Haddon, or both together, were better able to arrive at a correct diagnosis than myself, who had been intimately acquainted with the man's history for many years. Under the circumstances, I cannot but regard the use which has been made of this case to exalt Dr. Haddon at my expense, as both illiberal and unjust.

Eccles, November 7th, 1871.

I am, etc., RICHARD ROE.

P.S.—Possibly it may strike an ordinary observer as somewhat singular that Dr. Haddon should write to you in London in preference to communicating with me if he should feel himself aggrieved, seeing that we are living almost a stone-throw from one another.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

SIR,—Can any of your readers who are Poor-law medical officers inform me whether I am entitled as such an one to charge the extra fee allowed for midwifery cases in my parish when the same attendance is required in cases of miscarriage (under six months)?
I am, etc.,
London, November 1871.

CUIQUE JUSTITIA.

EARLY PREGNANCY.

SIR,—Under the head of Obstetric Memoranda, in the JOURNAL of October 28th, is a case of early pregnancy by Dr. Haining. In the churchyard of Rock, near here, was a gravestone with these verses,

"Ten years I was a maid,
One year I was a wife,
One day I was a mother,
And then I lost my life."

I was apprenticed here in 1795, where I have been ever since, with the exception of five years in London; and during the course of this long practice, I have attended three parturient mothers under 13 years of age. The mothers and children all did well.
I am, etc.,
THOMAS POPE.

Clebury Mortimer, November 4th, 1871.

MEDICAL CO-OPERATION.

SIR,—I beg to call your attention to the enclosed copy of a circular, which has been recently distributed in this neighbourhood, and which, as you will see, sets forth that a "Society" has been formed, with the object of providing first-rate medical attendance and medicine for on annual payment of ten shillings. The subscriptions are received quarterly or half-yearly, in advance, at the residence of Mr. Delamark Freeman, 20, Talbot Road, whose name, with that of a Secretary alone, appears on the prospectus. By what is, perhaps, merely a coincidence, a man has been engaged during the past few weeks calling upon the residents, including many of my patients, and soliciting them, in the most importunate manner, and much to their annoyance in many instances, to become members of this Society. When taxed with being an agent of Mr. Freeman's, he answered that he was performing his laborious task with purely benevolent motives; that a relative of his had long suffered from a dreadful malady, which, having defied the efforts of all the medical men in Bayswater, was cured with marvellous rapidity by Mr. Freeman; and that he was, therefore, anxious that every sufferer should avail himself of Mr. Freeman's extraordinary skill, more especially since they could do so for the ridiculously small sum of ten shillings a-year, not to speak of the medicine included. Now, sir, in the advertising columns of the papers, we read daily of cases in which wonderful cures have been wrought by means of a single box of pills or ointment; and, as we, of course, believe these to be true, we do not doubt that Mr. Freeman's case may be also authentic: but I, and many of my confrères in this district for whom I speak, deny that this case had been previously treated by us; and we deny, therefore, at least, that it had defied the efforts of all the medical men in Bayswater. Seriously, we think we have a right to demand from Mr. Freeman some account of the constitution of this "society" to which he is surgeon; and we shall also be glad, at the same time, to hear whether the toutting to which I have alluded has been carried on with his consent, and, if not, whether he has requested his officious friend to desist from so equivocal a mode of displaying his gratitude.

If Mr. Freeman can give us satisfactory explanations on these points, and if he can clear himself from the grave charges of professional misconduct which Dr. Royston brings against him, I am sure he will receive from the neighbouring practitioners a welcome such as is never refused to new comers in Bayswater, when their conduct is that of professional men and gentlemen.
I am, etc.,
112, Westbourne Grove, Bayswater, W. ALGERNON C. W. NORTON.

[COPY.]

"Bayswater Mutual Medical Aid Society, for securing professional medical and surgical attendance, and the supply of all medicines to the subscribers.—This Society is formed to enable persons, by payment of a small sum, to secure themselves efficient medical and surgical aid in case of illness or accident. All persons residing within the area of three miles of the 'Royal Oak', Bayswater, can become members of this Society. It is not intended that persons who may be suffering from any chronic or inveterate disorder shall participate in the advantages of this Society. Terms of subscription, ten shillings *per annum*, payable quarterly or half-yearly in advance. Hon. Sec., H. Harris, Esq. Surgeon, Delamark Freeman, 20, Talbot Road, Bayswater, W. Subscriptions will be received between the hours of ten and eleven o'clock in the morning, and from seven to eight in the evening, at 20, Talbot Road.

A CHEAP MODE OF PREVENTING WASTE OF WATER.

SIR,—In your report of my paper on the prevention of the waste of water by the very simple expedient of providing every house with a limited but liberal supply, you mention two objections that would not, I think, have been urged if I had not been pressed for time when explaining the plan.

Mr. Rawlinson objected, because he said water must be supplied in abundance. This is quite true, it should be, and would by any plan be supplied in ample abundance, as much as will be used; it is not abundance, but extravagance, to supply more than is used.

Mr. Chadwick thought receptacles for the storage of water liable to objection on account of the water losing its freshness in them; but he did not mean this objection to apply to the little receptacles for water which I proposed, too small to retain more than a few hours' supply, and as air-tight as the pipes themselves, which no air can escape from or enter, and in which the water may easily be kept as cool as is desirable by evaporation from the outside surface, if kept wet.

I thought it unnecessary to mention such a self-evident expedient. Other objections may be removed by expedients as simple. "Practical men" will, of course, object to a change, because they never believe anything to be practicable unless it is done, and when it is done they say they knew it from the first. For example, one of them has objected that the little hole proposed to limit the supply to the need of water would not discharge regularly, as the pressure would vary; also, that it would very soon be stopped up. There is no objection to the flow being sometimes a little faster or slower than the average, provided the quantity *per diem* is enough; and if the water be filtered, as it ought to be, it will be rare for the regulating hole to be obstructed; and if the water be not filtered, it may be as easily filtered before as after it passes the regulating hole; and unless the water be very dirty, it will be a long time before the filter becomes clogged.

I am, etc.,
P. H. HOLLAND, Medical Inspector.

DR. BROWN (Berwick-on-Tweed).—To the General Secretary, 13, Newhall Street, Birmingham. Dr. Brown should have, and no doubt has, received four circulars asking for his subscriptions, but has probably overlooked them.

EXTRACTS FROM A DOCTOR'S DIARY.

I.—On a raw October afternoon, thousands assembled at Blackheath to see, hear, and criticise Mr. Gladstone. Cases of bronchitis, jaundice, and puerperal mania, required attention; but the occasion of delay was exceptionally excusable. From a distance, the scene on the hustings reminded us of executions at the Old Bailey, and the last act of a well known drama, when Calcraft, explaining to Punch the simple arrangement of the noose and gibbet, is immediately strangled, and added to other victims of the fatal club, including Judy, the beadle, and the family medical attendant. On horseback, behind the crowd, in spite of the distance, the cheers, occasional groans and interruptions, above all, now and then, we could catch a few sentences, flowing in fascinating cadence, beautiful in composition, powerful in argument. Through an opera-glass, we notice a deadly pale, earnest face, marked with lines in all directions; a splendid head, uncovered, exposed to the cold for two hours, whilst we are shivering with our hats on; a waistcoat cut low, the chest unprotected. When we considered that the Premier next month will be 62 years of age, the work he has undergone, and the responsibilities of office, it is most extraordinary to estimate the talent, the intellect, the memory, and the physical endurance displayed. We have not read the speech yet; but from those who had good places near, the information is received that Mr. Gladstone never hesitated for an instant, required only statistical references, and his voice at the end remained firm and clear.

II.—Quite recently, a very interesting dinner-party took place at mess. After witnessing the Autumn Manœuvres, the representatives of the foreign governments sat temporarily harmonious at the festive board. One feels inclined to describe the appearance of Russian, Prussian, French, and Portuguese; what the American said, what the Turk did, and how every one paid the greatest deference to Mr. Russell; but, no, excepting Blumenthal. The turtle soup was not allowed to cool, the Roman punch to go untasted, nor the venison lost sight of. All the time attention became rivetted on a quiet, slim, gentlemanly man (dressed in plain clothes—the others in uniform), who had played a prominent part in the late war. What could have been passing through his mind, as ever and anon he cast admiring glances at the silver candelabra, the splendid plate, and the bright spoons? *A Berlin!* perhaps. Anyhow, Sedan was somewhat avenged, for the great general drunk the patent head-splitting brown sherry—that morning wine. The port is good, the claret still better, and we silently drank "*Vive l'Empereur!*" "*Vive l'Imperatrice!*" "*Vive le Prince Impérial!*" may they soon hold their own again, and, like John Gilpin, may we be there to see.

III.—Soapy Sponge never travels without Moggs' Cab Fares; we generally sleep with the Registrar-General's Annual under the pillow. From one of the letters that Dr. Farr, *à la Toots*, is in the habit of writing to himself, we learn that gout is becoming more fatal, for the deaths of 351 men and 96 women are recorded; also that "women have hitherto, and we hope will continue to set men good example"; we thought it was the other way, and, like the Turk, whenever there is a row, we inquire who is the lady. The Lord Mayor is requested to take notice that "refined gluttony is as fatal as intoxicating drink." Regarding the symptoms and treatment of gout, consult Garrod and Fuller, or, better still, Mr. Weller, senior, who recommends gin to many a widow with a good loud voice, and a decent notion of using it, as an infallible prescription. Pray accept the assurances of our distinguished consideration, etc.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Shrewsbury Chronicle, Nov. 3rd; The Liverpool Albion, Nov. 6th; The Woolwich Gazette and Greenwich and Deptford Chronicle, Nov. 4th; The Morpeth Chronicle; The Irish Times; The Melbourne Argus; The New York Tribune; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Robt. Barnes, London; Dr. J. Matthews Duncan, Edinburgh; Dr. J. Braxton Hicks, London; Dr. R. Liveing, London; Mr. Teevan, London; Dr. T. Clifford Allbutt, Leeds; Dr. Hitchman, Mickleover; Dr. R. Hibbert Taylor, Liverpool; Dr. Swayne, Bristol; Mr. Prichard, Bristol; Mr. Crossman, Hambrook; Mr. C. Gold, London; Mr. Gardner, Forfar; Dr. G. Hill, Hooton; Mr. A. H. Dolman, Derby; Mr. G. S. Elliston, Ipswich; Mr. Fowler, Bath; Mr. Jebb, London; Pendennis, Leicester; Mr. D. H. Watson, Stockton-on-Tees; Dr. H. Gueneau de Mussy, Paris; Mr. Barnard, London; Dr. J. C. Reid, Newbiggin-by-Sea; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. St. George Mivart, London; Dr. A. Wynn Williams, London; Dr. J. S. Ferris, Uxbridge; Mr. Soutter, London; Dr. Alfred Meadows, London; Mr. J. D. Harries, Shrewsbury; M.D. Edinb.; Dr. John Chapman, London; Dr. T. S. Clouston, Carlisle; Mr. Samuel Wood, Shrewsbury; Dr. Anstie, London; Mr. W. B. Dalby, London; Dr. G. Dabbs, Newport; Our Dublin Correspondent; Dr. T. D. Griffiths, Swansea; A Member of the Joint Committee; Mr. D. Davies, Bristol; Dr. C. Parsons, Dover; Mr. Richard Roe, Eccles; Mr. G. F. Hodgson, Brighton; Mr. E. J. Worth, Millbrook; Mr. Benson Baker, London; Dr. H. Barnes, Carlisle; The Secretary of the Royal Medical and Chirurgical Society; Mr. G. Elder, Nottingham; Dr. Murchison, London; Dr. Edis, London; Dr. Priestley, London; Mr. Maurice, Reading; Dr. J. Ford Anderson, London; Mr. Christopher Heath, London; Dr. Parsons, Frome; Mr. Howard Marsh, London; Dr. Shapter, Exeter; Mr. Berkeley Hill, London; Our Liverpool Correspondent; Mr. Husband, York; Dr. Robertson, Glasgow; Dr. Balthazar Foster, Birmingham; Dr. E. S. Thompson, London; Mr. W. Harris, Liverpool; Inspector-General Cooper, Birmingham; Dr. Trollope, St. Leonards-on-Sea; Dr. Delamark Freeman, London; Dr. Umpleby, Bedale; Mr. T. Cooke, Ashton-under-Lyne; Dr. Bradbury, Cambridge; Mr. W. White, Chew Magna; Dr. Bothwell, Plumstead; Dr. Colville Brown, Berwick-on-Tweed; Mr. H. C. Lawrence, London; Our Vienna Correspondent; etc.

MEMORABILIA

IN THE

HISTORY OF THE BRITISH MEDICAL ASSOCIATION.

Being part of an Address delivered at the Annual Meeting of the Reading Branch.

By GEORGE MAY, JUN., ESQ.,

President of the Branch; Surgeon to the Royal Berkshire Hospital; etc.

THE question has often been put to me, Why should I join the Association? What good has it ever done? I propose to devote the time at our disposal to a brief review of what the Association has done for the public and for the profession.

The Provincial Medical and Surgical Association was founded by Dr. Hastings at a meeting of fifty medical men in the Board Room of the Infirmary at Worcester in July 1832. It consisted of 150 members; increased before the end of the year to 310. It was not formed in imitation of the British Association for the Advancement of Science, which had been established the previous year, but arose from the success of the *Midland Medical and Surgical Reporter*. Its objects were—

1. *Social*.—To promote friendly intercourse at the annual meetings.
2. *Ethical*.—To check the spirit of misrule and confusion which actuated the profession, by the influence of public opinion, and by establishing harmony and good feeling.
3. *Scientific*.—To develop the science of medicine by collecting the results of individual experience.

The managing body consisted of a President and a Council, to represent districts, to collect subscriptions, and to decide on the essays to be published.

Before attempting to trace the results due to the Association, it may be useful to regard for a moment the condition of the medical profession at the time of which we speak. Medicine may be regarded as a science, an art, or a trade. The time was long past when Dr. Sangrado could treat his patients with copious draughts of warm water, and call in the barber-surgeon to finish his work by free venesection; or when Gil Blas could give his client the exclusive right to poison his Majesty's subjects by the sale of drugs; or when, in our own country, Dr. Reid was allowed to erect a stage for the sale of drugs, the surgeon in addition being allowed to use music, but both being wisely ordered not to hinder people from coming to the pump. But at this time medicine was something between a trade and an art. Regarded as a mere trade, the practice of physic required but little skill, the qualities best suited for insuring a prosperous career having no necessary connexion with intellect or science. An imposing manner, confident pretension, verbose declamation interlarded with high sounding terms, however unintelligible or unmeaning, unhesitating assurance of cure, condemnation of whatever antecedent practitioners had done—these and various still less worthy arts will suffice to gain a reputation sufficient to satisfy the cupidity of whoever can descend so low as to resort to them. Swift laments—

"Deprived of kind Arbutnot's aid,
Who knew his art, but not his trade."

I have recently become possessed of a medical account of this period, in which one shilling is charged for barley and gum, and have seen another sent by a gentleman, once known to most of you, in which sixpence was charged for an oily mixture.

From this condition the profession was just emerging when the Association was founded; and it is curious to notice how completely its founders overlooked the great influence it was destined to exert on what may be called the political aspects of medicine. The first trace of any such action occurred in 1833, when a letter was sent by the Association to Parliament thanking Government for the determination to record the causes of death. In 1835, the Eastern Counties Association was formed, "to watch over the interests of the profession", and from this time we shall be able to trace the efforts of two distinct and often opposing parties in the Association. But for our present purpose it will be more convenient to take an historical view, only tracing any one subject to its conclusion, where it can easily be so dealt with.

1833. *Bristol*.—The annual meeting was noted for its recommendation that joint reports should be made on subjects of medical interest. Hitherto this has not attracted the attention it deserves, chiefly from want of financial support; but it has probably a great future before it. Correspondents were elected to report on the medicine of foreign countries—a field yet unworked by this Association. The offer of a prize

for an essay called forth several valuable contributions. Medical reform was foreshadowed in the following truthful description of the President. "By a forced and unnatural division of offices, the profession has been split into departments. Each department has had assigned to it a separate superintendence, the aim of which has been to advance its interests without reference to the other branches. Government of the profession by separate and independent corporations has been fully tried and utterly failed. We may patiently wait those salutary reforms in medical polity which, sooner or later, an enlightened legislature must accord."

1834. *Birmingham*.—Members residing in large towns were advised to meet for mutual improvement. This was the first indication of the formation of branches, which have since contributed so largely to the success of the Association.

Provident dispensaries were recommended. This subject has recently received special attention; but, although many flourishing dispensaries are scattered through the country, it has not yet been carried out on the scale which its importance deserves.

1835. *Oxford*.—The Medical Benevolent Fund was founded.

1840. An elaborate report on vaccination by Mr. Ceely, costing the Association no less than £700 for illustrations, and which is still recognised as the standard authority on the subject, was followed by the prohibition of inoculation, and led to legislation which is even yet only partially successful in checking the ravages of small-pox. The Physician to the Emperor of Russia joined the Association, and influenced the Russian Government to register the causes of death in that empire.

1842. Life assurance offices were prevailed on to pay the fees of the medical referees.

1848. The retrospective addresses delivered at each annual meeting led to the publication of Braithwaite's *Retrospect* and Ranking's *Abstract*.

1849. A petition to Parliament to check the Sale of Poisons was speedily followed by Lord Carlisle's Bill to regulate the sale of Arsenic.

1864. Failure of Medical Provident Fund.

1866. This year will ever be memorable in the annals of the Association by the death of Sir C. Hastings, its founder, who for five-and-thirty years had devoted himself to promote the best interests of the profession.

Poor-Law Medical Relief.—Among the subjects which have prominently engaged the attention of the Association, Poor-law reform deserves special mention. So early as 1836, it was recommended that the parish should pay for drugs. This advice has been followed in many unions to the extent of furnishing cod-liver oil and quinine, and, in large towns, will perhaps shortly lead to the formation of dispensaries, where the poor will obtain the medicines prescribed by the parochial medical officers.

1839. In this year, in consequence of the remonstrances of the Association, the system of tendering for medical Poor-law appointments was abandoned. This practice had led to such results, that we find it officially stated that two hundred and thirty-three Poor-law medical officers were practising without legal qualification.

1870. In this year, the superannuation allowance was extended to Poor-law officers. It must be confessed that the efforts of the Association directly to improve the status of the Poor-law medical officers have hitherto been attended with very partial success; not from any want of zeal, but because the power which competing corporations possessed to facilitate the admission into the profession of imperfectly educated practitioners has enabled the guardians of the poor to dictate their own terms.

Medical Reform. 1837. *Cheltenham*.—Perhaps in no way has the Association done more for the public good than by its efforts to promote medical reform. In 1837, a Committee was appointed to watch the interests of the profession; and it was recorded that the power of granting qualifications was vested in no fewer than seventeen competing corporations, underselling each other like a Dutch auction. The Committee noticed the imperfections and unequal character of existing methods of qualification for medical licences, and the insufficiency and exclusiveness of medical corporations, with want of power to afford protection to the public and the profession against the arts of ignorant pretenders. It urged the importance of the one portal system, and advised that the profession should be represented; that the uniformity of primary qualification should be tested by sufficient examination; that there should be an equal right to practise throughout Her Majesty's dominions. These remonstrances for the time availed little. In 1842, we find that the College of Physicians denied the right of the Association to interfere. The College of Surgeons considered themselves immaculate; and Mr. Guthrie did not see anything to amend.

1846. In this year, registration of practitioners was recommended—a course afterwards carried out by the General Council with marked advantage.

1852. The Royal College of Surgeons was compelled to accept a charter giving Fellows the right to vote—a measure to which the important improvements lately adopted by that body can be distinctly traced.

1858. I need not weary you with the details of the struggle which ensued, and which, after having been carried on several years, ended in the passing of Mr. Cowper's Act granting:—1. Registration of qualified practitioners, with exclusive right to hold medical appointments and to recover remuneration; 2. Reciprocity of practice; 3. A national *Pharmacopœia*; 4. Establishment of a Council with power to exclude from the Register for infamous conduct—a clause which promised to be of very great value. The chief defects of the Act were that it made no adequate provision for uniformity of professional education, and that it failed to give the general practitioner any voice in the selection of the Council. This last provision is well known to have been long regarded by the Association as of great importance; and its omission recently caused the rejection of an otherwise very valuable measure of medical reform. A recommendation made several years since may prove a good compromise; namely, that the General Council should remain unchanged, but that the Councils of each corporation should be elected by the members of each corporation, the right of voting not being restricted to a select few.

Quackery.—At the foundation of the Association, there was a spirit of disunion with no recognised standard of authority; and probably in no way has the Association been of so much service as in its indirect effect on the profession. Medical associations must tend insensibly to form a standard of conduct and feeling to which the majority will by inclination happily conform, the few from motives of self-interest.

Our late friend and colleague, Dr. Cowan, was especially noted for his denunciations of all forms of quackery. At Liverpool, in 1839, he had the boldness to attack, and, in spite of the opposition of vested interests, the good fortune to destroy, an institution supported at Liverpool by many of the chief practitioners of that town, and which possessed a stock of no less than £1,500 worth of patent, and therefore secret, nostrums, there being at that time no fewer than six hundred stamped patent medicines; whilst advertisements were daily issued by those holding diplomas, vying with each other in their gross disregard of truth and decency.

In 1849, the President of the Taunton branch was expelled from the Association for consulting with an unqualified practitioner—a warning which has not required to be repeated. The recent defence of such conduct in Ireland shows how greatly the influence of such an Association is needed in that country.

I must not omit to remind you of the public condemnation of the Royal College of Physicians of Edinburgh. To their lasting disgrace, they had proclaimed what they called a year of grace—that is to say, they replenished their coffers by the sale of licences without even the pretence of any investigation, but easily satisfied with the signatures of two medical friends of the candidate for the diploma.

Homœopathy.—Perhaps in no single instance has the Association done so much good as in defining the duty of its members towards the practitioners of homœopathy. At the annual meeting held in Brighton in 1851, it passed resolutions condemnatory of the practice of meeting homœopaths in consultation. In 1857, Dr. Horner, a Vice-President of the Association, was unanimously removed from his position on account of his having adopted homœopathy. The Association did not cease reaffirming its opinions, till it became an accepted axiom that under no circumstances could medical men hold professional intercourse with practitioners of homœopathy. The importance of this decision will be estimated at its true value when it is recollected that up to this time some of the leaders of the profession, whilst deriding the practice of homœopathy, had not ceased publicly to proclaim their willingness to consult with homœopaths, setting at defiance the well known rule of medical ethics, that when the opinion of two consultants are irreconcilable, it is the duty of one of them to retire. But from this time (1861) no such conduct has been permitted.

I began by stating that, when the Association was founded, medicine was partly a trade, partly an art. I firmly believe that the trading portion is a thing of the past; that it is now partly an art, but day by day more nearly approaches a science. The apothecary of the past is displaced by the highly educated practitioner of the present. The energy of ignorance, which in times past was frequently so dangerous, is but seldom to be met with. The poor can obtain the highest skill. But in no respect is the advance so great as in the altered tone of professional feeling. To be held up to the reprobation of the profession has become one of the greatest of punishments.

Brief allusion has been made to some of the successes achieved by the Association; others even greater must follow. The one portal system is but a question of time. The proper representation of the

profession depends on the energy with which the struggle against vested interests is carried on.

Do not suppose that in claiming so much for the Association I desire to undervalue the important aid which has been received from the different medical journals; but, as the Association is the only recognised expression of professional feeling, without doubt it deserves the greatest share of the praise, in spite of the opinion expressed in certain quarters, "that its conduct is little else than a disgrace to the professional body of this country; annual meetings, feasting, toasting, guzzling, complimenting, and puffing forming the chief features of that stupidly managed Society, the British Medical Association."

[An interesting pendant to the friendly and complimentary observations here quoted by Mr. May concerning associations such as our own, are contained in some observations of Professor Virchow quoted in a letter which we have received from our able correspondent in Berlin.]

ABSTRACT OF A CLINICAL LECTURE ON THE MODE OF INVESTIGATING THE DISEASES OF WOMEN.

By ROBERT BARNES, M.D.,

Obstetric Physician, and Lecturer on Midwifery and Diseases of Women and Children, at St. Thomas's Hospital.

GENTLEMEN,—I have now a few general observations to make to you on the mode of investigating the diseases of women. In a former lecture, I told you that we were guided by the subjective sensations of a woman in our first investigations. When a woman complains of aching and pain in a part, we are naturally led to conclude that there is some mischief going on in the seat of pain, although there is no absolute certainty until we examine the organs suffering. In single women, we are chiefly guided by some disturbance of the function of menstruation. In many cases of disturbed menstruation, there exists some morbid condition which it is necessary to investigate. If there be intense pain and leucorrhœal discharge, we get the indication of disease requiring exploration. Discharges especially are significant, and render examination imperative. No woman suffers long from distressed menstruation or a discharge without danger of mischief. By examination, then, you come to a large class of *objective* signs, which, taken in conjunction with the *subjective* signs, throw great light upon the disease. From the two together, you may come to a rational view of the case.

First, then, as to the ovary. The ovary is recognised now as the *primum mobile*, the first cause of menstruation. When menstruation is disturbed we should look to the ovary; although the uterus, being the organ of the discharge, should be looked to also. Still, if there be no ovary, there is no menstruation; if the ovary be diseased, there is likely to be difficult menstruation.

There are diseases, however, having their primary seat in the uterus. The uterus has a certain definite position, size, shape, mobility, or range of motion, sensibility and attachment. All these conditions can be examined by the touch, and any deviations from them must have a cause. There are some other properties of the uterus which we can bring under observation—such as its vascularity, colour, and alterations of surface. The speculum enables us to see the lower part of the uterus and the vagina, and is here of the greatest possible service; but nothing, of course, can enable us to see the ovary.

[Dr. Barnes then referred to a diagram of the uterus and its appendages in the healthy state, and proceeded to show how its position was affected by abnormal conditions.] If there be a large quantity of urine in the bladder, the uterus is thrown backward; if the rectum be loaded, the uterus is pressed forward. Sometimes the uterus is from this latter cause so pressed against the bladder that there is retention of urine. I have known distressing cases of this kind. There are no means of keeping the bladder free until you have washed out the rectum. As to change of size, if the uterus be much enlarged, and the other signs of pregnancy agree, we conclude that the woman is pregnant; but the minor sizes of the uterus are not so easily settled as the result of pregnancy. They may be the result of engorgement, or of mischief coming on after pregnancy, or of tumours, etc. If at the end of three weeks from confinement we find that the uterus is large, we conclude that involution of the uterus has been arrested. The best way to ascertain the bulk of the uterus is to grasp it between the two hands. The sound will also measure the size of the uterus. The change of form chiefly indicates the presence of tumours in the uterus, which, springing out of its walls, alter its shape; or it may indicate a displacement. We ascertain the sensibility of this organ by the touch. Tenderness on pressure may arise from inflammation, or neuralgia, or irritability. There is supposed to be a simply hyperæsthetic condition of the organ, the slightest touch

giving acute pain; the tenderness may also arise from hysteria. In the normal state its sensitiveness is very slight.

There is another sign of great importance in ascertaining the true condition of the uterus—change of density or hardness. The os uteri, in the unimpregnated state, is as hard as the point of the nose: it feels firm, smooth, and hard. If that condition be altered to softness, you may suspect pregnancy; but of course you would not rely upon that sign alone. Another meaning of the softness is increased vascularity, which may arise from a granulating surface, the result of lost epithelium. If that be combined with increased size, patency, and leucorrhœa, we are pretty sure there is inflammation of the cervix uteri. Cancerous growth in the cervix may also help to keep the os open.

The significance of altered mobility is very important. The uterus naturally moves about, and if it do not, you have to consider a number of causes which impede it. A large fibroid tumour will sometimes fix the uterus. Cancer almost invariably alters the mobility of the uterus. Of all things this is the great test of cancer. In the earlier stages, indeed, it affects only the cervix; but when it has invaded the roof of the vagina, the bladder, and rectum, then you get a dense, firm mass, filling the brim of the pelvis, which you cannot move. There are conditions about the os which make this sign still more clear: the history also will guide you. After labour or abortion, you may have inflammation of the pelvic peritoneum; and this is sometimes attended with great effusion of plastic matter, which sets the uterus and surrounding structures fast together. The history will also guide you here. In the case of cancer you can see the disease, and find cancerous bleedings and discharges.

There is another cause of fixed uterus: the pouring out of a quantity of blood behind it—the so-called retro-uterine hæmatocele, a very interesting example of which is now in the hospital. This condition is always accompanied by pelvic peritonitis. This is distinguished by the os uteri being pushed against the symphysis pubis, and the sound passing upwards and forwards towards the umbilicus. This determines the position of the fundus of the uterus, proving that the mass felt behind the os cannot be the body of the uterus. The history and other signs, then, lead to the diagnosis of hæmatocele.

The significance of the several discharges we must consider on another occasion.

ABSTRACT OF A CLINICAL LECTURE ON A CASE OF CANCRUM ORIS,

AND ON CASES OF EMPYEMA IN YOUNG CHILDREN, TREATED BY PARACENTESIS THORACIS.

Delivered at King's College Hospital, November 2nd, 1871.

By W. O. PRIESTLEY, M.D.,

Professor of Midwifery in King's College; Obstetric Physician to King's College Hospital.

Cancrum Oris.—I wish to call your attention to some cases which we have had in the Pantia Ralli Ward. The first is one of comparatively rare occurrence, in which the child has died from rapid sloughing of the mouth. This little child, named Elizabeth Sowman, aged two years and seven months, was admitted on October 12th, suffering from marasmus and bronchitis. She was so small and emaciated that she weighed only 9½ lbs., the average weight of children at birth being 7 lbs. She had got a very inadequate supply of nourishment from her mother, and she suffered from convulsions at six months. When she was admitted, the skin hung in folds about the limbs; the joints were very large; the anterior fontanelle was still open. She was very feeble, sleepy, and sometimes fretful, but had no sickness or purging. Abundant small crepitant râles, with occasional sibilus, were heard all over the chest; the respiratory sounds were very feeble, and some dulness existed under the left clavicle. The abdomen was tumid, and enlarged glands could be felt.

The child was ordered to be well rubbed with warm olive oil night and morning, after the method recommended by the late Sir James Simpson, who, in making inquiries about the health of the children in wool-factories, found that they were plump, and very seldom affected with the various forms of struma and consumption. He thought this was in consequence of the oily nature of their employment, as in flax-works the workers had the same amount of these complaints as other people, or rather more. He therefore recommended external oil-rubbing as a means of improving the nutrition of emaciated children. This child was put on milk-diet and wine, with a teaspoonful of cod-liver oil three times daily. On the 14th October she remained much in the same state; and, as the bowels were rather confined, she took a drachm of senna-syrup. On October 17th she was very restless; and had much dys-

pnoea, with abundant crepitant râles all over the chest. On this day the inside of the lower lip showed for the first time an inflamed circumscribed aphthous patch, to which was applied a lotion of chlorate of potash and borax. Next day the patch had assumed a sloughy appearance, and had spread rapidly; and the child was consequently ordered a full allowance of brandy daily. On October 19th she was much weaker; the sloughing of the lower lip extended; and, as the two front incisors seemed to irritate the slough, they were removed. She was taking her food very well, and was ordered to take, three times daily, three minims of tincture of perchloride of iron, with syrup. On October 20th, the lower lip was perforated by the slough, which kept extending. The edges were black and ragged, and discharged offensively. The bowels now became relaxed; the pulse rose to 168; the temperature was 99.2, and the respirations were 60. She slept very badly, and coughed much. On the 21st, the ulceration presented a large ragged excavation of the lower lip and gums, and a lotion of chloride of zinc, 15 grains to an ounce of water, was ordered. On the 22nd the child grew very weak. The chasm extended to the chin, and measured an inch and a quarter across. On the 23rd she was still worse. On the 24th the whole of the lower lip had sloughed away, and the gums at the root of the teeth were involved in the gangrene. The breathing was very rapid, and crepitation was heard over the whole of the lung-surfaces. The pulse was almost imperceptible, but she yet took food well. Next day she sank suddenly, and died at 9 A.M.

This sloughing of the mouth is suitably called *cancrum oris*, or *gangrenous stomatitis*. There has been a good deal of confusion as to the varieties of stomatitis—so much so that Dr. West has proposed to divide the forms of it, and call only the more of the two milder forms severe *noma*. This term “*noma*” has been applied to all the forms of the disease. It was used by Hippocrates to indicate all ulcerations about the mouth. But as it is no doubt very desirable to simplify the nomenclature of disease, and at the same time have accurate definitions, you may advantageously adopt the terms proposed by Dr. West; viz., *follicular stomatitis*, the simple aphthous ulceration of the mouth; *ulcerative stomatitis*, or *noma*, the somewhat more severe affection in which the aphthous inflammation extends to the gums, covering them with a pultaceous exudation, and producing ulceration round the teeth; *gangrenous stomatitis*, or *cancrum oris*, in which true sphacelus of all the tissues occurs, and the loss of substance is both rapid and irreparable. This last form begins generally on the inside of the mouth: some authorities think in the cellular tissue or deeper structures, and others in the mucous membrane. Be this as it may, in the case before us the ulceration began as an aphthous or ulcerated patch on the mucous membrane inside the lip, thence rapidly sloughed through all the tissues, and gradually destroyed the child from exhaustion. Gangrene of this kind only occurs in very feeble children, and is most common after measles or scarlet fever, particularly measles. Where the child is much debilitated, there may be no antecedent illness.

As to the treatment, although it has been recommended generally to apply strong caustics so soon as the character of the ulcer is seen, it was felt that it would have been a cruelty to do so in this case. The child seemed half dying when brought to the hospital. In Philadelphia Hospital, however, the nitrate of silver in stick was used, and many cases recovered. Some authorities recommend the application of strong nitric or muriatic acid; and there can be no doubt that, if one could stop the gangrenous process and make the wound take on a healthy surface, there might be hope of recovery; but in a feeble child like this, such treatment was impossible. We had to be content with minor measures, and indulge the remote hope that, by soothing applications, the wound would take on healthier action. The poor child, however, died suddenly, and from the first gave little hope of recovery. This form of sloughing generally occurs in cachectic children, and sometimes bores right through one cheek. It is, perhaps, more frequent in the cheek than anywhere else. Occasionally it affects the genitals of both male and female children, and in these cases, as well as those in which it affects their face, if there be any evidence of power, it would be good practice to apply a strong remedy to check it, particularly as escharotics can be applied under chloroform: but one must be guided entirely by the condition of the patient in judging of its propriety. It was surprising to see this child, ill as it was, take its food readily to the last; but such is sometimes the case.

Pleuritic Effusion: Paracentesis Thoracis.—The other cases to which I wish to call your attention are instances of effusion of fluid into the pleura, for which paracentesis thoracis has been practised. You are aware that the symptoms of pleurisy are generally ushered in with pain in the chest, hurried respiration, and fever. The coughing often gives intense pain until fluid is poured out into the pleura; but even then a child is feeble and restless, with exacerbations of feverishness; and it cannot lie easily except in some positions.

I must not here enter into the various physical signs indicated by percussion and auscultation. I will merely remind you that commonly one side expands imperfectly in respiration, while the heart is pushed over to the right side from the presence of fluid; and eventually, if the fluid be not absorbed, although it may at first be serous, it is apt later to become purulent. Although this is the common mode of attack, yet I wish to warn you that there are chronic cases of pleurisy in which there are no such antecedent symptoms. Perhaps there is no history of a febrile attack to be traced. We have seen in this hospital a considerable number of cases of copious pleuritic effusion in children, where no distinct history of acute pleurisy could be made out, and its progress had been so insidious that it was unsuspected. Now, supposing that the symptoms do not yield to ordinary remedies, are we justified in tapping the chest and letting out the fluid in young children? In determining this question, it must be remembered that the fluid in these cases often becomes purulent, and then there is a fresh accession of fever, the child becomes hectic, the tongue is redder, and there are probably diarrhoea and sickness. The cavity of the pleura, indeed, then becomes a large abscess, and the child is in grave peril. Two very favourable cases have occurred at an interval of twelve months in this hospital. One case has gone out recently, convalescent. I confess that for some time I viewed unfavourably the operation of paracentesis thoracis in these cases. What I had seen and read of it abroad was by no means encouraging. M. Boyer had not a single favourable result in all his cases. Dupuytren had only two successful cases out of fifty. M. Gendrin did not save one child in twenty! But a paper was published some years ago in the *Guy's Hospital Reports*, in which much better results are recorded; thirteen out of twenty-five recovering, and in some of the fatal cases death taking place from causes apart from the operation. Dr. West has come to think that we may tap the chest more frequently, and that children are possibly lost in consequence of it not being done.

I have now seen several cases where the operation was followed with good results. Here is an example. James Busby, aged 8, was admitted into the Hospital on June 6th, 1870, with pleurisy, becoming worse and worse. He had to be propped up in bed from excessive dyspnoea, and would have sunk unless the operation had been performed. Various measures were had recourse to before the operation—such as blistering, dry cupping, etc. On the 29th of June, the symptoms were extremely urgent; and on the 13th of July, as a last resource, the pleura was tapped by Mr. Wood, at the suggestion of Dr. Playfair. Thirty-six ounces of thick pus were drawn off through a tube under water, immediately after which he breathed more easily, passed a quiet night, and next day was more comfortable than he had been for a month before. The line of dulness was moved back three-fourths of an inch nearer the median line. On the 20th of July, the pleura had filled again, and the boy was apparently as bad as ever. There was considerable bulging in front of the ribs, just below the left nipple. Mr. Wood passed a trocar through the old wound, and drew off nine ounces of pus, which gave him no relief. Next day, the dyspnoea was still greater; the bulging in front was larger, red, and tender, looking like an external abscess, and poultices were applied. On the 24th, he seemed at the point of death from dyspnoea, and the house-surgeon opened the swelling at the most prominent part with a bistoury. Eighteen ounces of pus gushed out, and for a week afterwards the discharge was very profuse, soaking the bed-clothes three or four times daily. Oedema of the feet came on; and on August 7th, both legs and thighs were much swollen, and diarrhoea set in. For this he was treated with opium, catechu, and kino unsuccessfully; and on the 19th, the diarrhoea was so excessive that all food was stopped except raw meat pounded with sugar, and a liberal allowance of brandy. The second left rib was separated from its cartilage, and could be felt moving up and down under the finger. In a few days, the diarrhoea diminished; the boy began to improve and gain flesh. On the 19th, as no discharge took place, a counter-opening was made through the back of the chest, and a drainage-tube was put through from front to back. On September 16th, a smaller tube was substituted; and on October 20th, this was altogether removed. He was then plump, walking about the ward, though still unsteadily. The left side measured 10½ inches, one inch less than the right, and was tolerably resonant; there was vesicular breathing, with some small crepitation; and the heart had resumed its normal position. On Nov. 4th, he was sent away convalescent. In reference to the narrowness of the chest in this case, it must always be expected to follow to a greater or less degree; and there is little chance of the chest regaining its entire fulness again—it probably remains always partially collapsed, although there is great tendency in nature to repair the injury. Dr. West has suggested a peculiar belt and crutch to be used after treatment in hospital to lessen this deformity, and has seen children improved by its use.

The second child on whom paracentesis thoracis was performed has just left the ward. The notes are as follows. Annie Webb, aged four years, was admitted on the 19th July, with some dulness of the left side of the chest, diarrhoea, and abdominal pain. She had cough, and was restless. The temperature was 103 deg., and the pulse 136. The cough increased; and, on the 23rd, there was dulness over the whole of the left lung, with diminished respiratory and vocal sounds. The left side was slightly larger than the right, and the spinal column was curved from the left. On the 26th, the left side was painted with iodine liniment; but, as this took off the skin, it was not repeated. On the 28th, as she was coughing much, restless, fretful, and thirsty, she was given two drachms of cod-liver oil twice daily, two ounces of wine, and an extra pint of beef-tea. Notwithstanding this treatment, the pleuritic effusion increased so much that, on the 6th August, the intercostal spaces were bulging, and the most perceptible heart-impulse was between the sternum and right nipple. On the 16th, the chest was tapped under water, and a tube inserted, through which two ounces of very thick pus flowed. Considerable quantities of pus escaped daily. On the 25th, some purulent material was coughed up, the edges of the wound sloughed, and the tube was withdrawn. On September 2nd, the pleura was syringed out with one part of tincture of iodine to five parts of water. After this, the discharge became less, and great improvement was manifest in the girl's health. On the 30th, she had lost her cough; the wound was rapidly contracting, and very little discharge of pus; the heart was in its normal position, and a considerable quantity of air could enter the left lung. The abdominal pain in this child was very likely to mislead the practitioner, and make him suspect some abdominal affection. It is well to be upon one's guard in this matter. When a child complains of pain in the lower part of the chest or upper part of the abdomen, you need not necessarily suppose that it is suffering from peritonitis or inflammation of the bowels. Examine its chest carefully, especially if it have cough. Most frequently cases of this kind turn out to be pleuritic, and not abdominal. When the chest begins to bulge on one side, there is then no doubt that there is the effusion of pleurisy. I have no doubt, gentlemen, that in this child's case tapping was a very judicious measure; and I feel certain that this operation will come to be the recognised method of treatment in such cases.

ON INTRAOCULAR MYOTOMY.*

By AUGUSTIN PRICHARD, F.R.C.S.,

Consulting Surgeon to the Bristol Royal Infirmary and Eye Dispensary,

It has been my desire for some time to bring before you some of the results of this operation on the eye, the method of performing which I will presently describe. We of the elder generation in our student days were taught that the firm grey ring, about an eighth of an inch in width, joining the iris and choroid, and lying a little behind the junction of the cornea and sclerotic, was a ligament, and it was therefore called the ciliary ligament; but it was also added that some older anatomists considered it a ganglion, and others even thought it muscular. It was obvious, however, on minute dissection, without powerful microscopic aid, that it received numerous branches of the ciliary nerves, which ran forward imbedded in the grooves on the inner surface of the sclerotic; and that a few were traceable through its tissue into the iris; and also that some nervous twigs seemed to emanate from loops whose direct continuity with the ciliary nerves it was difficult to trace. These latter, I need scarcely remind you, come from the lenticular ganglion, and consist of branches of the third or motor, the nasal branch of the first division of the fifth, or the sensory parts, and the sympathetic; besides the two long ciliary nerves which leave the fifth nerve before it joins the ganglion, and enter the globe of the eye along with the others; one of these two anastomosing with one of the short ciliary twigs before it pierces the sclerotic, thus, independently of the nervous supply to the lids, conjunctiva, muscles, and other appendages of the eye, forming an extremely complex arrangement of nerves running forward to the ciliary ring. This peculiar structure is now acknowledged to be muscular, composed of non-striated fibre in the human subject, but of striated fibre in some of the lower animals; having its fibres directed principally in two sets, one circular, and the other radiating, but much intermingled; the whole forming so firm a ring that, when there is effusion within the globe of the eye, that is, inside the choroid, the sclerotic itself, dense and inelastic as it is, rather yields than this band, which forms a constricted line round the hardened globe. In those rarer cases where the whole eye, including this band, is distended with fluid, the sight is hopelessly gone.

* Read before the Bath and Bristol Branch, October 26th, 1871.

The operation to which I allude is the division through a small aperture of these muscles and the areolar tissue and nerves, which together form the so-called ligament; and it is easily performed, without much pain, and not needing chloroform. Mr. Hancock and Mr. Solomon, and some others, have written on the subject; and Mr. Solomon, who seems to have a large experience of it, lays much stress on the difference between division of the longitudinal and radiating fibres of the muscle, and advises a special way of operating, so as to ensure the division across the radiating fibres; and he brings forward some cases of much interest and success, where he has performed his operation for the cure of various defects in the accommodating power of the eye. I am not convinced of the reality of this difference, and believe that, if the whole grey body be cut through, the fibres of all kinds must be divided, and the action of the muscle modified and impeded; and, independently of any effect on the muscular and nervous elements of the organ, the dense unyielding ring can no longer afford the mechanical resistance which it has hitherto given.

Unfavourable results of the operation are extremely rare, the usual local objective consequences being an immediate effusion of blood, sometimes filling the anterior chamber, which, however, is absorbed in a day or two; a slight protrusion of the choroid or even of the hyaloid membrane; a gradual leakage of watery fluid from the chambers; and a dragging of the pupil downwards towards the opening. The other results vary according to the case.

The operation is generally performed with a cataract-knife; but I very much prefer the iris-knife, a little instrument which has undeservedly fallen into disuse. It is a knife about as wide as the blade of a cataract-needle, cutting on one edge only, with a smooth and round back, being tolerably strong for its size. The surgeon stands behind the patient, and, steadying the head and eyelids as in the extraction of cataract, with the knife pointed vertically downwards, its back being towards the globe, lets the point enter the cornea about a line from its lower margin, and pass onwards through the iris close to its ciliary border, into the space between the edge of the lens and the sclerotic; then, by pressing the edge forwards against the sclerotic, and letting the little knife partially cut its way through, the ciliary muscle must be divided. Before the instrument is quite withdrawn, it should be slightly rotated, so as to allow a free escape for the aqueous humour and any blood which may have been effused during the operation, and of any fluid that may be collected at the roots of the ciliary processes and round the ciliary ring.

The cases where this operation will be of service may be stated generally to be those where the sight is dim, the eye unusually tense and hard; in chronic recurrent iritis with effusion; in glaucoma in all stages; and in sclerotic inflammations which are accompanied with increasingly impaired vision and much circumorbital or hemicranial pain: in fact, in those cases where iridectomy is successful. And it is quite different both in a physiological and practical point of view from mere puncture of the cornea or evacuation of the aqueous humour, or tapping through the sclerotic in cases of hydrophthalmia, recommended by Wardrop and others. I am not prepared to say that this proceeding is a complete substitute in all cases for iridectomy; but it has the advantage of being quite safe and simple, and comparatively a slight operation, not requiring chloroform, and productive of little injury to the eye. It gives time for other treatment, and for iridectomy itself, should that measure be advisable. I am quite aware also that some of the highest ophthalmic authorities in London have no opinion of its efficiency; but this I make bold to put down to want of experience, from lack of faith in its merits. I believe also that, in cases where this operation proves entirely useless, iridectomy will prove useless too. I have performed the operation as I have described it a great many times, and the general result is as follows.

In one old gentleman, who was quite blind, there was suppuration of the globe; and this, the only untoward consequence I have met with, was due to the patient's imprudence. In many other cases, the result has been negative. In very many instances of progressive disease threatening the sight, the complaint has been checked and a portion of sight saved; and in many others the sight has very much improved, and freedom from pain ensured. It is worthy of remark, that I have never seen a return of glaucomatous disease in an eye thus treated; and also that it is only in bad and unpromising cases, where other treatment proved unavailing, that the operation has been performed.

I must briefly narrate to you some of these cases, in illustration of what I have described.

CASE I. Glaucoma.—One of the first cases in which I performed it, was in a poor woman blind for some time with one eye with what used to be called amaurosis. She was under various general and local treatment for it when the other eye became suddenly dim; and she was brought up to the Eye Dispensary almost blind a few years ago. The

pupils were dilated and fixed, but ~~not~~ yellow or glaucomatous in appearance; and she suffered extreme pain in the sides of the head. We tried the treatment usual in such cases—blisters, iodides, and local stimulating applications to the eye; but she grew gradually worse, and it appeared certain that nothing but operation would give her any chance, and that a very poor one. I therefore went down and performed intraocular myotomy in a little back street in the Hotwells, my friend Mr. Leonard kindly giving me his help; and there we left her, without much hope of amendment. We saw nothing of her for some weeks, when she presented herself, but so altered that I did not recognise her as the same person. She could see well; and the change in her showed the difference between the vacant look of a blind person and the active expression in the eyes of one who sees.

CASE II.—In an old lady, who was blind except that she could distinguish light from darkness, who was very old, and whose case was very chronic, the operation in both eyes resulted in the restoration of sufficient sight to enable her to go about with comparative comfort.

CASE III. Subacute Glaucoma.—A little weakly nervous old lady, of excessive timidity, suffered from glaucoma of the left eye, which had almost destroyed her vision when I saw her. By a sort of ruse we got her to submit to chloroform, to which she was very unsusceptible; and I then removed a piece of iris; and, finding the lens partly opaque, removed that also. She recovered the strength of the eye, but saw barely the light. Two or three years afterwards, the right eye became similarly affected, with much pain in the head and fulness of the vessels. No treatment seemed to touch it, and neither she nor her friends would hear of any operation. At one of my visits, however, I went armed with my little knife, and, partly by stratagem and partly by force of arms, I got hold of her head and made the required puncture before she well knew what was the matter. From that time the pain (in the head left her, and the eye soon became strong. The sight remains much as it was just before the operation, and she finds her way about tolerably well. I have no doubt that she would have been blind in a very few days, if the disease had continued unchecked.

CASE IV. General Ophthalmitis.—An old lady was advised by her medical man to put herself under my care, as his remedies had failed to relieve her of a very painful and active disease in one eye. When I first saw her, she had pus in the anterior chamber, a partly opaque and rough cornea, long standing iritis, and inflammation of the sclerotic, with intense pain in the eye and half over the head, as severe a case as we often see. I thought, however, that I could cure her by general treatment and local applications; and with tonics and other means she became much better, but in a very short time returned to Clifton as bad, if not more suffering than ever. The sight was hopelessly lost; but she suffered so much pain, that she was precluded from any enjoyment of life, and from performing her duties. I therefore determined to try this operation, and made a free puncture in the way described. She shrieked out at the time, and suffered very great pain for some hours afterwards; but went home in three or four days quite relieved, and has remained well ever since.

CASE V. Acute Glaucoma.—A woman, between 50 and 60 years of age, came up from the country with well marked acute glaucoma, a comparatively rare disease, generally affecting both eyes, probably gouty or rheumatic in its origin, known by enlarged fixed oval pupils of a green colour, rapid destruction of the sight, and, as far as we now know, only to be relieved by operation, and, before the date of iridectomy and intraocular myotomy, incurable. The disease had existed five weeks, and had already destroyed the sight, except that in one eye there was a faint perception of light; but this was only occasional. The eyes were very hard and prominent, but not very vascular. The lens looked hazy, and the iris was pressed against the cornea in each eye; and she suffered extreme pain in the head. Her medical attendant in the country had treated her with great activity, and had done all that leeches, blisters, mercurial and other medicines, could do; and they would have relieved her, if any internal remedies would; but the disease held its course. In this case there was every expectation that an operation would remove the pain and check the disease; but I could give her no definite hope of a restoration of the sight, which seemed to be lost. I divided the ciliary ligament freely in each eye, letting out a large quantity of fluid and some blood. She complained of much pain at the time of the operation, and for some days afterwards. On the fifth day, she became easy, and stated that she could see the light and her hand moving; and from this time she gradually and slowly mended, and, when I last saw her, she was quite free from pain, and her eyes were strong. She could see fairly with both eyes; that is, she could find her way about, and see all objects about her tolerably clearly; and the sight was still mending. The pupils had become black, but were still very large and pointed below, being drawn down at the seat of the operation.

I have chosen these five successful cases to show the occasional value of the operation in different states of the eye. I have not yet tried it in corneitis and pannus, but intend to do so. There is no claim to novelty in what I have now brought forward; for I believe that others have done the same, although the mode of performing the operation may not be identical. But I must very briefly speak of this operation in another point of view, in which I think it of much physiological and pathological interest and value, and which, to my knowledge, has not been previously noticed.

In one of my papers, on Extirpation of an Injured Eye for Sympathetic Ophthalmia of the other, I stated that, from examination of the removed eyes, I found that in a large majority of cases the sympathetic ophthalmia occurred where a cut had divided the cornea and iris, and destroyed the lens, and left a hardened and adherent capsule pressing on the ciliary ligament; and that it was the diseased action of the compressed nervous structure of this organ which, through the sympathetic and fifth nerves, led to the development of sympathetic destructive disease of the uninjured eye.

It must be admitted that the nerves passing to the grey ciliary ring control and superintend the nutrition of the anterior part of the eye, for there is no other nervous supply; and the nutrition of the eye is modified, or impaired, or improved, according to the condition of the nerves. The pressure on this ring produces blindness of an incurable kind, if of any moderately long standing without suitable treatment; and it generally leads to similar disease of the other eye; and, as the removal of a diseased eye checks the progress of complaint in the other, so I believe, and am prepared to show by some cases, that division of the muscle in an eye blind from pressure on the nerves will alter and improve the nutrition of the eye operated on, and will check the progress of disease in the other.

CASE VI. *Disordered Nutrition of the Eye altered by Operation.*—In the year 1868, I removed the left eye of a young man who was blind from injury and sympathetic ophthalmia. The remaining eye was at that time affected with the bulging and thinning of the sclerotic coat round the margin of the cornea known as "staphyloma corporis ciliaris", and he could just discern the light. This state became worse; and after a while, merely to relieve the tension and pain, I performed intraocular myotomy, and he went back to the Union, of which he was and is an inmate. When I next saw him, the eye had nearly recovered its usual size and shape; the pupil was closed, and most of the cornea opaque; but there was a firmer and healthier feel about the eye, and the staphyloma had disappeared—a circumstance which I never witnessed before; and he could still see the light. In June of last year (1870), I made an attempt to remove a portion of iris, but only succeeded in removing a portion of membrane which I considered to be the capsule of the lens. In June of this year, he was again under treatment by Mr. Leonard and myself; and we took out a piece of iris through a section in the upper part of the cornea, where alone it was clear, leaving a pupil of considerable size. This young man can now see objects around him, but not very distinctly. The case, however, is a very remarkable one, and proves that the removal of the tension of the eye and relief from the pressure on the nerves by the division of the ciliary muscle have restored the nutrition of the globe to a comparatively healthy state.

I must lastly give one or two cases to illustrate the effects of the operation on the other eye, an effect most remarkable, and at first unexpected, but perfectly true and unmistakable.

CASE VII.—In September 1870, a poor man aged 60 came under my care with the following unpromising condition. He had cataract and glaucoma of the left eye, which was hard, congested, and quite sightless; and with the right eye he could not see his way about. He could see sideways, but not straight before him; and the eye was hard and full. After trying various treatment without effect, I divided the muscle in this eye, and much fluid and some blood escaped; and he complained of much pain. Within three days, he had greatly improved, and could see objects all round him; a fortnight after the operation, he could see very much better, and the pupil was drawn down and active; and, what was most remarkable, he drew my attention to the fact that he could see the light with the old glaucomatous left eye; and, upon examination, I found it looking much more healthy; and the pupil, instead of being fixed, was moderately active. Under these circumstances, about a month afterwards I extracted the cataract, and he saw better. About six months after the first operation, he had fair sight in the right eye, in which the pupil was still drawn down; but in the left, where I had removed the cataract, there were evidences of great tension, the iris being pressed backwards by the fluid. I therefore divided the muscle in this eye also, and the patient was relieved. He can see to go about anywhere, and can see objects moderately well; and he is still under treatment.

This interesting case proves to me the following facts; viz., that

intraocular myotomy will check glaucoma in the eye operated on; that it will, by sympathetic action, relieve a similar state of the other eye; that glaucomatous tension of the eye is not removed by removal of the lens; and that the ciliary muscle may be divided with advantage in a tense eye from which a cataract has been extracted. I have been so convinced of the truth of these inferences, that I have not hesitated to advise, and very frequently to perform, this operation on a hopelessly sightless eye, in order to preserve the other.

CASE VIII.—A servant, who had lost one eye completely by recurrent iritis, which had resisted all kinds of medical and topical treatment except operation, and had left her with bulging iris, closed pupil, and hard globe, came under my care with a similar condition in a very acute form in the sound eye. Although she had suffered only a few days, her sight had become extremely dim. I used some treatment without much avail, and then divided the muscle in her sightless eye. Much fluid escaped, and the next day she pronounced herself better. She had no bad symptom; and the recently affected eye answered favourably to treatment, so that the sight was entirely restored; and now both the eyes look more healthy than they did before, and she is able to read and to follow her avocation with comfort.

CASE IX was that of a middle-aged woman nearly blind in the left eye from slowly progressing glaucomatous disease resisting all treatment. After a time, the right eye began to be similarly affected; and I then divided the muscle in the left, in which she only saw light. The anterior chamber filled with blood at once. It was absorbed in a few days, and within ten days the sight was much improved. The result has been, that she has useful although imperfect sight in the left eye, whilst the right has completely recovered itself and become perfectly strong and well.

It would be useless to multiply cases of this kind, which much resemble one another; but I think I have brought forward enough to prove the great value of this operation.

It will probably be noticed that I have said nothing about the ophthalmoscopic appearances in these cases. I only examined a small number of them, for in most the symptoms of disease and indications for the operation were obvious. It is possible that, by careful examination of the interior of the eye, we might eliminate from our list some cases in which the operation must necessarily be useless; but they would be very few. The seat of the operation is entirely out of sight under any circumstances; and the only condition which would prove that it would be no use to operate, would be evidence of incurable disease in the retina and optic nerve, independent of pressure within the globe, a comparatively rare cause of blindness. There is, however, a fair field open for careful observation in this respect.

In conclusion, for the tedium and length of my paper, which naturally has not the interest for many others that it has for me, I must ask the forbearance of my audience, and lay the whole blame on the importance of the subject.

SUCCESSFUL TREATMENT OF CHRONIC HYDROCEPHALUS.

THE case of Jane Johnson reported in the *Standard* as dying at Leigh, in Essex, on September 26th last, between eighteen and nineteen years of age, recalls to my mind a case which I attended in 1848.

Mrs. R. brought a baby, twenty-two months old, into a room where I was engaged with a difficult labour, observing, "There is no cure for this poor little object." The child had been blind six months; its head measured twenty-seven inches in circumference. The cranial bones, not having grown since its birth, were very far separated from each other. Its neck was about the thickness of three fingers, its legs of one; the abdomen was much enlarged. The mother had been told a year previously by two practitioners of much experience, that there was no cure for it. I told her that it might die at any time; but that if it lived I thought it might be cured. The treatment was commenced November 6th, 1848. It consisted of two grains each of hydrargyrum cum cretâ, powdered rhubarb, and carbonate of soda, or two grains of hydrargyrum cum cretâ and one of Dover's powder, according to the state of the bowels, with occasional carminatives. The effect was immediate; the most sanguine prognosis was more than realised. In three months, the child could run alone; at three years, he was foremost amongst his playmates, and whilst at school, the first in his class. He is now established as a watchmaker and jeweller in London, and is the support of his aged mother. Two or three years previously, my father-in-law had been consulted for a girl nine years old, who had been long blind, and whose case for two years had been considered hopeless. Similar treatment, with the addition of blisters to the head, was followed by equally happy results.

HENRY UMPLEBY, M.D., Bedale.

ON PARALYSIS OF THE BLADDER, AND ITS TREATMENT BY THE CONSTANT GALVANIC CURRENT.*

By JULIUS ALTHAUS, M.D., M.R.C.P. Lond.,
Physician to the Infirmary for Epilepsy and Paralysis.

It is a well-known fact that, while some diseases of the bladder, such as inflammation and stone, have received a full share of pathological inquiry and therapeutical attention, other affections of the same organ have been unduly neglected, both as far as pathology and treatment are concerned. To this latter class of diseases belongs the affection known as paralysis of the bladder, which is generally, in text-books on the practice of medicine and surgery, and even in special treatises on diseases of the urinary organs, dismissed with a few cursory and superficial remarks; while in practice patients suffering from this disorder are given over to the use of the catheter for the rest of their lives, and only imperfect endeavours are made to cure a very annoying and troublesome complaint, which almost always, if left to itself, exerts a depressing influence upon nutrition and assimilation throughout the system, and likewise causes considerable mental despondency, with all its attendant evils.

The term "paralysis of the bladder" is often loosely applied to cases in which there is difficult micturition, but where the bladder is not really paralysed. Patients in whom this organ has lost its function of acting as a reservoir for the accumulated urine, are said to suffer from incontinence or paralysis of the sphincter of the bladder; and again, cases in which some mechanical obstruction, such as hypertrophied prostate, offers an impediment to the discharge of the urine, are frequently put down as such of paralysis of the bladder. It can, however, be no matter of surprise that pathological terms relating to disordered micturition should have been vague and inaccurate, if we consider that until quite lately the physiology of that important function has been in a most unsatisfactory condition. Only little was known about the mode in which the motor and sentient nervous supply is conveyed to the bladder, and even less about the muscular forces by which the urine is retained in, and expelled from, that viscus. Before, therefore, proceeding to the immediate subject of this paper, I will give you as concisely as possible the results of some very important investigations into the physiology of micturition, which have recently been made by Professor Budge of Greifswald, and with which, although they have been made known in Germany for some years past, I believe the profession in this country are as yet unacquainted.

Budge made his experiments chiefly on dogs, in which the nervous centres and the bladder were laid bare. It being impossible to determine the course of nervous fibrils from the central organs towards the viscus, by means of dissection or chemical or mechanical tests, the only way to arrive at a satisfactory conclusion respecting the origin of its nervous supply was to observe the physiological effects of electrical stimulation. Now it was found that by faradising the cerebral hemispheres, the corpora striata, and thalami optici, no effect was produced on the bladder; nor did any action become perceptible when the cerebellum was faradised. As soon, however, as the pedunculus cerebri and the restiform bodies were touched by the electrodes, the viscus was seen to contract, and urine was voided. Thus it was made evident that nervous fibrils exist at a certain definite point in the upper portion of the cerebro-spinal axis, which have a special relation to the movements of the bladder.

It now became necessary to determine the course which these fibrils take in order to reach the viscus, and which might lead either through the pneumogastric, the sympathetic nerve, or the spinal cord. Both the pneumogastric and sympathetic were divided without altering the phenomena previously observed; but, after section of the cord, faradisation of the parts just mentioned proved ineffectual. Further experiments showed that these motor fibres of the bladder proceed from the pedunculus and the restiform bodies through the anterior columns of the cord to the anterior roots of the third and fourth sacral nerves, and that their function may be excited both by cerebral influence and by reflex action, the latter through the intermediate agency of the posterior roots of the sacral nerves.

Besides the one just mentioned, there is another nervous centre for the bladder in the lower portion of the lumbar cord, faradisation of which causes well-marked movements of the viscus, and the excitability of which, after death, persists longer than that of any other portion of the cord in relation to the bladder. Motor nervous fibres proceed from

this, independently of those first described, through the hypogastric plexus on their way to the bladder.

Another important result of Budge's researches has been, that the muscle hitherto described by anatomists as *sphincter of the bladder*, is really no sphincter at all, physiologically speaking; and that the longitudinal as well as the circular unstriated muscular fibres of the bladder—that is, the muscles known as detrusor urinæ and sphincter vesicæ—serve exclusively for expelling the urine, without having the least effect in closing up the orifice of the viscus. Faradisation of any portion of the bladder causes urine to be voided; and when Budge caused a column of water to flow in an uninterrupted stream out of the bladder, faradisation of the anatomical sphincter had no influence in arresting the flow. This was, however, immediately checked when the electrodes were directed to the membranous portion of the urethra, acting upon the constrictor urethræ and bulbo-cavernosus muscles. The nerves animating these muscles originate in the pedunculus cerebri, and emerge from the cord between the third and fifth sacral nerves, being enclosed in the sheath of the pudendal nerve. The muscles mentioned habitually close the bladder by means of their reflectory tone—a special arrangement to that effect existing between the posterior roots of the third, fourth, and fifth sacral nerves, the lower part of the spinal cord, and the anterior roots of the same sacral nerves.

The female bladder has, likewise, no sphincter, properly speaking; but the constrictor vaginæ takes in females the place of the constrictor urethræ and bulbo-cavernosus muscles in males. It is, therefore, best to drop the term "sphincter of the bladder" altogether, and to call the dense mass of unstriated circular fibres near the opening of the urethra into the bladder the "annulus circularis".

Being guided by the results of these physiological researches, we can experience little or no difficulty in satisfactorily explaining the phenomena of micturition, both in their normal state and when they are pathologically altered.

1. The urine is *allowed to accumulate* in the bladder by the reflectory tone of the constrictor urethræ and bulbo-cavernosus muscles. When their tone is considerably increased, as is the case during erection, any passage of urine from the bladder becomes impossible; but if it be lost, there will be incontinence—that is to say, the urine will dribble off as fast as it is secreted. This, however, it would be incorrect to call "paralysis of the bladder". Artificial incontinence may be produced by section of any of the parts concerned in keeping up the reflectory tone of the urethral muscles. Thus the urine is seen constantly to dribble away in dogs after section of the *anterior* roots of the three sacral nerves previously mentioned, whereby the *motor* fibres animating the urethral muscles are deprived of their energy; and the same takes place if the *posterior* roots of these nerves be divided, in consequence of which the influence of the sentient nerve-fibres is withdrawn. Either of these operations destroys the reflectory arrangement just described, and, therefore, the tone of the urethral muscles. On the other hand, division of the spinal cord at some place *above* the sacral nerves increases the reflectory tone of all parts below, and, amongst others, of the urethral muscles. In this instance, therefore, the result of the operation is not incontinence, but paralysis of the bladder; the latter being due partly to an increased reflectory tone of the urethral muscles, whose function it is to close the orifice of the viscus, and partly to true paralysis of the motor nerves of the bladder itself.

2. *The urine is voided* in the normal condition by concurrent relaxation of the constrictor urethræ and bulbo-cavernosus, and contraction of the longitudinal and circular unstriated muscular fibres of the bladder. This occurs either by cerebral impulse, or by sentient influence and consequent reflex action. Thus we generally make a point of passing urine just before starting on a railway journey, not because there is any desire to do so, but because we know from experience that for some time to come we shall have no opportunity of satisfying any call of nature. The sentient influence comes into play when the bladder is full and becoming distended, thus causing a peculiar impression on the sentient nerves which imparts to us the desire to empty the viscus. If both cerebral impulse and sentient influence be dulled, as is the case during sleep, no urine is passed; but if they be increased from any cause whatever, unusually frequent calls are the consequence. Thus a general state of excitement and nervousness, which frequently causes diarrhoea, will also cause frequent micturition; and exalted local sensibility of the sentient nerves of the bladder, owing to inflammation of the mucous membrane or the presence of a foreign body, will produce the same result.

Paralysis of the bladder—that is to say, inability to pass urine in the natural way from loss of motor nervous influence—may therefore ensue in the following circumstances.

1. When the conduction of nervous influence from the *pedunculus cerebri* to the bladder is interrupted. This occurs in certain cerebral diseases, in hysteria, in typhoid fever.

* Read before the Medical Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

2. When the influence of the *lumbar portion of the spinal cord* is removed, as in chronic myelitis, certain injuries of the spine, and in atony of the cord. The inability to pass urine is here due partly to paralysis of the motor nerves of the bladder, and partly to an increased reflectory tone of the urethral muscles, which close up the orifice of the bladder and do not allow the urine to escape.

3. When the normal excitability of the *motor or sentient nerves of the bladder* is pathologically altered, without any central affection being present. Most cases of this kind originate in affections of the sentient, not of the motor, nerves of the bladder, and should, therefore, be looked upon as instances of reflex or inhibitory paralysis. This occurs after instrumental interference—such as the operation of lithotomy; after any operation for piles, but chiefly where the actual cautery is used; and after childbirth, owing to the pressure of the head on its passage through the pelvis. Local paralysis of the bladder is also observed after the use of certain drugs which have a special influence upon the nerves of the viscus, such as belladonna and hyoscyamus.

It will be observed that I do not include under the heading of “paralysis of the bladder” cases of *atony* of the viscus from overdistension. The pathology of such cases is quite different. They occur either in consequence of some organic obstruction—such as stricture or hypertrophied prostate, preventing the complete emptying of the bladder; or in people who, on a single occasion, or habitually, for some reason or another, suppress the desire to pass urine. In such cases, the muscular fibres of the bladder become overstretched and lose their tone, but there is not necessarily any failure of nervous power combined with this; and it is, therefore, preferable to avoid the term “paralysis” for cases of this kind.

The treatment of paralysis of the bladder has hitherto, on the whole, been unsatisfactory, more especially that of the first two forms of the disease, where the affection is owing to cerebral or spinal mischief. The remedies most usually recommended and employed are strychnia, ergot of rye, cantharides, arsenic, iron, and faradisation. These remedies have, no doubt, succeeded in curing or improving a number of cases, more especially of the third class; but they have, to my personal knowledge, often remained ineffectual even in such patients, and rarely, if ever, do any good in the cerebral and spinal varieties of the disease. It is especially well known of faradisation, that it has little or no therapeutic influence in diseases of the nervous centres; and, if employed at all in paralysis of the bladder, it should only be used in the local and reflex or inhibitory form of the disease. Under these circumstances it is certainly a matter of congratulation that we possess in the constant galvanic current a remedy which, if properly applied, appears always to be able to restore the influence of volition over the bladder, unless actual destruction of the nervous matter involved should have taken place. From what I have seen of its effects in a number of, at first sight, unpromising cases, I have no hesitation in asserting that, both in efficacy and quickness of action, it is infinitely superior to all other remedies which are generally used for this affection; and that, where there is a physiological possibility of restoring the voluntary action of the viscus, we shall be able to effect it by the aid of the constant current.

The mode of using this agent is of considerable importance. Experience has shown me that it is neither necessary nor expedient to apply the current directly to the tissue of the bladder itself, as we might do by means of an insulated sound, with a free metallic knob, introduced into that organ. Direct galvanisation of the *full* bladder is objectionable, because a powerful chemical decomposition of the urine is the consequence of such a proceeding, giving rise to symptoms of fainting, owing to the sudden distension of the viscus by the gases which are set free; while direct galvanisation of the *empty* bladder appears to produce an irritating effect upon its mucous membrane. External galvanisation produces none of these inconveniences, and is thoroughly effective, so that it should in all cases be employed in lieu of direct internal galvanisation.

The position of the electrodes should vary according to the seat of the affection. Where we have reason to believe that it is due to disease involving the pedunculus cerebri, one director connected with the negative pole should be placed to the back of the head, and another connected with the positive pole above the os pubis. The latter electrode should have a large surface. In cases of disease of the lumbar portion of the spinal cord, the negative pole is placed to the lower part of the lumbar spine, and the positive in the same position as above. Finally, in local paralysis of the bladder, we may either use the same arrangement of the electrodes as in spinal disease, or both directors may be placed above the os pubis.

How long should the application of the current be continued? and should it be intermittent or continuative? The intermittent application, according to my experience, is far superior to the continuative—a fact which is in perfect consonance with the results obtained by the same

method in other forms of paralysis. Fifty or sixty intermittences of the current are sufficient for one application. I am in the habit of leaving the positive pole *in situ*, and of removing the negative every three or four seconds, putting it on again immediately afterwards. The whole time of application in such cases, therefore, does not exceed three or four minutes.

The current used must have a certain tension; for, if it be feeble, no result is produced. I have in most cases used fifty or sixty cells of Daniell's or Smee's battery; but, in the cerebral form of the disease, less power may be employed.

I now proceed to narrate a few cases illustrative of the different varieties of paralysis of the bladder, and their treatment by the constant galvanic current.

CASE I. Paralysis of the Bladder from Syphilitic Disease of the Pedunculus Cerebri.—W. S., aged 29, unmarried, a clerk out of employment, was admitted as an out-patient at the Infirmary for Epilepsy and Paralysis, under my care, in April 1870. He had been in good health until three years ago, when he contracted a chancre, and had sore-throat and roseola about a month afterwards. He underwent a course of mercurial treatment, under the influence of which he apparently quite recovered. About Easter 1869, however, cerebral symptoms began to make their appearance. His memory became very bad; he frequently suffered from headache, and sensations of giddiness and dizziness; he felt irritable and desponding, and had some difficulty in expressing himself. At the same time, he entirely lost the relish for his work, and found sustained application impossible. He was now put on a course of iodide of potassium, under which he improved. Early in 1870, however, he had a fainting fit, and lost his speech for two days. He was now obliged to give up his employment altogether. About a month before I first saw him, he was suddenly affected with ptosis of the right eyelid; and, a few days after this had come on, with difficulty of micturition. This latter increased rapidly, so that he was only able, with great efforts, to pass about two tablespoonfuls of urine at a time. He was then, by his medical attendant, instructed in the use of the catheter, which he now introduced three times daily. He applied for relief at the Infirmary, chiefly with regard to a galvanic treatment of the ptosis, which troubled him more than his other ailments.

On examination, the patient appeared to be of sallow complexion, and spare habit. He had a childish and half-idiotic expression. He answered questions rationally, but in a sluggish and hesitating manner, and occasionally burst out laughing. The saliva was seen to dribble away from the corners of the mouth. There were complete ptosis of the right eyelid, and paralysis of the rectus internus muscle of the same eye. The sense of smell was diminished; the patient complained of nocturnal headaches and sleeplessness. The gait was rather staggering, but the patient could walk two or three miles without much fatigue. The heart and lungs were perfectly healthy. The tongue was fissured, and digestion was much impaired. The action of the bowels was torpid; and he never passed his urine now in the natural way, although he could by much straining pass a small quantity. The urine contained an enormous excess of phosphates, but was otherwise healthy. As the patient had taken large doses of iodide of potassium during the last twelve months, and his general nutrition was rapidly failing, he was put on iron and cod-liver oil; and galvanisation, by the constant current of Daniell's battery, of the paralysed muscles of the eye and eyelid, and of the bladder, in connexion with the medulla oblongata, was at the same time resorted to. There was soon considerable improvement perceptible in both affections. The patient passed about four ounces of urine in the natural way after the second application; after three more, he had entirely recovered the control over his bladder. The ptosis improved *pari passu*. Soon afterwards, he was lost sight of; but I heard lately that, although his general condition had become rather worse, and more especially his intellect was fast failing, there had been no return of the ptosis, nor of the paralysis of the bladder.

CASE II. Hysterical Paralysis of the Bladder.—A married lady, aged 32, of highly nervous constitution, who had lived much in the tropics, was sent to me by Dr. Frank in July 1870. She had been very delicate as a child, and her mother had died of phthisis. Family troubles thoroughly upset a system naturally predisposed to nervous disturbances, and in which only some powerful exciting cause was required for the full development of hysteria. Early in 1870, when she was under the care of Dr. Siordet, of Mentone, the patient had cataleptiform seizures, and convulsive attacks resembling opisthotonos. She soon after lost her voice, and the power of walking and of voiding the urine. From March 6th, until the time she came under my care, the catheter had to be introduced twice daily. This was a cause of great annoyance, for it became necessary that the patient should, even in her travels, merely on account of this symptom, be constantly accompanied by a medical man

able to give relief to the bladder. The urine in this case was quite normal.

Galvanisation of the cervical sympathetic and the spinal cord was resorted to in this patient for producing a beneficial modification of the constitution of the nervous system. A current of fifty cells was also applied to the bladder on two several occasions (July 30th and 31st). After the first such application, the patient passed her urine in a feeble stream, and with a certain amount of pain and straining; after the second application, she could pass it freely, and had fully retained the power of doing so when I last heard of her, ten months later (May 1871).

CASE III. Paralysis of the Bladder from Disease of the Lumbar Portion of the Spinal Cord.—A gentleman, aged 46, married, of spare habit, and without regular occupation, was in his usual health in summer 1870, when he went for change of air to Blankenberghe, near Ostend. He took a most active part in all the gaieties which were going on there, and, amongst other things, danced all the dances every night at the casino, which he had not done for many years past. After this kind of life had gone on for about a month, he suddenly lost the power over the bladder, being altogether unable to void his urine, so that the use of the catheter became necessary. Soon after, he also lost to a great extent the power over the lower extremities, so that he was unable to walk for more than a few minutes at a time; and he began to suffer from obstinate constipation. Symptoms of catarrh of the bladder now likewise made their appearance. The patient consulted a number of eminent physicians and surgeons, both in Germany and England, who treated him with iron, nux vomica, arsenic, ergot of rye, and various other medicines, but without beneficial result; and he came under my care in March 1871.

The symptoms had, on the whole, not varied much since their first appearance, but the catarrh of the bladder was now rather worse than before. The specific gravity of the urine was 1.025; it had a very feebly acid reaction, and readily turned ammoniacal on standing; it contained a large quantity of muco-pus. There were occasional attacks of great irritability of the bladder, attended with chilliness, chiefly at night. He introduced the catheter three times daily, and, when the bladder was irritable, as many as six times; and he never passed his urine in the natural way. Digestion was impaired, flatulency complained of, and the action of the bowels was sluggish and uncomfortable. The patient was in a most desponding state of mind, and almost despaired of recovery. He was treated with galvanisation of the lumbar spine, and of the bladder. After the second application, he could pass his urine freely by himself, and only introduced the catheter at bedtime, in order to make sure that the bladder was completely emptied. At first, he generally found about eight ounces of urine in the bladder; but, as the treatment proceeded, the quantity drawn off at night became reduced to two or three ounces, showing that the expulsive power of the viscus became more and more strengthened. The patient likewise underwent medicinal treatment for the catarrh of the bladder, and peripheral galvanisation was used for the lower extremities and the rectum; but it would be foreign to the purpose of this paper to enter at length into these matters. Suffice it to say that, when he discontinued the treatment in June last, the expulsive power of the bladder was all that could be desired; that the action of the bowels was much easier, and that he could walk some miles at a time without fatigue. The urine still contained muco-pus, but not nearly as much as before, and its reaction was now strongly acid.

The foregoing cases are sufficient to show the marked and rapidly beneficial effects which galvanisation of the bladder will produce in paralysis of that viscus, even if produced by constitutional causes, as in the first case, and by disease of the nervous centres, as in the last. If it be, at the same time, considered that the treatment is painless and devoid of inconvenience for the patient, it will, I hope, be conceded that a new and really valuable means for the relief of that troublesome affection has been added to our therapeutical store.

DONATIONS, BEQUESTS, ETC.—Mrs. F. K. H. N. has given £1,000 to the Royal Isle of Wight Infirmary, Ryde.—The Misses Steven, of Polmadie and Bellahouston, have, in accordance with the wishes of their brother, Moses Steven, expressed shortly before his death, distributed £2,000 between various charities, among which are £200 to the Glasgow Royal Infirmary, and £100 each to the Glasgow Western Infirmary, the West of Scotland Convalescent Home, the Glasgow Convalescent Homes, the Glasgow Royal Asylum for Lunatics, and the Glasgow Eye Infirmary.—The Malvern Rural Infirmary has received £100 under the will of Mr. Oliver Mason.—The Leicester Infirmary has received £500 under the will of the Rev. W. G. Sawyer.

CLINICAL MEMORANDA.

PUNCTURE OF THE INTESTINE FOR THE RELIEF OF TYMPANITES.

AMONG the various interesting communications which have appeared in recent numbers of the JOURNAL on "Punctures of the Colon for the Relief of Tympanites", no reference has been made to medical authorities who in the last century not only discussed the operation from a theoretical point of view, but successfully relieved by surgical interference the intense pain from which their patients suffered. I trust that a brief reference to these writers may not be devoid of interest to those members of our profession who are concerned in the revival of the operation.

It has occurred to me that the operation might have been first suggested by the practice, which was advocated by the older surgeons, of pricking with round or triangular needles the gut distended with air, in the course of the operation for hernia. Paré, Corneille de Soelingen, and Pierre Dionis, among others, recommended the practice. Heister, in his work on *Surgery* (Eng. ed., p. 74, 1750), suggests that in pneumatocele, or "hernia flatulenta", if ordinary remedies fail, the scrotum should be perforated with a trocar, and its contents thereby discharged, "which will demonstrate whether it was wind or water." In the same work, Heister expresses doubts of the success of the operation of paracentesis in tympanites. According to Sprengler, in his *Histoire de la Médecine*, vol. ix, p. 181, François de Paule Combalusier was the first who successfully employed the trocar in tympanites. (Combalusier, *Pneumatopathologia*, a French edition of which appeared in 1754, *Traité des Maladies Venteuses*, traduit du Latin, par Jault, vol. ii, in 12.) Benjamin Bell, having observed that this operation was attended with but slight danger in the lower animals, advised that the intestine should be punctured in tympanites. Callisen, who used Petit's trocar, states that paracentesis may be useful as a palliative (*Syst. Chir. Med.*, Pars ii, p. 52). Charles Bell, in his *System of Operative Surgery*, vol. ii, p. 186, does not regard with much favour the practice of piercing the gut with the trocar in intestinal tympanites. C. B. Zang gives very precise directions for the performance of the operation. He plunges a long and fine trocar in the middle of a line drawn from the anterior extremity of the second left false rib to the anterior superior extremity of the ilium of the same side, to the depth of four or five inches. In this way the instrument strikes the descending colon without piercing the mesentery. (Zang's *Operat. Th.*, iii, p. 289.) Zang states that the operation is as devoid of danger as ordinary simple puncture, because, after the withdrawal of the cannula, the wound in the intestine does not exceed half a line in extent. In the *Dictionnaire de Médecine et de Chirurgie*, ed. 1835, L. Ch. Roche, in his article on "Tympanite", after recommending the ordinary remedies and attempts to draw off the gas with a syringe, states that, as a last resort, the abdominal walls may be punctured; and, although he considers the operation to be attended with grave danger, states that it has been practised a certain number of times with success. Among more modern works on surgery, Chelius gives similar instructions for the operation of paracentesis in distension of the alimentary canal with air, when the ailment is idiopathic, and not a symptom of any other disease. (South's edition, vol. ii, p. 495.) Olivier operated on twenty patients in Bolivia, South America, of whom eight recovered in three weeks; the others died, probably from not having been subjected to treatment till too late. The cause of the disease was attributed to overloading the stomach with half-cooked vegetable food, and drinking badly fermented liquid prepared from maize. (*Vide New Sydenham Society's Year-Book*, 1861; and Schmidt's *Jahrbücher*, vol. iii, p. 308.)

G. SYMES SAUNDERS, M.B., M.R.C.P.,
Resident Physician, Devon County Asylum, Exminster.

MALIGNANT DISEASE OF THE LUNGS SIMULATING PHTHISIS: ENCEPHALOID DEPOSITS IN THE KIDNEYS.

PRIVATE JAMES C., aged 30, belonging to the 2nd Battalion Coldstream Guards, was in hospital for thirty-four days in 1860, for a simple venereal sore, which was followed by a bubo; and in 1868 for twenty-six days with bronchitis. He had been twelve years in the service. He was and always has been a strong, muscular-made man, and a good soldier.

He was admitted into hospital July 15th, 1870, for an attack of hæmoptysis, stating that he "spat up" a little blood on the 4th, and that on the night before admission he lost a pint in a similar way. He did not

look ill. The skin was cool. Temperature in the axilla 96.2. Pulse 68. Slight comparative dulness was detected below the right clavicle, with prolonged expiration. He had slight pain and an uneasy sensation in this side. The expectoration consisted of tenacious-looking "pellets," which were blood-stained and few in number. This condition continued without any decided change to August 5th, when, during the previous night, he had had a copious attack of hæmoptysis. His pulse continued remarkably quiet. There were now detected rather fine and numerous muco-crepitant râles below the right clavicle after deep inspiration or cough. He rapidly lost ground from this date, continuing to have more or less hæmoptysis, venous in character, and, when not blood-stained, purulent and frothy. There followed all the physical signs of rapid disorganisation of the right lung, with formation of a large cavity at its apex. On October 26th, he had retention of urine, which subsequently required relief by catheterism. The urine was always copious, notwithstanding profuse perspiration whenever he slept; it was free from albumen. The pulse was always slow, from 60 to 68, until he became hectic. The bowels were habitually costive. On October 31st, he suffered from abdominal pains, with fulness and tympanites. The tongue was dry and brown; the skin cold and dry. From this there was little change, and he died on November 3rd.

NECROPSY.—The body was much emaciated. There was a small tumour of the size of a pigeon's egg on the right side of the chest, surrounding the fifth rib, at its junction with its cartilage; another of similar size on the left side, around the centre of the fourth rib. Neither tumour was connected with the integuments. They consisted of soft, brain-like material. The ribs, where in connection with the tumours externally, were devoid of periosteum. The tumour on the right side protruded through the fourth and fifth intercostal spaces, the lung being indented by it, but non-adherent. The right lung, by its upper lobe, adhered firmly to the parietes, and was broken down in its removal, when a quantity of soft brain-like matter was taken away. Its upper lobe was destroyed, and lined with an irregular material of a similar character, intersected here and there by the remains of the vessels. Throughout the other two lobes were scattered aggregated masses of what at first sight appeared miliary tubercle, but they were more dense, harder, and heavier. The left lung was not adherent, and only contained deposits similar to those on the lower lobes of the right lung, but not to any great extent. The abdominal organs and mesenteric glands appeared healthy. The upper part of both kidneys had disappeared, and had been replaced by a globular mass, of about the size of the closed fist, surrounded by peritoneal covering, which gave it a white glistening appearance. On section, a distinct separation was seen between this mass and the lower part of the organs, which appeared normal. The diseased portion was dark, mulberry-coloured, and soft at its base, becoming lighter coloured, and more brain-like in consistence towards the circumference. Portions of the several diseased products were examined under the microscope, and presented well marked characters of malignant growth.

This case presents two or three points of interest. It had been diagnosed as one of hæmoptysis of a tubercular origin, and this was borne out throughout by the physical signs; while the slowness, or almost normal frequency of the pulse, was frequently noted as unusual in such cases. The kidneys found so extensively diseased had given rise to no symptom, either as to the quantity, or the character of their secretion.

JOHN W. TROTTER, Assistant-Surgeon, Coldstream Guards.

THERAPEUTIC MEMORANDA.

ABDOMINAL PUNCTURE IN TYMPANITES.

As the subject of tapping the intestine in tympanites is now being discussed, and a record of cases is being formed, I may perhaps be allowed to add one to the number.

In July 1869, I attended a lady with intestinal obstruction; and, after two or three weeks of treatment, Mr. Hilton came down from London and met me in consultation. As he did not consider the case suitable for colotomy or other operative proceeding with a view to radical cure, I obtained his sanction to puncturing the bowel. This was done with a fine exploring trocar, a little to one side of the umbilicus, and with a considerable degree of immediate relief, air escaping, and the abdomen falling a good deal in size. The same proceeding was repeated about half a dozen times on successive days, and always with relief for some hours; but the amount of gas removable was always limited. No bad symptoms, however, were ever induced, though the patient ultimately succumbed to the disease.

Cheltenham.

T. MORLEY ROOKE, M.D. Lond.

ABDOMINAL PUNCTURE IN TYMPANITES.

I WRITE to endorse the opinion of Dr. Braxton Hicks, that the credit of this operation must be given to that person who has placed it on a scientific basis and laid down rules for our guidance in its performance. The question of priority will probably never be determined; but I agree with your correspondents that it is by no means a novel procedure, for Mr. Stocker has often spoken to me of it as having been done at our hospital from the period of his earliest connexion with the institution. One case, which occurred twelve years ago, I well remember. Mr. Stocker called me up in the night to see a man just admitted for intestinal obstruction; and, as his sufferings were great, we put a trocar into his colon. It gave him great relief, and the operation was attended by no harm. The case was reported by Dr. Hilton Fagge in the *Guy's Hospital Reports* for 1869, p. 343.

SAMUEL WILKS.

77, Grosvenor Street, Grosvenor Square, W.

[M. Depaul communicated to the Surgical Society of Paris, on May 3rd and 10th, a case in which successive puncture of the transverse colon in a case of acute puerperal peritonitis, with vomiting and considerable tympanites, gave great relief, the patient ultimately recovering. (*L'Union Médicale*, July 27th and 29th.) M. Fonssagrives has communicated to the Academy of Medicine a paper (August 12) in which he cites eighty four cases where puncture of the intestines has been practised for tympanites. He recommends the operation in severe cases, as one which gives great relief, and is not particularly dangerous. Other speakers expressed their confidence in the operation. ED. B. M. J.]

VACCINATION OF NÆVI.

IN the last impression of the JOURNAL I read a letter from Mr. G. F. Hodgson of Brighton on Mr. Ellis's mode of vaccination by blister. I have had no experience of its value in ordinary vaccination, but have for years been in the habit of using liquid blister for abrading the surface in the treatment of nævi, where circumstances have permitted me to adopt vaccination as a means of cure. The difficulty of applying the lymph satisfactorily, owing to the free bleeding which is apt to follow puncture of a nævus, induced me to try exposing the absorbing surface by blistering it. I found the plan very satisfactory; and whenever a suitable case has since come under my notice, ordinary vaccination not having been practised, I operate in this way, and have invariably been successful.

The largest nævus which I have removed by this method was nearly an inch in diameter, very prominent, and situated on the scalp. Ligature being inadmissible, and pressure having been applied assiduously for many weeks without the slightest diminution in the size of the tumour, Sir James Paget advised its destruction by nitric acid. Before carrying out these directions, I thought I would try the effect of blister-vaccination, but, from the raised fleshy nature of the nævus, was not very confident of success. The result, however, was complete obliteration, the scab separating in about ten weeks. Vaccination in this case had not been done at the usual time, in consequence of the child's extremely delicate condition.

E. F. WESTON,

Surgeon to the Stafford County Infirmary, etc.

Stafford, November 14th, 1871.

SULPHUROUS ACID IN SMALL-POX.

I AM glad to be able to corroborate the statement of Dr. Hjaltelin as to the value of sulphurous acid administered internally in small-pox. The number of cases which have been under my care have only been a few more than those treated by Dr. Hjaltelin, and I should have thought them too few in number to warrant remark by themselves. As, however, they have all been treated with sulphurous acid and have all done well, they give an evidence in favour of Dr. Hjaltelin's treatment which is worth recording. Several of my cases were confluent, in persons who had not been vaccinated; others were semi-confluent, and others modified. They were all treated with sulphurous acid and water in varying doses; and I believe that the eruptive fever was checked, the secondary fever rendered less dangerous, and the period of convalescence shortened. I have had sulphur burned in all the sick rooms; for, as a germicide, there is, in my opinion, nothing more potent. Sprinkling carbolic acid about a room seems to me worthless. What is wanted is a gaseous substance that will fill the room, enter all the chinks and crannies, and touch the ceiling as well as the floor. If carbolic acid be preferred, the best way to use it is to sprinkle it upon a shovelful of hot cinders. I ought to say that, as "parish doctor," I have seen many other cases than my own, and the result has been renewed faith in sulphurous acid.

R. T. MANSON, L.R.C.P. Ed., M.R.C.S.E., Howden.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

EXTROVERSION OF THE BLADDER.

(Under the care of Mr. SYDNEY JONES.)

ON Wednesday, October 25th, Mr. Sydney Jones introduced into the operating theatre a patient suffering from this malformation. In the treatment, his object had been to divert all the urine into the rectum (as suggested by a case of Mr. Simon's), and to close the anterior orifice of the ureter. He had already made a communication, of about half an inch in extent, between each ureter and the rectum, by introducing a silk loop through each ureter, and gradually tightening it by a Graefe's tourniquet in the rectum. There was abundant evidence, before and during the operation, of the sphincter ani being able to control the escape of urine. On the day of operation, as much at least as two ounces escaped as soon as the sphincter was relaxed by the introduction of the finger into the rectum.

Mr. Sydney Jones now proceeded to attempt closure of the anterior orifice of the ureter. Each ureter was drawn forward for about an inch; a director being introduced, the galvanic cautery was applied, so as to destroy the mucous membrane. Two small clamps were subsequently fixed so as to compress the deepest point of each ureter.

Mr. Sydney Jones remarked that, in this case, there had been abundant evidence of the power of the rectum and sphincter to retain urine. It remained to be seen if the formation of a cloaca, such as here aimed at, would prove as serviceable as, or more serviceable than, the receptacle usually made in front of the extroverted bladder.

CHARING CROSS HOSPITAL.

EXTROVERSION OF THE BLADDER.

(Under the care of Mr. BELLAMY.)

THE operation for extroverted bladder, introduced to the notice of the profession by Dr. Ayres of New York in 1859, and since practised by Pancoast, Holmes, Wood, and others, was performed in Charing Cross Hospital on the 13th of July last, on a young man, by Mr. Bellamy. Unfortunately, however, the superior abdominal flap sloughed away in consequence of the patient's incessant coughing from bronchitis after the operation. The lateral flaps retained their vascularity, but became two cutaneous nodules, like walnuts, growing from the lower part of the groin on each side, the left larger than the right. On November 4th, Mr. Bellamy tried a second operation, in which he hopes to be more successful. The right flap he carefully dissected from the subcutaneous tissue after making an incision round the outer, upper, and inner margins. The left flap, which was very thick, he divided, and dissected the inner half as he had done the right flap. The three were then carefully drawn over the mucous surface of the bladder, and united by a suture. Of course there is now no possibility of obtaining an abdominal flap; yet some relief will be afforded to the patient if this operation be successful.

ST. BARTHOLOMEW'S HOSPITAL.

OPERATIONS, SATURDAY, NOVEMBER 11, 1871.

Amputation of the Leg at its Lower Third.—This patient was a most powerful man, having extraordinary muscular development throughout the body, particularly of the arms; yet the circulation in his left leg was exceedingly sluggish, and the limb always cold. He met with an accident on an Indian railway some years ago, his foot being crushed. Amputation was performed, but the flap was scanty, and the scar was never a good one. Latterly the stump became such a source of annoyance to him that he determined to come into the hospital, and, if necessary submit to a second operation. Various means were tried to make the stump heal, among which was skin-grafting. But on account of the sluggish circulation in the limb, and the unhealthy granulations on the wound, they did not succeed. Mr. Callender operated, making a large and full back flap, and placing the leg on a back splint to insure rest,

and with abundance of cotton wool to insure warmth. There were no vessels of consequence to tie, these having been completely obliterated after the former operation. The singularity of the case was the extreme coldness of the damaged leg, and the power of the general system. Seven men hardly sufficed to keep the man on the table during the excitement of the chloroform.

Recurrent Fibroid Tumour on the Back.—This patient had a tumour as large as a child's head removed from his back less than three years ago. The tumour then appeared to be quite enucleated; but the disease has several times returned, and, on the present occasion, the operation was the fifth that had been performed on the same part for its removal. The tumours have always grown with remarkable rapidity, a few months bringing them to the size of a cocoa nut.

Extensive Disease between the Os Calcis and Astragalus.—This patient was operated on by Mr. T. Smith. After making a free incision on both sides of the foot, he gouged out a quantity of diseased bone, and ran a seton through from side to side. He found the rose-headed drill of great service in running through the articulation. The patient's foot was very much swollen, and it was thought that the ankle-joint was involved. After the operation, however, the disease was found to be confined between the os calcis and astragalus.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

CASE OF VESICO-VAGINAL FISTULA.

(Under the care of Mr. SQUARE.)

S. H., a stout, somewhat florid, though not healthy-looking, woman, of hysterical temperament, was admitted into the medical wards on June 28th, 1870, suffering from constant escape of urine. She was thirty years of age, had been married ten years, and had had four children, all living. All her labours had been difficult; the last, in August 1869, particularly so, lasting thirty-six hours. Directly afterwards she noticed the continuous escape of urine, which was attributed to weakness. For three months she was confined to bed; and, up to the date of admission, had been quite unable to work, partly from general debility, but chiefly from the inability to retain her urine. She was ordered a mixture of iron, strychnine, and spirit of chloroform, and in about a month her general health very much improved; but, as the escape of urine continued quite unaltered, an examination was made by Mr. Square, who found that there was a fistulous communication between the vagina and bladder on the right side of the median line, about an inch and a half in length when the parts were drawn down by a hook.

On August 30th, the edges of the fistula, being held firmly, were pared with a fine straight knife. Six wire interrupted sutures were then introduced, by means of a curved tubular needle. The sutures were then merely twisted close up, by means of an instrument terminating in a doubly perforated ball, no quills or buttons being used. The patient was placed on her side in bed, and a short metal catheter, with an S-like curve, having attached to it an India-rubber-tube, was introduced, so that the extremity of the curve projected forward over the pubis, whilst the tube passed backwards to a vessel at the side of the bed. The catheter and tube were removed twice a day, to be cleared of mucus; but, with that exception, they were kept constantly in for a fortnight. A pill, containing three-quarters of a grain of opium, was given every four hours; and, to check the vomiting caused by the chloroform, ice was ordered with good effect. At first the vomiting was severe, and sufficient to cause some anxiety as to the endurance of the stitches. She had for some time milk-diet and fish. The urine was normal, and came away *guttatim*, thus keeping the bladder empty; and, having no cause for contraction or spasm, the bowels after the second day were open regularly. There was no sickness after the first day. The opium was gradually reduced; and on September 9th she was ordered a mixture of quinine and acid and a chop. Not the slightest leakage of urine into the bed had been detected. On September 13th, a fortnight from the operation, the catheter and tube were removed, and for the next few days an ordinary catheter was introduced every two hours. At first she had some difficulty in waiting so long, but that gradually passed off; the catheter was introduced less and less frequently, and on September 20th the urine was allowed to pass naturally. Her progress with regard to her general health was very slow, and once or twice she took cold, which retarded it still more. On October 2nd, the sutures were removed. She was kept in on account of her general health until November 9th, when she was discharged.

The chief points of interest in this case seem to be the complete success of the ordinary interrupted sutures, and the advantage of not allowing any urine to collect in the bladder, and by that precaution avoiding contraction and spasm.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 18TH, 1871.

REGINA v. KELLY.

THE trial of Kelly for the murder of Talbot has ended in an acquittal. With the juridical and political aspects of the trial we have no professional concern. With the decision of the judges as to the point of law raised, we are chiefly interested to observe that the Lord Chief Baron finally laid down very distinctly what has always been understood by our profession as the rule of law—that a surgeon was bound to bring to his task generally competent skill and *bona fides* with a view to effect cure; and that it was beyond the custom and province of courts of law, in case of alleged murder, to enter into a minute technical discussion of the details of treatment, when it had satisfied itself that the surgeon was a competent and qualified person, acting to the best of his knowledge and in an upright intention to effect the cure of his patient, or to give him a possible chance of life. We can but join in the wish which has been expressed in the most competent quarters, that this just ruling had been acted upon more decidedly in the earlier part of the case. It is, of course, difficult for us to say what expedients are not justifiable for an advocate to whom his client's hope of life is entrusted. But it is impossible not to feel acutely the gross injustice which Mr. Butt's line of defence in this case inflicted on an able surgeon, who fulfilled with earnestness, skill, and devotion, a most delicate and important duty. There is not, we believe, the least difference of opinion amongst surgeons, that Mr. Stokes, whose skill and attainments have made for him a reputation which extends far beyond the limits of this country, fulfilled in this case to a nicety all the duties of his office. He would have been highly blameworthy, had he failed to do all that art could suggest to give a last despairing chance of life to a man whose injuries, left untended, must have been fatal. In such a case, little short of a miracle could have saved the patient. But we record even this week a case in which, a bullet having been lodged for three weeks deeply in the substance of the brain, and having been sought for by trephining, and removed after washing away the diffuent portion of brain-substance through which it had passed, the patient recovered, and was restored to sound health. As Dr. Howard, the narrator, says, "the will of Providence alone can be offered in explanation of the recovery of the patient"; but it is to that high arbitrament that the surgeon must leave the issues of his efforts in cases so desperate. He would be culpable, indeed, to shrink from the last efforts which science tells him can afford a desperate chance to a patient wounded through the base of the brain or the upper part of the spine.

Such a fiery ordeal of vituperative depreciation as Mr. Stokes has been called upon to pass through might well induce the boldest surgeon to hesitate before he interfered, in another such case as that of Kelly, with what would otherwise be the inevitable course of nature. But we have confidence that they will not be deterred by any considerations from the performance of their duty under such responsible circumstances. The character and skill of Mr. Stokes have been amply vindicated by the issue; and we feel assured that he will not ultimately have any reason to regret that he did his duty by his patient.

SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

OUR readers are acquainted with the details of the Poor-law Medical Officers' Superannuation Act (1870), which declares in its preamble that "it is expedient that provision should be made to enable superannuation allowances to be granted to medical officers of unions, districts, and parishes, in England and Wales, who become disabled, either by infirmity or age, to discharge the duties of their office." This Act was framed on the Irish Act, which has now been carried out during its brief period of existence in upwards of thirty cases. Under the circumstances above stated, the Act authorises the guardians to make an annual superannuation allowance, which is usually calculated at two-thirds of the prior income; and defines the fund from which it will be made, as well as the form of certificate necessary for the medical officer to claim the allowance. Recently Mr. Grubb of Warminster applied to his guardians to apply the Act in his case: the circumstances are precisely those contemplated by the law. He had filled the office with credit, and satisfaction to all, during twenty-seven years; he is now retiring, suffering from infirmity, his health having broken down during the course of his arduous services. Some time since, while in the discharge of his duty, he met with an accident, fracturing his thigh. His application to his Board has been met by the following resolution.

"Resolved,—That this Board are fully sensible of the conscientious discharge by Mr. Grubb of his duties as their medical officer during the last twenty-seven years. That they have given full consideration to his application for a retiring pension, but are sorry that they are unable to entertain it, lest they should establish a precedent, which they are unwilling to do."

We earnestly hope that the Board, who are evidently acting under an unjust and mistaken impression, will reconsider the matter. The principle is settled by the Act of Parliament, which declares that it is expedient that, under such circumstances as they admit to exist, a pension shall be granted. Thirty precedents already exist under the Irish law, and to say that they do not mean to form a precedent is a peculiar hardship and injustice. The refusal to apply the law is in direct contradiction to the expressed intention of the legislature; and, even from a legal point of view, it may very much be doubted whether Mr. Grubb might not enforce the Act against them. The permissive character of the Act is evidently intended to give the guardians power to refuse the allowance to an undeserving officer, or one who has not satisfactorily performed his duty. This, they fully admit, is not the case with Mr. Grubb: and, entirely believing that the guardians of Warminster have been led into an act of gross injustice by a misapprehension of their position and duties in the decision, we submit the matter confidently to their own sense of right and justice for redress.

We shall only add one word. The Legislature, in placing in their hands a permissive power, which enables them to hold the greater control over their officers, by having the means to punish undeserving officers by withholding a pension, by no means contemplated that the guardians should flatly refuse to carry out the provisions of the Act in the express circumstances which are declared to render it expedient. This is to nullify legislation; to contravene the intention of the Parliament, which is expressed with peculiar clearness in the preamble; and to desert their first and most apparent duties as repositories of a parliamentary power, and public functionaries acting under a legislative authority. To refuse to carry out an Act of Parliament, because to do so would create a precedent, is a position of dangerous absurdity, of which a little reflection will show to the Warminster guardians all the enormity. Perseverance in such a course could only have one issue. The attention of Parliament being called, as of course it would be, to so flat a contradiction of its declared will and intention, it would become necessary, as it became necessary in the case of the education Catholic children, to take out of the hands of the guardians a power which they deliberately abused. As friends of local self-government we always deplore instances of local perversity.

This Act was passed in the interests of the poor, so that, when a medical man became incapacitated from adequately fulfilling his duty to them, his poverty should not fight with his will in inducing him to hold on to office. The guardians are guardians of the poor as well as of the rates. It is contrary to the public welfare, no less than to the declared intention of the Legislature, that superannuation allowances should be withheld from medical officers of long service, whom proved and certified infirmity incapacitates from the adequate performance of their duties, and when they ought and wish to retire. This very board, we may observe, is now pensioning its relieving officer.

ADULTERATION OF DRUGS.

THE adulteration of drugs is probably not carried on in this country to the same extent as in America, but it certainly is to a large extent; and a report recently presented to the Pharmaceutical Conference at St. Louis by Mr. J. H. Remington of Philadelphia exposes some of the tricks of the trade, to which it may not be unprofitable to direct the attention of our readers.

After some introductory remarks, he proceeded to say that, of all substances, powders were probably the most liable to adulteration; and that principally in consequence of the difficulty of detection. He had been informed of several wholesale drug-houses where rooms were set apart for the purpose of mixing powders; and another case where there was a regularly organised adulterating department, with a foreman—of no doubt large experience—to superintend this special branch. All sorts of cheap substances were used in this department of industry, the object being to imitate as nearly as possible the colour and general appearance of the genuine article: flour, starch, terra alba, woody fibre, sawdust, musty ship-biscuits, were all in demand for this purpose. Spices, on account of their widely extended use, are of all powders most largely adulterated; and some startling revelations might be made if a spice-miller could be persuaded to disgorge his ill-gotten knowledge. The only safe way to get pure powdered drugs is, according to Mr. Remington, to pay a good price, and buy from conscientious persons who are above suspicion. Cochineal is adulterated with sulphate of barytes, a heavy white powder, which, when shaken with the insects, lodges in the wrinkles and crevices on the surface of the body. The weight is thus increased sometimes from 15 to 25 per cent. Balsam of copaiba is often mixed, and sometimes is found entirely fictitious, being composed of a mixture of castor-oil, resin, and oil of copaiba. Powdered ipecacuanha is sometimes so adulterated and weakened that tartar emetic is necessary to strengthen it. Oil of lemon has been met with, mixed with 30 per cent. of fixed oil. Powdered opium is often mixed with powdered extract of liquorice. In fact, some dealers uniformly send to the grinders a certain proportion of liquorice with the opium, so that they may be ground together. Powdered rhubarb is frequently adulterated with turmeric. Sometimes senega-root is mixed with cypripedium. Castile soap frequently contains an undue proportion of water. It has been met with containing as much as 30 per cent. Acetic acid is also mixed with water, acidulated with dilute sulphuric acid. Subnitrate of bismuth has been found mixed with phosphate of lime to the extent of 20 per cent., and citrate of iron and quinine adulterated with citrate of ammonia, and containing less quinine than called for, 10 or 15 per cent. instead of 25 per cent. Quinine itself is frequently met with mixed with cinchona, muriate of cinchona, and salicine. Santonine has been found adulterated with small particles of mica and cream of tartar, and cream of tartar frequently mixed with tartar emetic. Cream of tartar is grossly adulterated; the terms strictly pure, pure No. 1 and No. 2, being used to indicate varying proportions of cream of tartar and terra alba: the latter material is largely imported for the express purpose of adulterating, the importations amounting to many tons annually. Chloroform is sometimes diluted with alcohol, and iodide of potassium in crystals is mixed with bromide, and occasionally with bicarbonate of potash. Solid extracts are also much adulterated. In the manufacture of syrup, a

considerable portion of the sugar is replaced by glucose, especially in making fruit-syrups.

In the discussion which followed, Professor Marcoe of Boston referred to white Castile soap of handsome appearance which he had met with containing 20 per cent. of steatite, which could be detected by its insolubility; and Mr. W. Saunders, of London, Ontario, to a quantity of oil of peppermint, which had been submitted to him for examination, containing 25 per cent. of castor-oil.

THE Birmingham Hospital for Women is to be opened for the reception of patients on the first Monday in December.

A CORRESPONDENT informs us that a provident dispensary has been recently opened in Mansfield. This is the second time the dispensary has been opened, the former having failed some years ago.

HER Majesty's Government, on the recommendation of Mr. Gladstone, has been pleased to grant from the Royal Bounty the sum of £300 to the children of Dr. Livingstone.

THE professorial speeches, and the expression of their sympathies by the students, at the reopening of the School of Medicine in Paris, were very republican in character.

FROM an account of the water-supply and soil of the town of Zürich, we learn (*Der Naturforscher*, August) that, in the cholera epidemics of 1855 and 1867, no confirmation could be found of Pettenkofer's theory with respect to the connexion of cholera and subsoil water.

DR. LIEBERMEISTER of Basle has been appointed Professor of Pathology and Therapeutics at Tübingen, in the room of the late Dr. von Niemeyer; and has been succeeded in his post as Professor of Medicine by Dr. Immermann of Erlangen.

THE Shoreditch local authorities persist in their determination to sell the timber of their probably infected small-pox shed; and Mr. Shaw Stewart has proposed, therefore, that the Asylum Board Managers shall buy and destroy it. The sum necessary is £27 : 10.

THE steamer *Franklin*, from Stettin, has arrived in New York. On her voyage, forty-one deaths from cholera occurred on board.—The official news report from the Persian Gulf states that on the Arabian coast "many deaths from cholera have taken place, and all the people are engaged in interring their friends."—Cholera is again becoming very fatal in Constantinople.

A VERY remarkable collection of medicinal and other drugs, says *Nature*, has been brought together in the Exhibition of Natural Industry of the United States of Columbia or New Granada in the city of Bogota. Among febrifuges, it includes the yellow quina of Zaragoza and the Sarpolata, which is considered more effective even than quina of dye-plants.

DR. CZERNY, senior assistant to Professor Billroth of Vienna, has accepted an appointment to the Professorship of Practical Surgery at Freiburg. The *Wiener Medizin. Wochenschrift* remarks that this is the first appointment of an Austrian to a German university which has been made for some time; and regards the fact as evidence of the high reputation possessed by the Vienna school of medicine.

AT the recent Pass Examinations for the diploma of membership of the Royal College of Surgeons, ninety-seven candidates presented themselves; namely, forty-six for the double examination on Surgical Anatomy and the Principles and Practice of Surgery, and also the Principles and Practice of Medicine; nineteen on the first part only; three on Medicine, having previously passed in Surgery; and twenty-nine who, having passed a Medical examination elsewhere, were only examined on the Surgical portion.

DR. C. J. B. ALDIS proposes that the plan of employing dust-boxes, daily removed, should be followed throughout the metropolis. It has been adopted by the City of London, and is practised in some country towns and in many places abroad.

THE deputy coroner for East Middlesex (Mr. Richards) and jury, at an inquest a few days since, subscribed 8s. 6d. to summon Dr. von Seydewitz of the East London Hospital, for performing a *post mortem* examination without leave and "robbing the body" of the heart.

THE people of Hampstead are still anxious to have the Small-pox Hospital removed, and are frightening each other with cock-and-bull stories about the infection which it has spread. It is to their persistence in spreading these groundless alarms that they chiefly owe the depreciation of property of which they complain. Mr. Stansfeld has requested them to say precisely "how much" they are afraid of it, and to make a definite written proposition.

MR. CORDY BURROWS has, by the special favour of his fellow-townsmen, been re-elected for the third time (and out of ordinary course) as mayor of Brighton during the ensuing year. The British Association will meet during the year at Brighton, and the compliment is therefore the more marked. He inaugurated his year of office by a banquet, to which between 400 and 500 guests sat down. —We learn with pleasure that Mr. T. L. Gregson, surgeon, of Newcastle-on-Tyne, has been elected Mayor of that town. At the time of the annual meeting of the Association there in 1870, Mr. Gregson was Sheriff, and took an active part in the hospitable reception which was given to the visitors on that occasion.

MAKING THE MOST OF A MISFORTUNE.

A MAN is just now making the round of the London hospitals, exhibiting a curious malformation, and selling photographs of it. He has been born with two hands and lower arms on one side, and these are so joined that the fingers of the one act in opposition to the fingers of the other—perform, in fact, the function of the thumb in normal cases. We can only hope that his sale of the photographs to the curious student will repay his trouble, and compensate in some measure for the annoyance of his malformation.

FREE TRADE IN POISONS.

THE Croydon magistrates gave last week a very strange decision in the case of a chemist named Harrington, who, it was proved, had sold oxalic acid contrary to the provision of the Pharmacy Act, without labelling it, or marking it with the name and address of the seller. For this gross and dangerous breach of an Act passed in the essential interests of the public safety, the magistrates imposed on the offender a penalty of sixpence, saddling the complainant with the cost. A more senseless and dangerous decision we have not had occasion to observe.

DIABETES, LACTIC ACID, AND RHEUMATISM.

EARLY in the year, we published a communication from our correspondent in Naples, containing an account of Dr. Cantani's views on the treatment of diabetes by lactic acid. We believe this treatment has since been tried by several observers in this country. Dr. Balthazar Foster, of Birmingham, tried it very carefully very soon after Cantani's views were made known; and at the last meeting of the Birmingham and Midland Counties Branch, he read a paper containing the results of his experiments. The effect of the lactic acid treatment was illustrated by a diagram, in which the variations in the amount of sugar, in the quantity and specific gravity of the urine, and in the body weight of the patient, were represented graphically. Dr. Foster's observations tend to show that lactic acid has some influence in diminishing the sugar, though less than Cantani reported. The most interesting fact, however, in Dr. Foster's paper was the development of acute articular rheumatism during the lactic acid treatment; this was repeatedly observed in one case. We hope to lay these observations before our readers very shortly, as well as Dr. Foster's general experience on the treatment of diabetes.

BULLET IN THE BRAIN.

THE surgical history of the case of Talbot, developed at the recent trial, gives a special interest to an extremely remarkable case recorded by Dr. Howard of New York, in the recent number of the *American Journal of Medical Science*. The patient was a soldier in the 44th Indiana Infantry. The bullet entered the skull at a great distance from the point where it penetrated the scalp: it made at first a sort of trap-door fracture, and gave rise to but few symptoms. When symptoms threatening death occurred two weeks afterwards, its presence in the brain was diagnosed by a hair which was found sticking out of the aperture in the bone, and which the bullet had evidently carried with it. The skull was trephined; the ball was found deeply buried in the brain, and was removed two weeks after the injury. The patient made a complete recovery, and subsequently enjoyed robust health, having returned to duty, and served in the cavalry.

WELL-MERITED HONOURS.

BY decree of 11th of July last, Dr. Rose Cormack, our correspondent in Paris, received from the French Government the Cross of Chevalier of the Legion of Honour. On the 24th of the same month, M. Jules Favre forwarded a copy of the decree and the insignia of the Order, accompanied by the following very gratifying letter.

"Paris, le 24 Juillet, 1871.

"Monsieur,—J'ai l'honneur de vous annoncer que le Chef du Pouvoir Exécutif de la République vient, sur ma proposition, de vous conférer la Croix de Chevalier de la Légion d'Honneur. Je me félicite d'avoir été à même de faire connaître au Président du Conseil le savoir et le dévouement avec lesquels vous avez donné vos soins aux blessés français recueillis dans l'ambulance anglaise de la rue d'Aguesseau. Vous vous êtes montré un digne collaborateur de Sir Richard Wallace: et le gouvernement français s'est plu à le reconnaître.

"Recevez, monsieur, avec mes félicitations les assurances de mes sentiments les plus distingués.

"Le Ministre des Affaires Etrangères, JULES FAVRE.

"M. le Docteur J. R. Cormack, 7, rue d'Aguesseau."

Along with the above, the following document (the usual certificate) was received by Dr. Cormack.

"République Française.—Ordre National de la Légion d'Honneur. —Le Grand Chancelier de l'Ordre National de la Légion d'Honneur, certifie que, par arrêté du onze Juillet, mil huit cent soixante onze, M. Cormack, médecin anglais, a été nommé Chevalier de la Légion d'Honneur, pour prendre rang du même jour.

"VINOY.

"Versailles, le 15 Juillet, 1871."

Dr. Cormack has also received the war medal and the cross of the Société Française de Secours aux Blessés. To the congratulations on these honours we wish to add our own. Dr. Cormack showed a remarkable amount of devotion, courage, and skill, throughout both sieges of Paris. He kept bravely to his post, and never ceased to fulfil all the duties of a citizen, a philanthropist, and a physician.

ANOTHER LADY-DOCTOR.

MISS SUSAN DIMOCK, a young American lady, has just graduated with distinction in medicine, surgery, and obstetrics, at the University of Zurich.

PRECAUTIONS AGAINST CHOLERA.

THE London College of Physicians have recently shown a wise but ominous foresight in appointing a Committee during the quiet winter months to consider what general public recommendations they can properly authorise, in the present state of knowledge, for the personal guidance of those who may be threatened or attacked with cholera. This Committee will shortly issue its report. Just now we are free from the epidemic influence, and possibly, therefore, too little alive to the prospective perils of the next warm season. But let the Local Boards of Health and sanitary authorities throughout the country take example from the London College. During the cold season, the low temperature arrests the extension of the disease; it does not extinguish it, or destroy the power of subsequent activity in the particles of contagion, which await the return of a higher temperature. The pois ons

of the Deltas seem all to follow this law—the yellow fever which is born in the Delta of the Mississippi, the plague born in the Delta of the Nile, and the cholera born in the Delta of the Ganges. But woe comes to those who assume that this hybernation implies entire extinction of activity. The Russian experience of 1847 is still at hand to teach us. The epidemic which had become generalised at the close of 1847 appeared to be brought to an end by the severe winter of 1848. From the 1st of February, 1848, there were no more cholera-deaths. Then every one said, “The outbreak is over.” But the months of April and May of that year cruelly dispelled these illusions. Cholera reappeared every where in its haunts of the previous year, and spread with frightful rapidity throughout the vast territory of the Russian empire. The number of deaths in all the Russias in the month of July, 1848, is stated by Dr. Chasseaud of Smyrna, in his prize essay just published at Constantinople, to have amounted to eighty thousand weekly. The existing state of things at Constantinople, and the history of the German cholera ship which has just reached New York, shew that our present sense of security is based upon data which are merely local and superficial.

MORTALITY AMONG CHILDREN IN VIENNA.

THE great amount of mortality among foundlings and nurse-children in Vienna has aroused the attention of the city authorities, who have instituted an inquiry into the subject. In consequence of this, the *Stadtphysicus* has made the following suggestions. 1. The Common Council shall undertake the chief inspection of children put out to nurse, in the same way as it already does in the case of orphans maintained at the public charge. 2. In order to carry out this object, it shall authorise the Children's Friends' Society to inspect the nurse-children in Vienna. 3. It shall supply the society with a place for meeting and for keeping its records, on condition that it furnishes regular reports to the magistrate. 4. The Common Council shall, as far as possible, contribute to the support of this society as well as of the fund established by Dr. Heldinger. 5. The Council shall provide that nurse-children shall be received only under a police licence, and that the neglect to give information about them shall be severely punished; and shall provide a place for keeping a register of the names of all foundlings and nurse-children. 6. In order that there may be a sufficient amount of public medical aid for the children, small districts shall be formed, to each of which a physician shall be appointed, who shall be under the direction of the General Sanitary Administration.

OVARIOTOMY ON A CHILD.

DR. J. EWING MEARS records, in the *Philadelphia Medical Times*, Nov. 1, a case in which ovariectomy was successfully performed on a child six years and eight months old, for the removal of a dermoid cyst of the right ovary, containing three pints of fluid, with solid contents—an irregularly shaped osseous mass, some hair, and fatty matter. Dr. Atlee has operated on a girl aged 16; Mr. Baker Brown records ovariectomy in a patient aged 13; and in the *Edinburgh Medical Journal* for November 1870 is the report of a successful ovariectomy by M. Jouon of Nantes, the patient being aged 12. The patient of Dr. Mears appears to be the youngest on record.

VEGETABLE SOURCE OF CARBOLIC ACID.

MR. J. BROUGHTON, quinologist to the Indian Government, states (*Pharmaceutical Journal*, Oct. 7th, 1871) that from the essential oil of a very common hill-plant—the *Andromeda Leschenaultii*, identified as methyl-salicylic acid, and almost identical with the Canadian oil of winter green—he finds that a very pure carbohc acid may be prepared at from five to seven shillings per pound in that country. The plant grows in inexhaustible abundance on the Neilgherries; and it appears to him worthy of record that, should circumstances render the supply of the English product difficult or uncertain, as in the case of war, or the English price increase, a practically inexhaustible source exists in India, from which this indispensable substance, in its purest state, can be obtained at a slight enhancement of the present price.

THE SUPPORT OF HOSPITALS BY WORKING MEN.

OUR Leeds correspondent writes:—A bazaar in aid of the funds of the new hospital at Rotherham was opened on the 9th instant by Earl Fitzwilliam. In the address, his lordship referred to a statement which he had received from Dr. Shearman, from which it appears that, during the past year, forty-three accidents sent from Rotherham were admitted into the Sheffield Infirmary—a distance of six or seven miles. It was further stated that the proprietors of the Parkgate Ironworks have made a legal claim upon their workmen to contribute a penny a week from their wages towards the support of the Rotherham Hospital. “The subscriptions of the Parkgate workmen will amount to £430 *per annum*; and Dr. Shearman calculates that, if every workman in the neighbourhood would do likewise, the sum of about £3,000 a year would be realised; and that sum would be amply sufficient to keep this institution permanently going and prospering.”

THE HISTORY OF MEDICINE.

M. DAREMBERG has inaugurated, at the School of Medicine in Paris, the new course of the History of Medicine, founded by a legacy of M. Champotran. Tracing the difference between the inductive school of Hippocrates and the deductive system of Cnidos, he declared that the deductive, or *à priori* method, will always be fatal to science; and that the inductive or experimental method is the only true system, to which science owes its progress, and that its application to medicine will be the lasting glory of the Hippocratic school.

SPURIOUS URTICARIA.

M. GARNIER, in commenting, in *L'Union Médicale*, Nov. 14th, upon the observations of Dr. Sieveking, in past numbers of this JOURNAL, on the Urticaria produced by Santonine, observes that he speaks of the roseolar eruption produced by mussels and tunny fish, and other food more or less deteriorated, as being identical with that following the use of copaiba. Dr. Garnier has observed that they differ, in that in the former cases there are always gastro-intestinal disturbance, nausea, and vomiting, which, he asserts, are not observed to accompany the roseola of copaiba.

LESSONS FROM INDIA.

THE Secretary of State for India has issued a valuable blue-book, containing the annual report on measures adopted for sanitary improvements in India from June 1870 to June 1871, together with abstracts of sanitary reports for 1869, forwarded from Bengal, Madras, and Bombay. This blue-book summarises, in a highly interesting form, the annual reports of local commissioners; and contains large data concerning the rise and progress of cholera epidemics, the direct influence of sanitary works in lowering death-rates, and many accessory subjects. In an able review by Dr. Cunningham of the local cholera reports, he concludes, from stated data, that the water cholera theory, although warmly espoused by some of the Presidency sanitary officers, and especially Dr. de Renzy, is not fully supported by the great mass of facts collected. We have already referred to the histological report by Dr. Lewis negating Hallier's fungoid theory, and the secondary position to which Pettenkofer's views as to the etiological relations of soil are reduced by Indian experience. Nor does Dr. Ince, who made a special inquiry into the epidemic in the Peshawur Valley, conclude that cholera was there at least chiefly spread by human agency. All, however, are alike agreed that, whether an atmospheric-theory such as that of Dr. Bryden, or the water-theory of Dr. Snow, disclose the *vera causa* of cholera epidemics, “the degree in which inhabitants of a given area are likely to escape will depend greatly on their sanitary condition, on the purity of the water-supply, the excellence of the drainage, and the completeness of all other such arrangements.” This volume includes a practical treatise on water-analysis, the joint production of Drs. Macnamara, Parkes, and Angus Smith; some valuable memoranda on conservancy, drainage, and irrigation; and an elaborate and excellent code of rules as to the measures to be adopted on the outbreak of cholera and small-pox amongst British troops.

HUMAN LOCOMOTION.

IN an interesting lecture by Professor Wilder at the Cornell University on this subject, he notices the curious fact that a person never goes in a perfectly straight line for any distance, but always turns to one side or the other, and at last describes a circle and returns to the point from which he started. The deflection is generally, if not always, from right to left, and is accounted for on the principle that one side of the body tends to outwalk the other. It is a received opinion among American hunters and woodmen, that people who lose themselves in forests or extensive plains thus travel in a circle, turning to the left.

THE MANCHINEEL POISON.

PROFESSOR KARSTEN has related to the Austrian Pharmaceutical Conference in Vienna his personal experience of the poisonous properties of the famous manchineel tree (*Hippomane manzanilla*) of the West Indies and tropical America, which have been doubted by some naturalists. Being engaged for some hours in collecting its juice, Karsten was attacked with burning sensations of the skin, swelling of the face, eyes, etc., which compelled him to pass three days in total darkness. He attributed these effects to a volatile poison given off by the tree.

THE PROPERTIES OF THE TUTU PLANT.

IN a paper read before the Wellington Philosophical Society, New South Wales, by Mr. G. H. Hughes of Hokitika, he describes the physiological effects of a small dose of the extract of this plant, *Coriaria Ruscifolia*, which he administered to himself.

"About three-quarters of a pound of the fresh ground shoots were treated with successive quantities of distilled water slightly acidulated. After filtering and adding the acetate of lead in excess, it was submitted to the action of sulphuretted hydrogen, again filtered and evaporated to the consistency of an extract. This extract was well washed with successive quantities of alcohol, filtered, evaporated, and ammonia added, when a precipitate resembling kermes mineral was separated (resinous matter). It was still further concentrated, distilled water added, and again filtered from precipitate; evaporation continued, again treated with alcohol, filtered, and evaporated to a syrupy consistence. On cooling, a few crystals formed with difficulty. This thick solution possessed very active properties; and a quantity of it, certainly not more than one-twelfth of a grain (I was scarcely aware of having tasted it), in five minutes' time produced a most disagreeable irritating sensation in the throat, extending to the stomach, with pain across the region of the stomach, and accompanied by nausea. In a quarter of an hour's time, vomiting came on, which continued more or less for two hours. Very unpleasant sensations continued for two hours more, when, after great flushing of the face, with all but intolerable heat, the effects passed away."

The paper, which is printed in the *Pharmaceutical Journal* of October 7th, 1871, gives an account of the chemical relations of the active principle and of the antidotes to the poison.

AUSTRALIAN ENTOZOA.

AT a late meeting of the Royal Microscopical Society, Dr. Spencer Cobbold handed in a report on some preparations of entozoa, with accompanying notes, forwarded to the Society by Mr. Morris of Sydney, and made observations on some of the most interesting forms. Of the five species collected by Mr. Morris, Dr. Cobbold stated that by far the greatest amount of importance was to be attached to the discovery in Australia of *Stephanurus dentatus*. This entozoon was introduced to the scientific world as early as the year 1834 by Natterer, who found it in large quantities infesting the adipose tissues of a breed of Chinese pigs, on the Rio Negro in Brazil. Up to the year 1870 nothing further was heard of this parasite, when Dr. Cobbold received a communication from Professor Fletcher of New York, stating that it was committing great destruction among the pork-raising districts of the United States, thousands of pigs in some localities falling victims to its ravages. In aspect and structure *Stephanurus* bears a close resemblance to *Trichina*, but is of much larger size, the cysts of the former frequently measuring an inch or an inch and a half in length: its greater magnitude is the principal safeguard against its introduction into the human subject. Dr. Cobbold supplemented his remarks with some observa-

tions on the question of sewage-irrigation connected with the propagation of entozoic diseases. In his opinion it played a very important part; and he did not feel his position in the slightest degree destroyed from the fact of Mr. Hope's ox, brought up for nearly two years on the produce of the "Breton" irrigated farm, being entirely free from internal parasites of any kind. This animal had never been allowed to graze, but had had all its food cut and carried to it; its water was all brought to it, and altogether the animal had been so carefully guarded and nurtured that the entozoa were shut out from any chance of obtaining a foot-hold. The soil, again, on Mr. Hope's estate was of such a porous nature that the matter containing the undeveloped germs was at once absorbed; while on swampy ground, as about Croydon and other low-lying districts, where this mode of irrigation was practised, the roots of the grasses were constantly immersed in it. The prevalence of tape-worm and other entozoic diseases in those parts of India where sewage-irrigation is carried out, is enormous, and thousands of cattle are destroyed as being unfit for human food. This wanton destruction of all carcasses containing traces of *Cysticercus*, or other entozoa, Dr. Cobbold severely censured, as the meat, on being thoroughly cooked, even though infested with parasites, is wholesome, free from any abnormal taste, and its consumption is unattended by deleterious results.

THE LATE DR. GRIFFITH F. D. EVANS.

AT a special meeting of the Governors of the Shropshire Eye and Ear Infirmary, the following resolution was passed, and a copy ordered to be forwarded to Mrs. Evans.—The meeting specially begs to tender their sympathy with Mrs. Evans on the death of her late talented husband, who, by establishing the Eye Dispensary in 1818, acting as its surgeon for the first fourteen years, and afterwards as its honorary physician up to the time of his decease, has proved himself a real benefactor to the neighbourhood. When it is remembered that the first eye hospital in London was only established in the year 1804, prior to which date diseases of the eye were almost entirely neglected, and that, with the exception of one or two large towns, the Shrewsbury Dispensary was the first formed in the provinces, the giving such a boon to Shropshire and neighbouring counties argues well for the energy, skill, and knowledge of Dr. Evans. The gratitude of a very large number of patients will form a fitting testimonial to a long life of usefulness.

FEVER-WARDS.

A CORRESPONDENCE has taken place in the public journals as to the necessity of providing accommodation for fever-patients at county hospitals. Where provided in connection with such hospitals, the contagious huts should be in separate parts of the grounds. We have already expressed our views as to the duty of a more ample provision of isolation homes throughout the country.

THE DISCOVERY OF THE CIRCULATION.

WE learn that it is intended to hold a public meeting shortly to advance the objects of the Harvey Tercentenary. Lord Granville will preside, and the University of London has been asked to lend its large hall. Some interesting relics of Harvey will be collected, including, if possible, busts, early portraits, and—an excellent precedent in matters of circulation—original copies of his books will be shewn.

METROPOLITAN CHOLERA-HOSPITALS.

MR. STANSFELD'S answer to the deputation of the Metropolitan Asylums Board, on the subject of the Prevention of Cholera, seem to us quite satisfactory. It sets at rest a great many alarms and difficulties which had been started in anticipation of a different plan. His own impression, and that of the medical officers by whom he was guided, was, that in each union, and perhaps in each parish, provision should be made against the spread of cholera. That provision should be made by a central board, like their own, who should be prepared to deal with any cases that might arise. With that view, the Local Government would be willing to discuss with the Asylums Board any measures which might be considered necessary.

DR. DALRYMPLE, M.P.

DR. DONALD DALRYMPLE, M.P. for Bath, has returned from the United States, which he had visited with a view to collect information as to the treatment of habitual drunkards. Dr. Dalrymple, who is in good health, has been absent from England about three months. He visited, while in the United States, Chicago, New York, Boston, Albany, etc., and accumulated much information upon the subject to which he has of late specially directed his attention.

PUBLIC URINALS IN PARIS.

M. CHEVALLIER, Member of the Council of Public Health in Paris, informs the municipality of that city that one of the first sanitary matters which claims attention is the state of the public urinals. These require improvement as regards their construction, their number, and the means of keeping them in a good sanitary condition. For the latter purpose, he says that coating the wall of the urinal with coal-tar or Norway-tar has proved perfectly successful in two instances in which it has been tried in Paris, in preventing the fermentation and putrefaction of the urine. In concluding his remarks, M. Chevallier urges, as an additional reason for the multiplication of urinals, the dangers which arise from prolonged retention of urine, in the form of various diseases of the urinary organs, such as chronic inflammations, renal and vesical calculi, suppurative cystitis, pyelitis, and similar diseases.

RELATIONS OF TINEA OF ANIMALS TO TINEA OF MAN.

M. ST. CYR, Professor in the Veterinary School at Lyons, writes on this subject as follows (*Veterinarian*, November 1871). The *tinea* of the cat offers numerous analogies to the *tinea* of children. The disease presents the same essentially parasitic nature; the same cupuliform aspect of the primary lesion; the same composition in the crusts; and, lastly, a perfect resemblance between the constitutive elements of the microphyte that produces the two maladies. There is, therefore, nothing more required to establish a complete identity between them than to prove that they are transmissible from one species to another; that the *tinea* of the child, for example, may be transmitted to the cat; and that the disease which we produce in sowing on the skin of the cat the spores of *tinea* derived from the infant clearly offers all the characters of the affection observed in this animal. On February 7th, 1866, M. Dron, now chief surgeon in the Antiquaille Hospital, sent M. St. Cyr some crusts taken from the head of a child affected with the disease, and under his care. Some days afterwards, he sowed them on the head of a cat, and as a result he obtained a very fine *tinea*. There could be no doubt, then, as to this fact. The *tinea* of the child is contagious for the cat; and this *tinea*, transmitted directly from the child to the cat, offers the same characters as that transmitted directly from cat to cat. We might, therefore, says M. St. Cyr, from this conclude that the *tinea* of the cat may also be transmitted to the child; and that, consequently, there is a complete identity between the two diseases.

SCOTLAND.

THE number of matriculated medical students in the University of Edinburgh at this date (November 18th) is 599, of whom 209 are registered as first year's students.

UNIVERSITY OF ST. ANDREW'S.

IN consequence of the election of Mr. Disraeli as Lord Rector of Glasgow University, his supporters at St. Andrew's University, for which he had also been nominated, have determined to bring forward Lord Lytton as their candidate.

GLASGOW UNIVERSITY.

THE contest between Mr. Ruskin, the Liberal candidate, and Mr. Disraeli, who was brought forward by the Conservatives, has resulted in the election of the latter by a majority in all the nations, representing

a total of 134 votes over his opponent. The election of any particular candidate with prominent political views has practically little or nothing to do with the spirit of the University. At Glasgow, as at other Scotch Universities, the election of a Lord Rector is looked upon chiefly as a pastime by the majority of the students, the influence of the Rector in the government and policy of the University being little understood and as little cared for by them.

PROSECUTIONS UNDER THE MEDICAL ACT.

IN the case of John A. Forbes, chemist, prosecuting Frederick Adair, 24, Marischal Street, Aberdeen, for a contravention of the 40th section of the Medical Act of 1858, in having advertised himself as an M.D., and having signed his letters Frederick Adair, M.D., he being unregistered, and therefore not a doctor of medicine, nor recognised as such by law, Sheriff Guthrie Smith held this week that there was no evidence that the respondent carried on a business as a medical practitioner. An advertisement had appeared to the effect "Dr. Adair, etc.," but it had not been proved that it was inserted by the authority of the respondent. He, therefore, found the charge not proven, and expenses were allowed to the respondent. Mr. J. A. Forbes also prosecuted John Chadwick, 21, Lodge Walk, for the unauthorised use of the title M.B. The defence was that the letters M.B. and L.V.M. meant medical botanist and licensed vendor of medicine. The Sheriff considered that if a man call himself M.B. he must certainly be understood to hold himself out to the world as possessing the degree of Bachelor of Medicine, and is therefore likely to deceive the public as to his professional abilities. The respondent was fined £10, with £3 3s. expenses. The first decision involves a refusal to the public of the substantial protection to which they are entitled. It shows once more how extremely difficult it is to give effect to the 40th clause of the Medical Act. It would be satisfactory to know whether the Sheriff entertained any real doubt as to the authority on which the advertisement was inserted; and where there would have been any difficulty, had the doubt been foreseen, in obtaining satisfactory evidence to that effect. We are informed that Adair has for years been notoriously practising as one of the advertising medical fraternity in Glasgow. Mr. Forbes seems to be rendering an useful public service in endeavouring to enforce the Act for the protection of the public.

IRELAND.

THE opening meeting of the Obstetrical Society of Dublin takes place at the College of Physicians on the 18th instant, when the President, Dr. G. H. Kidd, will deliver an address, and the different officers for the coming session will be elected.

THE Council of the Apothecaries' Hall, Dublin, has selected the *British Pharmacopœia* a second time as the subject of the annual prize of five guineas, the examination for which will take place on the first Monday and Tuesday in May, 1872. The prize is to be competed for by apprentices.

THE MEDICAL EVIDENCE AT KELLY'S TRIAL.

WE have great pleasure in publishing the following important statement:—"The undersigned, having carefully considered the evidence in the recent trial for the murder of police-constable Talbot, and believing that certain statements made during the trial are likely to affect very injuriously the professional reputation of Mr. William Stokes and the surgeons who acted with him, desire to record their opinion that the bullet-wound in the neck of police-constable Talbot was the direct and sole cause of his death, and that no blame can be justly assigned to any of those by whom the wound was treated.—Cæsar H. Hawkins, William Fergusson, T. B. Curling, James Paget, Prescott Hewett, J. Ashton Bostock, John Eric Erichsen, John Birkett, George Pollock."

INTRODUCTORY ADDRESSES IN DUBLIN MEDICAL SCHOOLS.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

THE Introductory Address was delivered on the 6th instant by Dr. ARTHUR WYNNE FOOT. He commenced by alluding to the fact that frequently, of late years, the opening sentences of the introductory addresses in the hospital had consisted of obituary notices, and expressed the general gratification which was felt that on this occasion the prelude was not to be pitched in a minor key. He alluded, in graceful and delicate terms, to the circumstance that he occupied the post of junior physician, vacated by the retirement of Dr. Hudson, now the President of the College of Physicians—rather as his representative than his successor—and regretted that the presence of his predecessor precluded him speaking of him as he could and would. Alluding to the conditions which have led students to regard these annual orations as the capital affliction of human patience, while not expecting that he should escape their criticism in many particulars, he assured them that their ears should not be reassailed with stock quotations from Bacon and the poets. Declining to handle any topics of intense professional interest, or even national importance, such as medical ethics or State Medicine, he preferred to dedicate the occasion to the interests of the youngest student now beginning to prepare himself, by hospital attendance, for the future business of his life. He offered to take him step by step over the course through which he had gone himself. If his food were poisonous, he had tasted every dish, and regarded his position there that day as a convincing proof that his method was, at least, worth their trial of it. He advised them to devote themselves at first to the art or practical part of medicine, which could be learned nowhere but by the bedside of the sick, and nohow but by personal attendance on them and written narratives of their illness. The courtesies of the sick room—no mean accomplishment—were to be upheld here as well as in the chambers of the wealthy. High personal character—a most influential circumstance in deciding their future career—if now acquired, would prove a powerful ægis in a life peculiarly assaulted by temptations of various kinds, and would surround them with an atmosphere pure enough to disinfect even the pestilential breath of calumny. "Work" was the password to success, the key to unlock every difficulty, the thread of Ariadne in the maze of life; but work was not to be of an epileptic kind—in convulsive fits, followed by acute attacks of idleness, which did not exhaust their susceptibilities to fresh ones, but, by repetition, left the mind a desert, with no oasis. Their energy was not to be the flare-up of lighted straw, but a banked-up furnace of dull but sleepless determination. All well-fed, active streams of work found their way, sooner or later, to the great sea of knowledge, and, rising again from that sea, rained down such honour, emolument, and rank, as the profession, the public, or the State, had it in their power to bestow. The scientific part of medicine was to be studied as carefully as the art, but later, because the practice of medicine was the fundamental necessity. Science, as applied to medicine, meant the physical sciences, and not logic, ethics, and metaphysics. Physical science was striding about in the arena of medicine, dealing death-blows to quackeries—doing what the art of medicine could not do; and opposition to the influence of science would be as vain as an attempt to stop the motion of the world, and they would only make a Juggernaut of themselves under the resistless wheels of Progress. Alluding to the necessity of erudition in medicine, as being a profession related to all human knowledge, and to the fact that the writings of many medical men were not properly appreciated in their lifetime, he observed that the brightest epiphanies of intellect were sometimes too strong for the eyes: like comets, they blazed and disappeared before we had time to wonder at them, but they left behind them in their works a glittering train of luminous thoughts, at which men marvelled as they read when the dazzling influence of the meteor was withdrawn. Referring to the threefold object of medicine—the cure, the palliation, and the prevention, of disease—he stated his belief that at no very distant time the prevention of disease would occupy the mind of the public and the profession in a degree anticipated by few at present. He declined to discuss the question on the present occasion how far preventable diseases were the moral police of the Almighty, and as such to be left to work out their own ends; but was not disposed to regard plague, pestilence, and famine, as unavoidable tortures inflicted by wrathful Omnipotence upon His helpless handiwork. Our present knowledge of the causes of the propagation of cholera was a striking and solemn illustration that the

threat of Rabshakeh enjoyed a wider fulfilment than was ever dreamed of by the Assyrian captain. In the midst of luxury and in the centres of civilisation that disease was spread, even among the high and noble, by an unconscious performance of the act which was held out to the Jews as the dire alternative of their refusal to capitulate to Sennacherib. In some concluding remarks addressed to the senior students, he counselled such of them as had great attainments to preserve their lustre by humility, remembering that the great sea of knowledge was unfathomable, and that the wisest of men could not, during his whole lifetime, do more than wet his ankles on its shore; they must be patient if success seemed slow to come, because the crowns of kings would not fit the brows of infant princes. They should scorn every shape and form of humbug, and abhor and dread it as the tunic of Dejanira. The address closed with a final appeal to those who were commencing to learn clinical medicine at the hospital this winter; that they would enter on the path of education indicated; and that, cherishing a strong faith in the power of work, they would persevere until they found their labours crowned with one of the many diadems of success.

THE ADELAIDE HOSPITAL.

THE inaugural lecture of the Session 1871-2 was delivered on the 3rd instant by Dr. BARTON, one of the surgeons.

The lecturer said that public hospitals fulfilled a two-fold object—namely, the relief of human suffering, and the technical instruction of students in the wards, which was the very fountain-head of medical knowledge. The primary object of medical skill was, and should ever be, the alleviation of actual bodily affliction, the prolongation of human life, and the prevention of deformity. The secondary purpose of medical study was little lower than its aim—namely, to discover the sources and causes of disease, to suggest the means by which they might be prevented, and to obtain methods by which the various forms of external injury might be rectified. In this light medical practitioners were divided, by an obvious distribution of labour, into physicians and surgeons; one of these classes was concerned with the nature of natural and organic disorders; and the other with external injuries. He referred to further subdivisions of medical science—to the branches concerned with ophthalmic, auricular, obstetric, and other diseases, and remarked that such subdivisions had been already carried as far as was expedient. Excessive splitting up of the highways of medicine into too minute branches might tend to obscure the main features of broad natural laws, and to lead to all bodily disarrangement being referred to the same cause—making the sun, as it were, go round the world instead of keeping the planets in their order. The physician should care for the whole human race, without distinction of race, religion, or complexion; and he trusted that, when it came to the turn of those whom he was addressing to apply their acquirements, they would never allow such distinctions as he alluded to to interfere with their anxiety to assist the afflicted and soothe the weary. When their sympathies were touched by application for relief, they should remember to place pecuniary reward as a purely secondary matter in their consideration. With regard to patients, the medical man was always bound to give the best advice in his power, irrespective of what the position of the sufferer might be. While he paid all due deference to any little prejudices of the patient, the physician should never make any compromise with quackery, nor allow his regard for the opinion of some old woman to permit any nostrum to be tried upon a patient in his charge. If there were danger to the life of a patient, should the medical man tell him so, or encourage him by holding out hopes of recovery which were unlikely to be realised? When death was imminent, it would certainly be false mercy to deceive a patient; but as long as there was no immediate danger, and a hope of recovery, it was better to cheer him forward. There were many instances in which people who laboured under organic disease of the heart lived well for many years. If those persons had been informed of their actual condition their lives would have been rendered miserable, and their deaths would, in all probability, have been hastened. The friends of the patient, however, should be honestly made acquainted with the true state of the case, although there were times when it was even more prudent to express to them a quiet doubt than to give a decisive opinion one way or the other. When they had to deal with cases which had been previously under the care of another medical man, the most generous care should be taken to say nothing to damage his reputation even when they had to differ from him and adopt a different course of treatment. The Army Medical Service now afforded fine openings to young medical men. The dispensary doctors of this country were still, however, for the most part, placed in an unsatisfactory position. The position they occupied had not sufficient official inducement to attract the best men, nor were the

prospects of private practice much more encouraging. The institution of local village hospitals, containing half a dozen beds, with a good, well-trained nurse to attend each, was one of the greatest desiderata in Ireland at present. Very great advantages would be afforded by them. In minor cases, patients would be spared the humiliation of going to the workhouse hospitals; in more complicated ones the delay, inconvenience, and danger of travelling fifteen or twenty miles to the county infirmary; while, at the same time, the local surgeon would have his experience largely improved by having them from the outset under his own supervision. Institutions of the kind were to some extent established in England. They would cost very little, and he trusted that some gentlemen of property in Ireland would soon make a move in that direction.

ASSOCIATION INTELLIGENCE.

GLOUCESTERSHIRE BRANCH.

THE fourth annual meeting of the above Branch will be held on Thursday, November 23rd, at 3.30 P.M., in the Gloucester Infirmary.

Members wishing to bring before the Branch any matter of professional interest, will kindly communicate with the Secretary prior to the meeting.

The chief business of the meeting will be the election of officers for 1872.

At 6 P.M. a dinner will be provided at the Spread Eagle Hotel, Gloucester. Price, 4s.

ALFRED FLEISCHMANN, *Honorary Secretary.*

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEDICAL MEETINGS.

THE next meeting of the members of the above District will be held at the Fountain Hotel, Canterbury, on Thursday, November 23rd, 1871, at 3 o'clock. The Chair will be taken by the President of the Canterbury Medical Society.

Dinner will be provided at 5 o'clock precisely. Charge, 5s., exclusive of wine.

All members of the South Eastern Branch are entitled to attend, and to introduce friends.

The following papers have been promised:—1. Hernia, with cases of operation for strangulation.—2. Remarks on the diagnosis and surgical treatment of Fibroid Tumours of the Uterus.—3. Variola in Pregnancy and its results.—4. Rupture of the Aorta within the Pericardium.

Gentlemen who wish to be present at the dinner, are particularly requested to inform me *on or before* Tuesday, the 21st instant.

CHARLES PARSONS, M.D., *Honorary Secretary.*

2, St. James's Street, Dover, Nov. 14th, 1871.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEDICAL MEETINGS.

THE November meeting of the members of the above District will be held at the Old Ship Hotel, Brighton, on Friday, November 24th, at 3.30 P.M.; Dr. ALFRED HALL in the Chair.

Dinner will be provided at 5.15 P.M. precisely. Charge (not including wine), 5s.

All members of the South Eastern Branch are entitled to attend, and to introduce professional friends.

Gentlemen who propose to stay to dinner, are requested to inform me the day previously.

Notice of the following papers has been received:—1. A Remarkable Case of Fecundity occurring after the Cure of Endometritis, etc., which had been the cause of Sterility. By A. Hall, M.D.—2. The Danger of Ill-constructed or Neglected Cisterns. By J. Jardine Murray, M.D.

THOMAS TROLLOPE, M.D. Cantab., *Hon. District Secretary.*

35, Marina, St. Leonard's-on-Sea, November 8th, 1871.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting will be held at the General Hospital at Maidstone, on Tuesday, November 28th, at 4.15 P.M.; Dr. ALBERT DAVIES in the Chair.

Dinner will be provided at the Mitre Hotel at 6 P.M.

Business to be transacted.—The election of a member of the Medico-Ethical Committee of the district, *vice* Joy, resigned.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary.*

Rochester, November 13th, 1871.

CUMBERLAND AND WESTMORLAND BRANCH: AUTUMNAL MEETING.

The Whalebone-Loop in Midwifery.—Selection of Cases for Asylums.—Pure Air in Sick Rooms.—Misplaced Heart.

THE autumnal meeting of this branch was held at the King's Arms Hotel, Wigton, on Wednesday, October 25th. The President, Dr. ELLIOT, of Carlisle, occupied the Chair, and opened the meeting with a few introductory remarks on the usefulness of such a society, and the amount of good which might be effected by individual members contributing statistics on certain subjects, which might be collated by the Society. This was independent of the papers and discussions which came before the meetings.

Communications.—1. DR. SHANNON (Wigton) read a paper on the Use of the Whalebone Loop in Midwifery Practice. He had first seen the whalebone loop used by Dr. Tiffen of Wigton, about ten years ago, and had used it constantly since that time. The instrument which he employed was a modification of the fillet used by Dr. Westmacott, and was of very simple construction. Only a small amount of damage resulted from the unusual amount of pressure occasionally exerted. In opposition to the views of Ramsbotham, it was pointed out that the instrument acted not only by direct traction but by leverage also. It was the most common substitute for the short forceps, over which it had the advantages of simplicity of construction and ease of application; and it would also very often take the place of the vectis. The cases in which he had employed it most frequently were those in which the progress of the head became delayed at the outlet. He had also used it with success when the head was arrested at the brim, and where others would have had recourse to long forceps. In occipito-posterior and in face presentations the instrument would be found useful.—Dr. TIFFEN (Wigton) stated that in the earlier years of his practice he found that delays in labour cases were very common, and he often wished for some means for facilitating the progress of labour. He used to give ergot very frequently, but it acted badly on the child; and on looking out for some simple means he fixed upon the "loop." He now used it in every second or third case, and considered it one of the most universally applicable of instruments.—Dr. MILLER (Aspatria) found the loop most useful in pulling down the occiput when fixed behind the symphysis pubis, but for ordinary cases he thought Denham's whalebone forceps more useful.—Dr. DICKSON (Whitehaven) often employed Denham's whalebone forceps, but had not tried the "loop." He thought that as much as possible ought to be left to nature.—Dr. DODGSON (Cockermouth) thought that instruments ought to be more frequently used; always, in fact, when they could be used with safety.—Dr. FANSON (Whitehaven) had found a whalebone fillet in a very old collection of obstetrical instruments, many of which were upwards of a hundred years old. He had never used it, and preferred his forceps, which gave him good results.

2.—DR. CLOUSTON (Carlisle) read a paper on the question—What Cases should we send to Lunatic Asylums, and When? [This paper will be published in the JOURNAL].—In the discussion which followed, Dr. MACLAREN (Carlisle) referred to the difficulties of home treatment, especially among the working classes.—Dr. TIFFEN thought that some cases were rendered permanently incurable by being kept out of asylums, and would like to have information regarding those cases which were most suitable for detention in workhouses.—Dr. HENRY BARNES (Carlisle) said that his greatest difficulty in treating cases of insanity at home was, the obtaining of experienced attendants; and that relatives did not usually make good attendants. He referred to the difficulties in the home treatment of cases of acute mania and general paralysis, and thought that the information which Dr. Clouston desired, as to the results of the two kinds of treatment, might easily be obtained through the agency of the Branch.—Dr. TIFFEN moved, and Dr. DICKSON, seconded, a resolution, to the effect that Dr. Clouston draw up and circulate a series of questions, in order to elicit the information required, and report at a future meeting.

3.—DR. MILLER (Aspatria) read a paper on some Diseases of the Uterus. He related the history and treatment of three series of cases which had recently been under his observation; viz., 1. Cases of simple ulceration of the os uteri; 2. Cases of pedunculated polypus; 3. Procidencia.

4.—DR. ELLIOT (Carlisle) read a paper on the best means for Maintaining the Purity of the Air in Sick Rooms when ventilation is not easily practicable. The ozonising influence of certain essential oils, recently demonstrated by Dr. Angus Smith, was referred to, and the oil of turpentine was mentioned as having given good results in the hands of the author, particularly in cases of abscess of the lung. Cloths saturated with it were hung about in various parts of the room, and were found to keep the air of the room pure.

5.—DR. ELLIOT related the particulars of a case of Misplaced Heart

in a lady. She had recently come to be insured, and he found the apex-beat of the heart on the right side of the sternum, and the liver dulness in left hypochondrium. She was the mother of two children, and had been under observation for several years.—DR. WICKHAM (Penrith) had seen a similar case in a new-born child.

Dinner.—At four o'clock the members and their friends sat down to dinner. The President of the Branch occupied the chair, and was supported by the Rev. Wm. Schnibben, Vicar of Wigton, Mr. J. M. Hodgson, etc.; and the vice-chair was filled by Dr. Tiffen.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

*Report.—Officers.—Femoral Aneurism.—Eccentric Hypertrophy.
Rupture of Auricle.*

THE annual meeting of the Section was held on October 27th; present, FURNEAUX JORDAN, Esq., in the Chair; and thirty-two members. Letters of apology for non-attendance were read from Mr. Alfred Baker, (President) and Mr. J. H. Houghton, of Dudley.

Report.—The following Report of the secretaries was read and adopted. The secretaries, in presenting their report, have to congratulate the Section on its continued prosperity. In the amount of work done, in the interest of the discussions, and in the attendance of members, the third session has realised the promise suggested by the early history of the Section. As regards the work, the secretaries feel that the amount of material brought before the members during the year, must have given a beneficial impulse to the study of Pathology in the Midland district, both on account of the excellence of many of the specimens, and the accurate observation entailed on the exhibitors. Although the Birmingham hospitals have afforded, up to the present time, the larger share of the preparations presented to the Section, it is hoped that during the ensuing six months there will be a considerable increase in the proportion of specimens from other sources. The secretaries look with confidence to the officers of the newly opened hospitals of the district, to increase the richness of the meetings by the addition of the results of their new and special opportunities for observation. From the foundation of the Section the attendance at the meetings has been large; and it is gratifying to observe that there has been a steady increase in the numbers present during the past session. The smallest attendance was over thirty. During the year several members have been lost, either from change of residence, or alteration in the list of members of the Branch, or death. Nevertheless, the members now number a hundred and twenty-two, which is an increase of seven on the roll of last year. This increase has accrued; it may be mentioned, without any special effort to obtain new members; the secretaries feeling that there is no special strength in a large number of members who do not attend, for a society which, being prosperous financially, and having only scientific objects in view, seeks importance from the active co-operation of its members rather than from their number. The reports of the meetings have, with one exception, been published in the JOURNAL. The exception was due to the inability of the secretaries to obtain a complete record of the proceedings. To prevent any such exception in the future, and also in order to facilitate the publication of the proceedings of the Section, the secretaries recommend that the following rule be adopted, and issued to the members, viz.—That the reports for publication in the BRITISH MEDICAL JOURNAL be given to the secretaries at the meeting at which the specimens are exhibited; and that the reports be written in a form fit for printing, with the name of the member exhibiting at the commencement.

The Treasurer's Report, which showed a balance of £12:7:5 in favour of the Section, was adopted.

Officers.—On the motion of Mr. OLIVER PEMBERTON, seconded by Mr. GEORGE YATES, Mr. J. Hyde Houghton, of Dudley, was elected Chairman for the ensuing year. Mr. Furneaux Jordan was re-elected Treasurer; and Dr. Foster and Mr. Vincent Jackson (Wolverhampton) were re-elected Secretaries for the ensuing year.

Vote of Thanks.—It was moved by Mr. J. F. WEST, and seconded by Mr. W. C. GARMAN, and carried unanimously, "That the best thanks of this section are hereby given to Mr. Alfred Baker, for the able manner in which he discharged the duties of Chairman of the Pathological and Clinical Section during the past year."

Communications.—1. Mr. OLIVER PEMBERTON showed a man, aged thirty, a potato salesman, who had consulted him on May 6th, 1871, for a rapidly increasing Femoral Aneurism on the left side, already extending an inch above Poupart's ligament. There was a history of syphilis at eighteen. No known cause could be assigned for the aneurism. The patient was admitted to the General Hospital, and the external iliac artery was tied by ordinary ligature, on May 27th, very high up.

The ligature came away on the twenty-first day. Complete recovery followed, but with a tendency to hernia at the seat of division of the muscles.

2. DR. A. UNDERHILL showed a specimen of an eccentrically Hypertrophied Heart. The patient was exceedingly plethoric, weighing twenty stone, and was admitted into the Queen's Hospital, suffering from chronic bronchitis with emphysema. On *post mortem* examination the heart was found to be hypertrophied, with its cavities enlarged, and when emptied it weighed 2lbs. 2½oz. There was no valvular disease, and no atheroma of the aorta.

3. MR. BENNETT MAY exhibited the Heart with its Pericardium, of a little boy ten years old, which showed a Rupture of the wall of its Right Auricle, caused by a kick from a horse in the face and chest—there being no external marks of violence. He was seen shortly after the injury, and had the following symptoms. He was unconscious, but apparently in great agony, screaming loudly. He was cold and collapsed, and the pulse beat forty at the wrist, was feeble and intermittent. The pupils were invariably unequal. After vomiting freely, he died just a hour and a half after the infliction of the injury. On *post mortem* examination, the only external mark of violence was a slight bruise on the forehead. There was no fracture of the ribs or sternum, and no bruising or discoloration within the chest. The pericardium was bulging, and distended with blood, of which it contained four or five ounces, in a coagulated condition. The heart was firmly contracted and empty. In the muscular wall of the right auricle was a laceration, about half an inch in length with irregular edges. The structure of the heart was perfectly healthy.

4. DR. MACKEY showed a Cirrhotic Liver, from a woman aged 45, not a drinker, but ill-nourished. The symptoms began with general failure of strength twelve months ago; a sallow colour, and "queerness of head" appeared six months ago. Ascites and anasarca followed about three months ago; vomiting was frequent, but she suffered little pain, and died comatose. The organ was small, and its surface was nodulated; the cut surface was rather hard, showing hepatic lobules distinctly. The hepatic cells were atrophied, and showed fat-globules.

SOUTH WALES AND MONMOUTHSIRE BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Town Hall, Cardiff, on November 7th, at 1.30 P.M.—the President, GEORGE PADLEY, Esq., in the Chair. Nearly forty members and visitors were present.

After the minutes of the annual meeting had been read and confirmed, thirteen new members were elected to the Branch, fourteen new members having been previously elected to the General Association by the Council.

Communications.—1. W. Taylor, M.D. (Cardiff). Excision of the Knee-joint. The paper was illustrated by two patients who had undergone the operation, and by photographs.

2. A. Sheen, M.D. (Cardiff). Sayre's Splint shown applied on a patient suffering from Hip-joint Disease. Attention was drawn to the relative cost of getting the splint made in London (£2:10) or the country (about 15s.)

3. J. H. Wathen, Esq. (Fishguard). Case of Lithotripsy. Mr. Wathen also showed a stone, of the size of a walnut, removed from a female patient *per urethram*.

4. A. Sheen, M.D. (Cardiff). Case of Popliteal Aneurism cured by Pressure, with subsequent Amputation of the opposite Limb for Popliteal Aneurism on that side.—Case of severe Compound Comminuted Fracture of Tibia and Fibula: recovery with an useful limb.—Both patients were shown five years after having been under treatment. They were both under Dr. Taylor's care in the Cardiff Infirmary in 1866.

5. J. Milward, Esq. (Cardiff). On Placenta Prævia.

6. C. T. Vachell, M.B. (Cardiff Infirmary). Exhibition of Microscopic Pathological Specimens, and of some Microscopic Specimens kindly lent by Dr. George Johnson (London), showing the Circulation in the Kidney.

7. J. G. Hall, Esq. (Swansea). A case of Embolism, and one of Carotid Aneurism.

Dinner.—At 4.30 P.M., twenty-nine gentlemen and six guests sat down to an excellent dinner; the President in the Chair, supported on his right by Mr. T. J. Dyke, President-elect, the Vice-chair being occupied by Dr. Sheen, one of the honorary secretaries. After the dinner, some discussion, introduced by Mr. James Lewis of Maesteg, took place on the desirability of establishing a Convalescent Hospital somewhere on the sea-coast in the county of Glamorgan.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH : GENERAL MEETING.

THE second general meeting of this Branch was held at the Midland Institute, Birmingham, on November 9th—OLIVER PEMBERTON, Esq., President, in the Chair. There were also present fifty-three members and visitors.

New Members—Eight new members of the Branch were elected.

Communications.—I. Mr. ARTHUR BRACEY exhibited the patient whom he had shown at the last meeting of the Branch, and in whose eye the Lens had been disorganised and Dislocated. The operation for removal was performed by making a corneal incision with a Von Gräfe's knife and withdrawing the lens by the scoop. A good result was obtained.

2. Dr. ALFRED HILL read a paper on Old and New Methods of Water Analysis. He began by referring to the care which the ancient Jews, Romans, and Greeks, took in order to obtain supplies of pure water. The writing of Hippocrates showed the importance which the Greeks attached to the purity of water for drinking purposes. He then gave a description of the various methods of analysis of water, and showed how in late times attention had been principally given to the estimation of organic matter and to a discovery of its chemical nature. The different processes were reviewed *seriatim*. The simple incineration process and its modifications were stated to be defective. The permanganate process gave different indications with the same quantities of different kinds of organic matter, and therefore was not trustworthy. The processes of Messrs. Wanklyn and Chapman, and that of Dr. Frankland and Mr. Armstrong, were examined; and Dr. Hill stated that, after having used the last named process upwards of three years, he was more than ever impressed with its superiority and utility.

3. Dr. B. W. FOSTER read a paper on the Lactic Acid Treatment of Diabetes.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 10TH, 1871.

WILLIAM W. GULL, M.D., LL.D., President, in the Chair.

Wound of Intestine in Ovariectomy.—Mr. CHRISTOPHER HEATH read a paper on a case of wound of the intestine made during ovariectomy, with recovery. The patient was under his care in the Hospital for Women in November 1870, suffering from an ovarian tumour, which had been repeatedly tapped, and for the removal of which an attempted ovariectomy had been undertaken by another surgeon a year before. The patient was worn out with pain and sickness, and was anxious that another attempt at ovariectomy should be made. This was undertaken by Mr. Heath on November 25th, 1870, when very extensive adhesions to the surrounding structures were found. On enlarging the abdominal incision with scissors in the ordinary way, an empty coil of small intestine, which was closely adherent to the wall, was divided in three-quarters of its circumference. The removal of the cyst was accomplished with considerable difficulty, the pedicle being tied and dropped. Mr. Heath then attached the bowel to the skin with silk sutures, forming an artificial anus, and closed the abdominal incision with wire sutures. The patient made a perfectly good recovery, fæces and flatus passing by the artificial opening on the second day, and solid motions *per anum*. The silk sutures were removed on the eleventh day, and the patient was moving about at the end of a month. Three applications of the actual cautery were made to the edges of the fistula to contract it, but it did not close, and the patient left the hospital in April 1871. She was presented to the Society in a very comfortable and healthy condition, the use of a belt and air-pad satisfactorily retaining all fæcal matter, and the patient having regular stools.—Mr. MAUNDER thought the moral of the operation to be, that in such circumstances we should be cautious not to use scissors.—Dr. EDIS had been present at the operation, and alluded to the difficulties of the case. He believed that the accident was unavoidable, and that Mr. Heath deserved all credit for having shown himself equal to the occasion by taking care of the gut, and sewing the cut edges to the abdominal wall, instead of leaving the injury alone in the belief that there was no hope for the patient.—Mr. JOHN SCOTT also referred to the unusual difficulties of the operation, at which he was present. Had a director been used, the result would have been the same as had occurred in the use of the scissors. The gut could not be separated from the peritoneum.—Mr. DE MORGAN, in expressing surprise at the favourable termina-

tion of Mr. Heath's case, referred to the extraordinary differences observed in the recovery of patients from ovariectomy. Cases in which great interference with the abdominal viscera has been found necessary, the tumour being perhaps torn away, recovered; while others presenting the most favourable conditions for recovery proved fatal. He then related several illustrative cases, and expressed his opinion that Mr. Heath showed great aptitude and skill in treating the case as he did.—Mr. LAWSON remarked that serous membranes which had been long inflamed, might be interfered with to a very great extent, as, for instance, the tunica vaginalis, which might be dissected out without producing alarming symptoms.—The PRESIDENT, after complimenting Mr. Heath on his honesty in bringing forward the case, expressed his desire to know in what position of the small intestine the opening was, and what Mr. Heath had to say about the propriety of using the scissors.—Mr. HEATH, in reply, said that he was in the habit of using the fingers first, but was not prepared for the existing state of things. He disagreed with Mr. Maunder, however, about the use of the scissors in the case. He could not give any definite answer regarding the position of the wound in the intestine. The contents hardly possessed a fæcal odour.

Thoracentesis in Pleuritic Effusion.—Dr. JOHN MURRAY read a paper on thoracentesis in a case of simple pleuritic effusion. The patient, a healthy-looking and muscular man, aged 38, was the subject of very extensive serous effusion into the left pleura, the heart being pushed entirely over to the right side of the chest, and the left lung completely compressed. His respiration was generally about thirty per minute, his pulse 120, and the temperature 101. Although the acute symptoms had subsided a month after the commencement of the attack, and a fortnight after the pleura had become completely filled, still there were no evidences of diminution of the fluid, notwithstanding that many of the usual remedies had been tried. The ultimate and complete recovery of the left lung was being endangered, and the healthy one and the heart and large vessels interfered with, while the man's general health was suffering. Dr. Murray decided to employ thoracentesis. Accordingly, Mr. Hulke performed the operation, and drew off thirty-five ounces of clear serous fluid by means of Nyrup's modification of Bowditch's aspirator, the trocar being passed into the chest between the fifth and sixth ribs, where the digitations of the serratus magnus meet those of the obliquus externus muscles. The effect of the operation was to diminish in six hours the respirations, pulse, and temperature in a remarkable manner. Ten days after the operation, all evidences of fluid were gone, and vesicular breathing had returned to a considerable extent over the upper two-thirds of the lung. The man was discharged five weeks after the operation with evidences of a good recovery. The breathing and percussion-resonance were still deficient over the left side, and friction-sound was everywhere heard; but he suffered no inconvenience from the last symptom, and appeared in excellent general health. Dr. Murray thought that paracentesis thoracis was the proper treatment in this patient's case; and expressed his opinion, after quoting the experience of Dr. Bowditch of Boston and others, that in all cases of extensive and uncomplicated serous effusions, the operation should be performed at least immediately after the subsidence of the acute symptoms.—Dr. MOXON related a case in which the patient rapidly recovered during treatment by the dry method, by diminishing the amount of fluid in the diet; and asked Dr. Murray if this plan had been adopted in his case.—Dr. ANSTIE referred to the dry method of treatment as painful and doubtfully effective. He asked why we should continue to give in such cases as that brought forward, iodide of potassium, diuretics, and the like, when we had the means of withdrawing the fluid at once in a safe manner. If properly performed by Bowditch's aspirator, air need not enter the pleura; and the operation produced little or no pain. The trocar furnished, also, the means of completing the diagnosis without harm.—Dr. PLAYFAIR testified from considerable experience to the good results obtained by the operation. When the fluid was serous, as much should be removed as would allow the remainder to become absorbed; but the aspirator was costly, and the fluid might be readily withdrawn by a tube under water. In empyema, when it was desirable to effect a continuous drainage, to reduce absorption to a minimum, he was in the habit of employing, at the Evelina Hospital for Sick Children, with much benefit and comfort to the patients, a plan whereby this constant drain was kept up by passing into the chest a drainage-tube, which was conducted below the bed and kept under water. By this means he had found a rapid diminution of pus in a very short space of time.—Dr. THOROWGOOD thought that the operation was now much more successful; but this was due, not to the complicated instruments in use, but to a more careful selection of cases. In empyema, he thought it a matter of little importance whether air were admitted into the pleura or not.—Dr. WILKS asked what advantage the instrument employed in the present case possessed, and whether it assisted the lung to expand.—Dr.

DOUGLAS POWELL remarked that the principle of the instrument was, that by means of a finetrocar a large quantity of fluid which might not otherwise come out was withdrawn by suction. He thought the object should be to withdraw a certain amount of fluid, and to allow the rest to be absorbed. He believed it to be important in empyema to withdraw the fluid without admitting air.—Mr. DE MORGAN referred to his having, he believed, been the first surgeon to put a drainage-tube through the chest in empyema. He doubted whether Dr. Playfair's plan would be of much advantage in purifying the pus in those cases in which it became putrid.—Dr. EDIS alluded to the stress which Dr. Bowditch laid on the early performance of the operation, the value of which had been borne out in his own experience.—Dr. ALTHAUS said that the application of electricity was known to cause the absorption of fluid from some serous sacs, as in hydrocele, and referred to a case of ovarian dropsy abroad in which a similar result had ensued, and suggested this mode of treatment in pleuritic serous effusions.—Dr. BARCLAY had always found simple pleuritic effusion very amenable to treatment, and would like to know what were the advantages of the operation.—Dr. DUFFIN spoke in favour of thoracentesis, and pointed out that, by allowing the functions of the organs to be interfered with and the organs dislocated, absorption of the fluid became thereby diminished.—Dr. JOHN OGLE referred to the experience at St. George's Hospital, which was favourable to the operation, and alluded to a case in which the patient had died during its performance.—Dr. DUCKWORTH, in advocating the great advantages of thoracentesis, observed that, if the chest refilled, it might with safety be tapped again and again.—Dr. LANGDON DOWN related his experience of this method of treatment, which was favourable. He had had recourse to the operation in five cases—in one to relieve dyspnoea, and in the others to save time.—The PRESIDENT pointed out that several things were being discussed by the members. The case in point was one of simple catarrh of the pleura, and the question was, whether such cases should be left to dry up or not: the issue was hastening the recovery. He alluded to the remarks which had been made on the supposed value of diuretics in pleuritic effusion, and said that he had thought all such opinions had been now given up. His own practice in simple pleuritic effusions had always been to make the patient hungry and keep him so.—Dr. MURRAY, in reply, said that the question discussed in his paper was limited to thoracentesis in simple and extensive pleuritic effusion—a plan of treating such cases which he strongly advocated immediately the acute stage had passed off. By this means the chest was at once relieved, and practically without danger, if done carefully with the aspirator. The sufferings of the patient were in every way diminished; the danger to the compressed lung was reduced as far as possible; and much time was saved in getting rid of the fluid, as compared with the old plan of treatment by diuretics and the like. Moreover, the operation might be repeated again and again, if necessary. Why then not withdraw the fluid by this means? He had found no difficulty on one occasion in drawing off under water fluid from the pleura by means of a common trocar and piece of tubing. The advantages of the aspirator over such a plan lay chiefly in this, that a fine trocar could be employed, and more fluid could frequently be withdrawn, aided as its flow was by suction. The instrument, he thought, had no influence in expanding the lung.

[Dr. Bouchut is discussing this subject, in a somewhat elaborate paper in the current numbers of the *Gazette des Hôpitaux*, in which he gives an interesting *résumé* of the medical history of the proceeding. The following bibliography of recent French writers on the subject may be useful to many physicians who are just now giving attention to this subject:—J. Guérin, *Gazette Médicale*, 1854, De la Thoracentèse par la Méthode Sous-cutanée.—Trousseau, Thoracentèse dans une Pleurésie chronique, *Bulletin de la Société des Hôpitaux*, 1850, p. 72.—Gendrin, Thoracentèse, 30 ou 40 fois, de 1830 à 1840, avec Trocart et Bistouri, *ib.*, 1850, p. 74.—Blondel, Ouvrage sur la Thoracentèse, 1815 et après.—Pidoux, *Bulletin de la Société des Hôpitaux*, 1850, p. 98, Indications de la Thoracentèse dans la Pleurésie latente.—Gubler, Thoracentèse dans la Pleurésie purulente, avec Trocart, *ib.*, p. 119.—Marotte, Thoracentèse dans l'Hydrothorax, *ib.*, p. 133; Thoracentèse dans la Pleurésie purulente. Guérison, *ib.*, p. 296.—Aran, Thoracentèse et Injections Iodées, *ib.*, p. 371.—Barth, Thoracentèse dans l'Hydrothorax, *ib.*, p. 387.—Marotte, Rapport sur la Thoracentèse, *Mém. Soc. des Hôpitaux*, 1853, p. 165.—Barthès, Pleurésie purulente: ponction: application d'une canule et injections d'iode, *ib.*, 1855, p. 354.—Legroux, Pleurésie purulente, 24 ponctions, et, à la fin, application d'une canule pendant 4 mois: injections; guérison. *Mém. Soc. des Hôpitaux*, 1854, p. 306.—Hérard, Thoracentèse dans la Pleurésie hémorrhagique; Mort, *ib.*, 1861, p. 16.—Bernard, Thoracentèse dans la Pleurésie aiguë simple; Mort, *ib.*, 1856.—Maurice, Thoracentèse dans la Pleurésie purulente: 3 ponctions suivies de fis-

tule: application d'une canule: injection iodée; guérison, *Mém. Soc. des Hôpitaux*, 1856.—Archambault, Thoracentèse dans la Pleurésie simple, *ib.*, 1864, p. 5.—Roger, Thoracentèse dans la Pleurésie purulente: 5 ponctions, puis application d'une canule; guérison, *ib.*, 1864.—Blachez, Thoracentèse par Trocart capillaire, *ib.*, 1868, p. 15.—Dupré de Montpellier, Sur la Thoracentèse dans les épanchements simples, *Bulletin de l'Académie de Médecine*, 1869.—Boinet, Des Injections dans la Pleurésie purulente, *Archives de Médecine*, 1853, et *Gazette Médicale*, 1855, p. 813.—Dieulafoy, De l'Aspiration pneumatique, Paris, 1870.—ED. B. M. J.]

ERRATUM.—*Zinc Paste*. In the report of the Clinical Society in the JOURNAL of November 11, p. 567, column 2, line 14, read "Mr. Hulke, in answer to the President, said that zinc paste was prepared by mixing the chloride of zinc with starch and a little tincture of opium to the consistence of honey."

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 7TH, 1871.

JOHN HILTON, F.R.S., President, in the Chair.

Dilatation of the Kidney.—Dr. PYE-SMITH exhibited a specimen of dilatation of the kidney, taken from the body of a young man aged 24. He had received a kick from a horse on the left side four years before the symptoms for which he was admitted into Guy's Hospital had appeared. These commenced with diarrhoea; and on the second day he noticed an abdominal tumour on the left side, which was thought, on admission, to be connected with the kidney. It was punctured as a means of diagnosis, and several pints of blood and pus passed out. The tumour filled again, and was a second time tapped. The patient shortly afterwards died. At the necropsy, adhesion of the left lung to the diaphragm was found, and peritoneal adhesions over the whole left side of the abdomen. There were a large dilated kidney and ureter. The urethra and bladder were healthy. The other kidney was hypertrophied, and apparently affected with parenchymatous inflammation. The ureter was strictured about two inches from the pelvis of the kidney, where he believed it had been ruptured, and afterwards contracted.—Dr. SEPTIMUS GIBBON asked what had ultimately carried off the patient.—Dr. DICKINSON said the blow must have been very great to rupture the ureter, so deeply situated as it is. Perhaps the whole mischief originated from a calculus. He had had a similar case to that before the Society, from calculus.—Dr. HARE considered it not necessary that there should be a calculus to produce these effects. A hydronephrosis was sufficient. He considered the specimen one simply of dilatation from pyelitis.—Dr. THOROWGOOD related a similar case, in which a calculus was the origin of the mischief.—Dr. MURCHISON referred to a case due to injury of the ureter.—Mr. HULKE pointed out that viscera were often ruptured without any external appearance of violence.—Dr. PYE-SMITH, in responding, observed that careful examination was made for a calculus and crystals, but none of any kind were found. The boy died as the result of suppuration and profuse diarrhoea.

Tuberculous Lung checked by Quinine.—Mr. SQUIRE brought forward the case of a boy who two or three years ago exhibited signs of tuberculosis, which were checked by quinine. In autumn, œdema of the legs and albuminuria, with hyaline and granular casts, appeared; and he died shortly afterwards. The apex of the lung, where symptoms had previously appeared, was found to be full of grey tubercle. There was no cavity, and no pneumonia. The intestine was in a state of ulceration.—Mr. HULKE, in alluding to a remark made in the discussion, said that the removal of a diseased limb in phthisical patients often relieves the lung-affection—a fact which should be set up against the idea that, by curing one part, the disease breaks out in another.—Dr. DOUGLAS POWELL pointed out how important it was, in connexion with the alleged effects of quinine, to know whether the tubercular disease present in this case was old or recent.—At the request of Mr. SQUIRE, the specimen was referred to Dr. Powell for report.

Diseased Heart and Embolus of the Spleen.—Dr. KING exhibited an enlarged embolic spleen and diseased heart, taken from the body of a man who died in the Middlesex Hospital. The patient had been the subject of acute rheumatism six years ago. On admission on August 29th, there were symptoms pointing to mischief in the spleen, and on October 29th the cerebral apoplexy from which he died in a few days. The mitral valve was found in advanced disease, an orifice in the vegetations leading into a cavity. There was pericarditis. In the spleen, which was very much enlarged, was an unusually extensive embolism; and in the anterior portion of the right cerebral lobe was a similar mass. Dr. King, in answer to Dr. Murchison, said that the mass in the brain was of a cheesy consistence, and found microscopically

pically to be composed of oil and granular matter. There was no plug discovered in the cerebral arteries.—Dr. MURCHISON had asked the question because in many cases without any cardiac disease, as in fevers, so-called embolisms are found. He related a case without cardiac disease, in which the internal organs and the brain were affected by embolism, and gangrene of the legs took place. These were all probably due to the fever-poison; so also in acute rheumatism.—Dr. CAYLEY alluded to cases of pulmonary apoplexy in which fibrine in the heart shortly before death has produced these. He thought Dr. Murchison's cases were thus produced.—Dr. MURCHISON rejoined, that this explanation would not answer in his case, as the embolism occurred several weeks before death, and there was no atheroma present.—Dr. PYE-SMITH considered the cases in question to be of the nature of thrombosis.

Epithelioma.—Mr. HULKE related four very instructive cases of epithelioma, which illustrated the local character of the disease. They all presented the microscopical characteristics of epithelioma, and in none was there a family history of cancer.—Dr. EDIS gave his experience of epithelioma in uterine practice, and referred to several cases in which, by early and complete destruction of the diseased structures by means of the actual cautery, the disease had been completely arrested for the time at least. There had been no constitutional symptoms in these cases.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 30TH, 1871.

ANDREW CLARK, M.D., F.R.C.P., President, in the Chair.

MR. TEEVAN exhibited—1. A new kind of Lithotrite, the handle being square and heavy, and the ordinary button being replaced by a vertical slide. The heavy handle enabled the lithotrite to glide into the bladder more easily, whilst its squareness permitted firmness when grasped—to be united with the greatest delicacy of manipulation. The act of pressing on a vertical slide was more simple than pushing a button to and fro. 2. A Syringe, for injecting the deep urethra, made of glass, capable of holding a few drops of fluid and having an elastic nozzle, five inches long, surmounted by a ball. A stiff nozzle was very undesirable. The ball permitted accuracy in application, for measurement could not always be relied on, as the penile urethra was continually altering in length. 3. A Syringe for patients to use either for gleet or gonorrhoea. It consisted of a small elastic ball attached to a nozzle of bone three and a half inches long. It was durable and inexpensive. Mr. Teevan also exhibited the *Bougie olivaire à ventre*, the *Bougie à trois boules* and M. Mercier's *Sondes coudées et bicoudées*.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, NOVEMBER 1ST, 1871.

JOHN THORBURN, M.D., President, in the Chair.

Cancer of the Stomach.—Dr. SIMPSON showed a section of a stomach obtained from the body of a lady. The walls of the stomach were nearly equally infiltrated with cancerous deposit, which ended abruptly at the pylorus in a raised, rounded edge. The fundus was quite free from scirrhus, and formed a flaccid pouch-like appendage to the mass of the remaining portion of the organ. The stomach was greatly contracted, so as to barely admit the thumb; the cardiac orifice seemed healthy. The glands in the vicinity of the stomach were diseased, but no secondary deposits were found in the liver or kidneys. The chest was not examined.

Spontaneous Deposit of Cholesteroline Crystals.—Dr. W. ROBERTS exhibited a specimen of urine passed by a man aged 30, who had suffered from frequently recurring attacks of hæmaturia. There was no tumour in either lumbar region, but pain was complained of over the left kidney. The general symptoms pointed to renal calculus. The presence of a hydatid tumour was suspected, but, although carefully looked for, no hooklets of the echinococcus could be detected. In addition to blood-corpuscles, the urine contained an abundant natural deposit of cholesteroline crystals, with granular or "inflammatory" corpuscles. Dr. Roberts remarked that the only other case on record in which cholesteroline occurred as a spontaneous urinary deposit, was to be found in the *Transactions of the Pathological Society of London*.

Fibrinous Casts of the Ureter.—Dr. W. ROBERTS showed some long worm-like casts which had been passed in the urine of the same patient. There were no tube-casts present.

Cystic Degeneration of the Kidneys.—Dr. W. ROBERTS exhibited the kidneys of a lady aged 52, the mother of a large family, the youngest of whom was four years old. She had been in her usual health, although

somewhat waxy in appearance, till October 24th, 1871, when she was seized with bilious vomiting, which proved excessively obstinate, lasting till the 27th. Epileptoid convulsions came on during the forenoon of the 28th; and in the evening, when Dr. Roberts saw her for the first time, she was semiconscious, but answered questions. Six ounces of urine were withdrawn by the catheter; a moderate amount of albumen was present. Tumours extending to the iliac crest were detected in the loins. The fits recurred frequently during the night of the 28th, and also on the 29th; there was now observed extreme contraction of the pupil, and the tongue was dry. Sixteen ounces of urine drawn by the catheter contained about one-twelfth of albumen; it was pale, and of specific gravity 1.013; it contained no tube-casts, but gave a speedy deposit of crystals of triple phosphate and of urate of ammonia. The patient died on the 30th; and at the necropsy, the kidneys were found transformed into a congeries of cells, varying in size from a pea to an egg; no trace of renal structure remained. Dr. Roberts remarked that this was a somewhat rare condition in adults, and that these cysts were formed by the expansion of portions of uriniferous tubes, and occlusion and consequent atrophy of the intermediate portions; he considered that there was some affinity between this form of degeneration and the granular atrophic forms of Bright's disease.

Ligateur Automatique.—Mr. STOCKS showed an instrument bearing this name. It was designed for the purpose of applying ligatures to arteries, especially at the bottom of cavities.

Self-holding Artery Forceps.—Mr. LUND showed a pair which he had designed on the principle of the "bull-dog" forceps. The mouth of the forceps formed half a sphere, inside of which was a little lip or groove which received the end of the artery; and Mr. Lund had found that it saved assistants, that its weight dragged down the vessel which was thus kept out of the way, and that it took up only the point of the vessel.

Cancer of the Kidney.—Dr. LLOYD ROBERTS showed a specimen obtained from the body of a male child aged nine months. There had been a distinct abdominal tumour almost from birth, which had been gradually increasing up to the time of its death. There had never been hæmaturia or any urinary symptoms. The tumour weighed five pounds and a half, and presented the distinct histological characters of malignant disease.

Intestinal Concretion.—Mr. LUND exhibited a specimen obtained from the stomach of a pony. It weighed 1½ lbs., was almost spherical, and had a number of square and hexagonal projections on its surface.

Abortion.—Dr. HADDON narrated two cases, and showed the specimens. In the first case, pregnancy had gone on till nearly the end of the second month; and, in the preparation, the chorion was well shown, with the embryo of the size of a barley-corn; in the second, the specimen was detached two months and a half after the cessation of the menses.

Extraordinary Case of Fœtation.—The Committee appointed at last meeting to examine the specimen shown by Dr. FLETCHER, reported that the preparation consisted of a cyst enclosing a full-grown fœtus attached to the placenta, both fœtus and placenta being almost universally adherent to the cyst-wall. The fœtus was covered with an encrustation of a gritty nature, not unlike lime; the cyst-wall was in a state of fatty degeneration. As there was no trace of the uterus or its appendages in connection with the cyst, it was impossible to arrive at any conclusion as to its original location within the abdomen.

SPECIAL CORRESPONDENCE.

EDINBURGH.

[FROM AN OCCASIONAL CORRESPONDENT.]

THE Winter Session here is now fairly commenced, and the classes are in full swing. The opening meeting of the Royal Medical Society was held on Friday, when an able address was delivered by Dr. Andrew Wood. The hall was crowded. The truth involved in Dr. Wood's advice that students should consider an active interest in the proceedings of the Society an essential part of the medical curriculum, has been fully borne out in the career of many of its members.

As usual on such occasions, there was considerable excitement amongst the students during last week in connection with the rectorial election; and, as might have been expected, the lady-doctor movement exercised some influence on the voting. It appears that Sir Roundell Palmer, the liberal candidate, had expressed an opinion, by telegram, against "mixed medical education", in reply to a question put to him on the subject. A deputation of medical students had, with a similar object, waited upon

Sir William Stirling-Maxwell at the railway station, to ascertain his views regarding "the subject of the admission of women into the medical lectures of the University", but without satisfaction. Sir William's answer, as given in an explanatory letter written afterwards, was characteristic of the man. "I told them", he said, "that it was a subject upon which I had not arrived at any definite opinion; and that even if I had done so, I must decline to answer any questions put with a view of influencing the election. Our interview was so brief, that I had not the opportunity of explaining so fully as I might have wished to have done the reasons of my refusal. I hope, however, that they, upon reflection, and that you will agree with me, that if one question may be asked, any other may be proposed, and that the character of your rectorial elections, and of the honour conferred upon the person elected, would be essentially changed by the introduction of the practice. I must, with all respect to my supporters, decline all share of responsibility in such a change, and, on the terms proposed, would neither desire nor accept success." The effect of the letter was, I think, to increase his chances of success in the election, had there been any doubt as to the ultimate result of the contest from the commencement. The high academical culture and attainments of both candidates would have rendered the contest a very close one, had it not been that Sir William's intimate knowledge of the Scotch Universities, and the distinguished position which he, as a Scotchman, had attained in the eyes of his countrymen, gave him superior claims to the honour. His majority of 594 against 502 may be supposed to be explained by these reasons. I say supposed, because it is impossible to say how an election may go when the constituency is very largely made up of young men and boys who have no idea what the duties and authority of the Rector are, and who look upon the contest as a legitimate opportunity for pelting each other with flour-bags and peas. I think I may safely say that a considerable number of the voters had never previously heard of Sir R. Palmer or his successful opponent, and know little more of them now. I am sure it would be for the advantage of the University, were the election vested in the hands of a constituency capable of deciding on the merits of the candidates and the wants of the University.

The Senatus Academicus met on Saturday to consider the existing regulations about female medical students, when it was decided, by a majority of fourteen against thirteen, to recommend to the University Court that they should be rescinded, without, however, interfering with those ladies who have already matriculated. The minority in the Senatus, it is said, intend to appeal to the University Court. As a consequence of the decision of the Senatus of the University, the friends of the female medical movement are showing unusual activity. At a meeting held on Monday by the General Committee for Securing a Complete Medical Education for Women in Edinburgh, the Lord-Provost—a warm supporter of the ladies—in the chair, the following resolution was passed, showing that the ladies and their friends believe themselves to be obtaining increasing support with the public, and that they intend to continue fighting *à l'outrance*:—"That it be remitted to the Executive Committee to watch over the two questions that have been brought before the meeting, viz.: (1) The means by which those ladies who have already begun their medical studies under the Regulations of the University of Edinburgh may be enabled to complete them; and (2) what steps should be taken by the General Committee, in view of the action of the University authorities, in regard to the resolution of the Senatus Academicus of date 11th November last, and to report thereon to a subsequent meeting of the General Committee."

The Obstetrical Society was opened last week on Wednesday, with an address by Dr. Keiller, the President, on the "Progress of Obstetrics." A *conversazione* was held afterwards, when a number of preparations, instruments, and other objects of interest were exhibited. The attendance was large and influential, and the meeting passed off most successfully.

As in most of the English schools, the entrance of medical students at the University is larger than last year. Up to Saturday last the total number of medical students who had matriculated was 558, as compared with 496 on the corresponding day of the session last year. Thus the forebodings of certain persons that the Edinburgh School of Medicine is on the decline, is not founded on fact, if the number of entries be a proper criterion. We may not have so many names of world-wide renown as when Goodsir, Simpson, and Syme were alive, but our teaching power is, nevertheless, equally strong and efficient as before.

Sir Robert Christison's honours are, of course, looked upon by every one as thoroughly well merited, and Mr. Gladstone's behaviour in the matter has given general satisfaction. Sir Robert has devoted the best part of his life heart and soul to the interests of the University, and has shed lustre on the chairs he has filled. He is one of the representative men of science, and the leading medical man in Scotland, and possesses a

personal influence which is very remarkable, not only amongst his old pupils, who are numbered by thousands, but with the bulk of the leading citizens of Edinburgh. I remember that some time since a paragraph appeared in the BRITISH MEDICAL JOURNAL, stating that Government intended conferring titles of honour on several medical men, in which the claims of Dr. Christison, Dr. Stokes, and Mr. Paget, were strongly urged by you. It is gratifying to observe that two of these gentlemen have already received the honour of baronetcy, and I am sure that the whole profession will support your recommendation of the third name.

CORRESPONDENCE.

LIP-READING BY THE DEAF AND DUMB.

SIR,—In a letter signed "Truth", which appears in the last number of the BRITISH MEDICAL JOURNAL, it is stated, on the authority of Dr. Gallaudet of Washington, that only a comparatively small percentage of deaf-mutes "can be taught to converse on commonplace subjects with their teachers, family, and intimate friends." Permit me to say that, as Chairman of the Committee of the Deaf and Dumb Home in Burton Crescent from its establishment up to a very recent period, it has been my privilege to see all the children admitted into that institution, and in no one single instance has material difficulty been found in imparting the new method of instruction. Of course, if idiocy be associated with deaf-mutism, all efforts to teach a child to speak would be unavailing; and I need hardly add that the ease and rapidity with which the little ones learn vary according to their natural aptitude.

An ounce of practice is worth any quantity of theory; and I recommend all my professional brethren who take an interest in the subject to visit either the Home in Burton Crescent or the School in Euston Road. Both institutions are under the direction of Mr. Van Praagh, who will be happy to give every facility to medical men desirous of judging for themselves of the merits of the system.

I am, etc., HENRY BEHREND, M.R.C.P.E.
Norfolk Crescent, W., November 13th, 1871.

SIR,—In your last week's issue your correspondent, signing himself "Truth", makes such statements on the education of the deaf as require direct contradiction from me.

The instruction of the deaf and dumb, on the so-called German system, has never been publicly introduced in any National School in England, hence his mistake as regards the schools in England and Scotland, where hitherto either absolutely the French or the mixed system are in vogue. I can, from experience, say with confidence that the course of instruction need not last longer than seven or eight years. As to the voice of the deaf—of course the inarticulate voice is harsh, but the teachers can change this so as to make it not only quite bearable, but not actually disagreeable to hearers; and, if they cannot, they ought to confess their ignorance, and not the impossibility of the practice.

I am most happy to be able to inform you that schools are being now established in America, where the system of articulation and lip-reading will be applied with great vigour.

One word in conclusion. As I have already observed on many previous occasions, ignorance of the principles of the real German system, and the "em-blems" of schools where they profess to do what they do not, will be a great obstacle to the public introduction of the system.

I remain, sir, your obedient servant, WILLIAM VAN PRAAGH.
164, Euston Road, N.W., 13 November, 1871.

*** We have received other communications confirming the above.

THE NATIONAL ORTHOPÆDIC HOSPITAL.—A series of readings and musical entertainments are being given at this hospital for the amusement of the patients, and in aid of the funds of this institution. The second entertainment took place at the Hospital on Wednesday evening last, the 15th inst. The programme consisted of vocal and instrumental music, and readings from various authors.

STRANGE, IF TRUE.—A rather equivocal account is given in the *Homeward Mail* of a gentleman who is stated to have swallowed a snake while drinking a quantity of water. He was aware at the time that he had swallowed some foreign substance, and soon afterwards became restless and faint. A purgative was administered, which resulted in the passage of the offending animal.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

MIDWIFERY FEES UNDER THE CONSOLIDATED ORDER OF THE POOR-LAW BOARD.

ACCORDING to Article 182 of the above order, it appears that, in cases in which any medical officer either for the workhouse or a district shall be called on by order of a person legally qualified to make such order to attend any woman in or immediately after childbirth, or shall, under circumstances of difficulty or danger, without any order, visit any such woman actually receiving relief, or whom the guardians may subsequently decide to have been in a destitute condition, such medical officer shall be paid for his attendance and medicines by a sum not less than 10s. nor more than 20s., according as the guardians may agree with such officer. It is provided by Article 183 that, in any special case in which great difficulty may have occurred in the delivery, any district medical officer shall receive the sum of £2.

The term childbirth, to which this order refers, is interpreted to apply only to those cases in which the child was or might be born alive. Hence the delivery of a seven months' child comes within the term childbirth. Attendance in a case of miscarriage, or in consequence of symptoms of premature labour, or if the woman were only four or five months gone with child, does not entitle the medical officer to the extra fee.

FEES FOR CERTIFYING TO PAUPER LUNATICS.

DR. BOTHWELL of Woolwich has sent to the guardians a claim of one guinea for certifying to a pauper lunatic. The guardians state that other medical men have only charged half a guinea. The Chairman said that they should not pay a guinea for what they could get done for half the money. The certification of pauper lunatics is not included under the list of extra fees in the consolidated order of the Poor-law Board. The fee is not fixed by the Poor-law authorities; it is fixed by the magistrate or justice of the peace before whom the case is investigated. The customary fee is from one to three guineas, according to the trouble and difficulty of the case. The order for payment from the magistrate is imperative on the guardians. The terms of the clause under which provision is made for the payment of the medical man, in 8 and 9 Vict., c. 126, are as follows. The justices causing any person to be examined by any physician, surgeon, or apothecary, may make an order upon the guardians of the union or parish, or overseers of the parish, to which such person is chargeable, for the payment of such reasonable remuneration to any such physician, surgeon, or apothecary, for the examination of such person, and for all other reasonable expenses in or about the examination of such person. The lunatics that may be sent to a lunatic asylum by order of the justices, in pursuance of Stat. 8 and 9 Vict., cap. 126, are either lunatics chargeable to the parish from which they are sent, or wandering lunatics, or lunatics who are not chargeable, but are neglected or ill-treated by their friends. The medical officer of every parish and union, who shall have knowledge that any person chargeable is deemed to be a lunatic, shall give notice in writing to the overseer or relieving officer, and either the overseer or the relieving officer shall within three days give notice to a justice of the county or borough; and, if he neglect so to do, he is liable to a penalty of £10. The overseer takes the lunatic before the justice; and the justice calls to his assistance a physician, surgeon, or apothecary. Wandering lunatics are to be treated in like manner. Lunatics not chargeable, but neglected or ill-treated by their friends, must also be examined in like manner. Any medical officer, relieving officer, constable, or overseer, failing in their duty as expressed in this Act, incurs a penalty of £10.

A DISPENSARY DOCTOR CALLED ON TO RESIGN.

A FEW weeks since, Mr. Horsley, Poor-law Inspector in Ireland, was authorised by the Commissioners to hold an inquiry into a charge brought against Dr. Spottiswood, the dispensary physician, and also the workhouse medical attendant at Cahirciveen, by the guardians of that union. The complaint was as follows. A man named Shea, belonging to the neighbourhood of that town, was returning from the Cahirciveen September fair, when he was thrown off his horse, a rather spirited animal, opposite the workhouse-gate. He was at once taken into the workhouse, and a messenger was despatched with a red ticket

to Dr. Spottiswood. The doctor refused to attend until the following morning. On his visiting Shea the following morning, he was dead. The circumstance was reported to the Board of Guardians in that town, and they communicated with Mr. Horsley, requesting him to hold an inquiry. On the receipt of the evidence, and of Mr. Horsley's report, the Commissioners have decided on calling on Dr. Spottiswood to resign. We understand that the guardians are getting up a memorial to the Commissioner asking him to withdraw the request.

ASSOCIATE (Carmarthen) asks whether a certificate of proficiency in vaccination is a *sine qua non* for an M.R.C.S. and L.S.A. applying for an appointment under the Poor-law Board? By looking in the *Medical Directory*, our correspondent will see at page 952 the list of authorised persons, and the nearest place at which it can be obtained.

OBITUARY.

JOHN SAMUEL SNOOK, M.R.C.S.L., COLYTON, DEVON.

MR. J. S. SNOOK died on October 15th, at Colyton, where he was well and favourably known as a practitioner. As a student at the Middlesex Hospital, his career was highly creditable; and on the completion of his studies, thirty-two years since, he settled in his native place, where with uniform success and credit he carried on a large country practice till his death, at the age of 57. The estimation in which he was held has been shown by the universal sympathy and respect manifested to his memory and towards his widow and family.

FREDERICK COOKE, M.R.C.S., ASHTON-UNDER-LYNE.

It is our painful duty to record the death of Mr. Frederick Cooke, of Ashton-under-Lyne, which happened on Thursday, October 19th. Mr. Cooke was in his sixty-first year. He was a native of the township of Denton, and was apprenticed to Mr. Cheetham, surgeon, of Ashton. He became a student at Grainger's School, and at Guy's and St. Thomas's Hospitals. He obtained the diploma of Member of the Royal College of Surgeons and the licence of the Apothecaries' Society in 1832. Mr. Cooke practised as a surgeon in Denton for about ten years, and during this period he married a sister of Mr. Cheetham. On the death of Mr. Cheetham in 1843, Mr. Cooke removed to Ashton; and in 1846 was appointed Medical Officer for the No. 10 District, which office he energetically filled up to the time of his decease.

Mr. Cooke was recognised in his own immediate locality as a surgeon of great ability, and his kind and sympathising manner to his patients earned for him a name which will long be remembered. His practice in Ashton and the neighbourhood became very extensive; and, although his constitution was very strong, the labour of a professional life impaired it, the result being a severe attack of hæmatemesis, from which he never entirely recovered. For the last three months he complained of a pain at the base of the left lung, and had some difficulty in breathing. He was, however, able to carry on his duties, with the assistance of his son, to October 12th, when he was compelled to remain at home. On the following morning, acute pleuropneumonia set in. He was visited by Dr. S. D. Lees of Ashton, and Dr. Simpson of Manchester; but their efforts were unavailing.

In 1862, Mr. Cooke was elected a member of the Town Council. Although a strong politician, he always took an independent part, and was never known to oppose any measure which might be calculated to conduce to the real welfare and benefit of the inhabitants of the borough at large.

CALEB WILLIAMS, M.D., F.R.C.S., YORK.

DR. CALEB WILLIAMS died on November 5th, after an illness of a few days, at the age of 72. His early professional education was under Dr. Travis, of Scarborough. He afterwards attended Guy's and St. Thomas's Hospitals in London, and spent a short time in Paris. At the age of 25 he commenced practice in York; in the same year he was chosen as Visiting Medical Officer to the Friends' Retreat. On the ground of declining health, he resigned this appointment in April 1871. In 1864, he succeeded Dr. Thomas Simpson as Consulting Physician to the York County Asylum. From 1838 to 1858 he was Lecturer on Materia Medica and Therapeutics in the York School of Medicine. Dr. Williams had a large experience in the treatment of the insane. He advocated a wide application of the plea of insanity in criminal cases. In 1856, he made known his opinions on this subject in a work on *The Criminal Responsibility of the Insane*. Dr. Williams's course as a practitioner was one of constantly increasing reputation. His skill and judgment in his medical career, of which his success is some guarantee, was united with

refinement, courtesy, and gentleness of manner, that made him a favourite with his patients and their friends. His character as a Christian gentleman was well known. He cordially united with his fellow-citizens in support of the numerous philanthropic, benevolent, and educational institutions in York. The County Hospital, the Dispensary, and the Penitentiary were especial objects of his interest and care. For forty years he was a preacher in the Society of Friends.

JOHN HANCOCK, M.R.C.S.E., L.S.A., WEDMORE,
SOMERSETSHIRE.

It is with regret that we announce the death of Mr. John Hancock, surgeon, who died on November 6th, after one week's illness. In 1834, he was appointed medical officer for the parish of Allerton; and, upon the formation of the new Poor-law arrangements, he had other parishes in addition placed under his charge. Finding the work too heavy, he resigned part of his district, but retained the remainder until 1849, when he resigned on account of insufficiency of salary. A vacancy occurring in 1854, he was reappointed at an increased salary, and continued to attend the poor until 1867. His professional skill was great, and his kindly genial manner endeared him to all; and his loss is deeply felt. His patients and friends were getting up a testimonial for him at the time of his death, as a token of respect and regard. He has left a widow and one child.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

SCHOLARSHIPS.—Trinity College offers one or more scholarships of the value of £80 a year for Natural Science. The examination will be on April 5th, open to all persons under the age of 21.—St. John's College offers an exhibition of £50 a year. The examination, on April 12th, in Chemistry, Physics, and Physiology, will be open to persons under 20 not members of the University, and to under-graduates in their first term. The tutors of the College will supply further information.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on November 14th.

Adams, Robert, Gunnislake, near Tavistock (University College)
Atkins, Francis Grant, Barbadoes (St. Mary's)
Baber, Edward Cresswell, Thurloe Square, Brompton (St. George's)
Barlow, Thomas, Greenthorne, near Manchester (Manchester School)
Biggs, Moses George, Welford, Northamptonshire (University College)
Davies, Arthur Evelyn, Newport, Monmouthshire (University College)
Davoren, John Lucius, Wandsworth (Dublin School)
Giffard, Douglas William, Guernsey (St. Bartholomew's)
Godrich, Alfred, Fulham Road (St. George's)
Hammond, Robert Edward, St. Helen's, Lancashire (Manchester School)
Hayes, Aylmer Ellis, Tavistock Crescent (St. Mary's)
Hill, Thomas Wood, South Kensington (St. George's)
Hodson, William Edward, Bishops Stortford (Charing Cross)
Jackson, James, Wootton Bassett (St. Thomas's)
James, William Dale, Yong Park, Islington (Sheffield School)
Lang, John Messiter, Thatcham, Berks (St. George's)
Lawrence, Henry, Clifton, Somerset (Bristol School)
Lyth, John Burdsall, Sheffield (Liverpool School)
Maisey, Frederick Thomas, Cheltenham (Guy's)
Marshall, John, Bolney, Sussex (Guy's)
More, James Huson, Manchester (Manchester School)
Newberry, William John, Liverpool Road (St. Bartholomew's)
Price, Charles William, Merthyr Tydfil (University College)
Raines, Charles, Hull (Hull School)
Randolph, Charles, Milverton, Somerset (Bristol School)
Seymour, Francis, Odiham, Hants (Guy's)
Sinclair, Daniel Archibald, London, Canada West (Toronto School)
Thompson, Henry, Hull (Hull School)
Tims, Thomas Lamb, Warwick (Guy's)
Turner, Francis Charlwood, M.A. Cantab., Guy's Hospital (Guy's)
Wacher, Frank, Underdown, Kent (Guy's)
Walker, Robert, Melbourne, Australia (St. George's)
Webb, Charles Frere, Basingstoke (King's College)

The following candidates were admitted members on November 15th.

Bailey, Thomas, Birmingham (Birmingham School)
Beech, Lionel, Grays, Essex (London)
Bridgman, Henry Edward, Torcross, Kingsbridge, Devon (St. Bartholomew's)
Cockburn, John Alexander, Birkbeck Road (King's College)
Coulter, William, Belfast (Belfast School)
Coupland, Sidney, Streatham, Surrey (University College)
Duke, Douglas William, Upper Norwood (Guy's)
Dustan, Henry, Jersey (University College)

Elliott, Frederick William, Turnham Green (University College)
Hosking, Ethelbert, Woburn Square (King's College)
Jackson, Thomas William, Leyland, Lancashire (Guy's)
Kilner, Walter John, Bury St. Edmunds (St. Thomas's)
Mackenzie, Lewis, *Dreadnought* Hospital Ship, Deptford (London)
Meredith, William Henry, Netherton, near Dudley (Birmingham School)
Parnell, Gerald Crecy, Sussex Place, Regent's Park (St. Bartholomew's)
Richmond, Onslow Robert, Hornsey (King's College)
Thane, George Dancer, jun., Montague Street (University College)
Wall, William Barrow, Wedmore, Somerset (University College)
Wesley, William Ken, Gloucester (St. Bartholomew's)
Wheeler, Daniel Martin Brumwell, Chelmsford (Guy's)

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 9th, 1871.

Graham, George William, Winchester
Mayne, Thomas, Devonport
Seymour, Francis, Odiham

The following gentlemen also on the same day passed their first professional examination.

Edwards, Alfred, University College
Griffith, William Edwin, Middlesex Hospital
Hawthorn, William Thomas, London Hospital
Woodward, George, St. George's Hospital

As an Assistant in compounding and dispensing medicines.
Wolff, Edward Parker, Evelina Hospital, Borough

MEDICAL VACANCIES.

The following vacancies are announced:—

BALFRON, Stirlingshire—Parochial Medical Officer.
BIRMINGHAM and MIDLAND EYE HOSPITAL—House-Surgeon.
BISHOP STORTFORD UNION—Medical Officer for the Braughing District: £35 per annum.
BOSMERE and CLAYDON UNION, Suffolk—Medical Officer for the Claydon District: £42 per annum.
CHARING CROSS HOSPITAL—Surgeon-Dentist.
DERBYSHIRE LUNATIC ASYLUM, Mickleover—Superintendent-Physician: £400 per annum, lodgings and rations.
ENNISCORTHY UNION, co. Wexford—Medical Officer for the Oulart Dispensary District: £115 per ann., Vaccination and Registration Fees, and residence.
EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road—Medical Registrar.
GENERAL HOSPITAL, Birmingham—House-Governor and Secretary: £200 per annum, board and residence.
KENT AND CANTERBURY HOSPITAL—House Surgeon: £80 per annum, board, lodging, and washing.
LINCOLNSHIRE—Medical Officer for the County Gaol for the parts of Lindsey: £120 per annum.
LIVERPOOL ROYAL INFIRMARY—Physician.
MOUNTMELICK UNION, Queen's County—Medical Officer for the Coolrain Dispensary District: £90 per annum, and Registration and Vaccination Fees.
PORTSEA ISLAND UNION—Medical Officer for the Landport District: £70 per annum.
REETH UNION, Yorkshire—Medical Officer for the Muker District: £22:10:0 per annum, and extra fees.
ROYAL INFIRMARY, Aberdeen—Physician.
ROYAL INFIRMARY, Edinburgh—General Superintendent: £420 per annum, and house rent.
ST. MARY'S HOSPITAL and DISPENSARY for WOMEN and CHILDREN, Manchester—Medical Officer.
SLIGO UNION—Apothecary to the Sligo Dispensary: £50 per annum.
SOUTH STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton—Physician's Assistant: £100 per ann., with board, washing, and furnished apartments.
SUSSEX COUNTY HOSPITAL, Brighton—Surgeon; Assistant-Surgeon.
TEIGNMOUTH, DAWLISH, and NEWTON DISPENSARY and INFIRMARY—House-Surgeon: £50 per annum, and board and lodging.
VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea—House-Surgeon.
WEM UNION, Salop—Medical Officer for the Prees District: £40 per annum.
WESTHAMPTON UNION, Sussex—Medical Officer and Public Vaccinator for the Rumboldswyke District: £100 per annum, and extra fees.

ERRATUM.—By an accidental confusion of names, it was recently stated, incorrectly, that District No. 1 and the Workhouse of the Pewsey Union were vacant: there is no change in the appointments in question.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BOTTLE, Alex., M.D., appointed Resident Physician to the Birmingham General Dispensary, *vice* C. W. Philpot, M.D., resigned.
GRANT, Hugh, L.R.C.S.Edin., appointed Medical Officer for the Parishes of Daviot and Dunlichity.
LOMAS, William, M.D., appointed Physician to the Finsbury Dispensary, *vice* Wm. Abbotts Smith, M.D., resigned.
PHILIPPS, Alfred, Esq., appointed Resident Medical Officer to the Finsbury Dispensary, *vice* J. L. May, Esq., resigned.
SHERIDAN, Michael J., M.D., elected Medical Officer for the Wexford Dispensary District of the Wexford Union, *vice* Robert J. Furlong, L.R.C.S.Irel., deceased.

ADDENBROOKE HOSPITAL, CAMBRIDGE.—The annual audit shows an excess of expenditure over income amounting to £682:8:5.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAYRoyal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Prosser James, "On Ozoena". An adjourned discussion on Dr. Alfred Carpenter's paper on the Two Cases of Muscular Anæsthesia. Mr. Spencer Watson's Case of Skin-grafting under Continuous Irrigation.

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited:—Dr. Dickinson, Intracranial Aneurism the cause of Sudden Death; Dr. Bäumlér, Aneurism of the Innominate Artery, compressing the Pneumogastric Nerve; Dr. Hawkes, Horse-shoe Kidney; Mr. Spencer Watson, Ulcer of the Lower Eyelid removed by Dr. Swift Walker; Mr. H. Arnott, Results of Excision of the Elbow-joint.

WEDNESDAY.—Hunterian Society, 8 P.M. Dr. Ward, "On Cases illustrating the Sequelæ of Ague and Malarious Remittent Fever."—Society of Arts, 8 P.M. Mr. Hyde Clarke, "On the Present State of the Through Railway Communication to India."

FRIDAY.—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Mr. M. C. Cooke, M.A., "On the Tremelloid Uredines."—Clinical Society of London, 8.30 P.M. Dr. Glover, "A Case of Uncomplicated Aphasia"; Dr. Moxon, "On Symptoms of Cranial Tumours destroying Nerves cured by Iodide of Potassium"; Dr. Habershon, "On Cases of Heart-disease." Also, papers by Dr. Anstie and Dr. Ogle.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FOR replies to questions concerning Poor-law medical questions, see Poor law Medical Department, under charge of Mr. Benson Baker, London, and Dr. Maunsell, Dublin.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COLLECTION OF SUBSCRIPTIONS.—Dr. Colville Brown (Berwick-on-Tweed) writes:—"Perhaps you are quite right in saying that 'I should have received four circulars'; but you are quite wrong when you say 'I have no doubt received them'." We are sorry to hear it; the applications should have come from the General Secretary, Dr. Brown not belonging to a Branch.

MR. HILL's communication as to operations at the West London Hospital, arrived too late.

DR. W. NEWMAN (Stamford).—With pleasure. *Quanto plus brevitatis, tanto plus gratia.*

VOMITING IN PREGNANCY.—In a recent number we referred to a memoir by M. Hubert on Vomiting in Pregnancy. At the Obstetrical Society, on April 5th, 1871, Dr. Graily Hewitt read a paper on the same subject. He appears to have anticipated M. Hubert. An abstract of his paper was given in No. 538 of the BRITISH MEDICAL JOURNAL.

ALUMNUS, St. Bartholomew's.—Yes, to both questions.

THE BROWN HOSPITAL.

WHEN J. N. N. next comes to town, he may be more successful in his search. Our contemporary was wrong in placing the hospital in the Walworth Road. It is in the Wandsworth Road, where it is in operation. We shall, at the proper time, give some further account of it. We regret J. N. N.'s mishap, but we are not responsible for other people's errors. He has addressed his complaint to the wrong office.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

CAUTION.

It having come to the knowledge of the Publisher that circulars have been distributed calculated to mislead advertisers as to the circulation of this journal, he feels it incumbent on him to state that its circulation far exceeds that of any other medical periodical, and that it has for many years past steadily increased, and is still increasing.

EXEMPTION FROM JURIES.—For the satisfaction of Dr. Haynes, I may state that, though not registered, physicians, surgeons, and apothecaries, actually practising, are exempted from serving on juries, by 6 George IV, c. 40.—B. W. LARA, London.

FEES AT INQUESTS.

SIR.—With reference to your reply to Dr. Haining in the JOURNAL of October 28th, about House-Surgeons and Fees for Necropsies, I beg to inform you that I forwarded a copy of it to our borough coroner, requesting a fee of £1:1 for a *post mortem* examination, made at his request, upon the body of a patient who recently died in this hospital. He replied, that the Act gave him no authority to pay me for my work, as it was not for his information, but to enable me to tell the jury the cause of death. Will you kindly inform me, through your columns, if I could legally recover in a County Court, as the coroner gave me a very unsatisfactory and evasive answer to your reading of the Act?

I am, etc.,

GEO. S. ELLISTON, House-Surgeon.

East Suffolk Hospital, Ipswich, November 1st, 1871.

* * The answer of the coroner in this instance is clearly not satisfactory. All information by an expert is for the information of the jury and not of the coroner. Having performed the inquest in this instance, without previous notice that he should require a fee for doing it, we do not think Mr. Elliston would be wise to push the matter further. The question should be raised when the order is given: raised courteously, but fairly. Whenever the coroner requires a duty to be expressly performed for the information of his jury, he ought to pay for it. If the *post mortem* examination has already been performed as part of the routine duty of the hospital, he clearly cannot and ought not to pay for it. This is not an authoritative reading of the law; but it is a question which may fairly, we think, be raised.

INSTITUTE OF ANATOMY.

SIR.—A patient of mine was foolish enough to send his six guineas to the Institute of Anatomy, conducted by Dr. Hunter, and took the medicine for the prescribed time of eight weeks. As the only complaint which he had was a little nervousness, he naturally found himself no better at the end of the eight weeks than he was at the beginning, but, fortunately for him, he was no worse. As the doctor required another fee to continue the treatment, my patient thought better of it, and came to me to show me the enclosed letter, which I send, because I think it a good specimen for publication.

I am, etc.,

AN ASSOCIATE.

October 30th, 1871.

"44, Great Charles Street, Birmingham, April 27th, 1871.

"Dear Sir,—We are in receipt of your favour and enclosure, for which we now offer you our best advice under the peculiar circumstances of your case. It is with much pleasure we can inform you that, although you have done yourself considerable injury by the practice you speak of, the evil is not irreparable, and its direful results may be entirely prevented by the employment of a course of remedies which, during our extensive and, we may confidently say, highly successful practice, we have never yet known to fail when our patients have implicitly abided by our instructions; much depends upon the firmness of the patient himself; and if you will rigorously conform to our instructions, the results will realise your most sanguine hopes. The bottle containing the urine we duly received, and have submitted the same to a very careful examination; and we readily and at once, by the aid of the microscope, detected the spermatozoa in the urine in large quantities, and are of opinion that the semen has been unnaturally escaping in the same way for a considerable time. The effect this would have upon the generative system ultimately would be a gradual wasting of those organs, which would cause impotency, and the least excitement would occasion the loss of your virile power, which, as no doubt you are aware, has a very debilitating effect upon the whole frame, bringing on palpitation of the heart, nervousness, and other organic diseases, because your system is deprived of that support which nature requires. The seat of your disease is in the seminal ducts or vessels conveying the seed from the testicles, which have become weakened by the practice mentioned, and are unable to retain their contents, the mouths of these vessels opening into the urethra behind the prostate gland have become enlarged, and the semen escapes in the manner described. The removal of these symptoms cannot, however, be effected in a day or a week; but if you place yourself under our care for about eight weeks, we have not the least doubt of effecting a permanent cure; our usual fees for which, in cases like your own, are six guineas, which sum includes consultations, remedies, etc. On receipt of this amount by post-office order or otherwise, we will forward full instructions for your subsequent guidance, together with the necessary supplies of the remedies. In the course of treatment we adopt, no particular change of diet is necessary, neither is it requisite to neglect business, nor alter the general habits of life. No deleterious ingredients are employed by us, but the cure will be imperceptibly, safely, and surely effected by the remedies we administer. The medicine we now send is for the purpose of preparing your system for the peculiar alteratives and tonics we intend to employ; and we feel satisfied that in a short time we shall deserve, and we trust receive, your heartfelt thanks for our exertions in promoting your temporal happiness, and ridding you of those distressing feelings of which you now complain. The dose of the medicine is one tablespoonful three times a day; the first and second doses to be taken half an hour before breakfast and dinner, and the third the last thing at night, which will prepare your system for the remedies described. Awaiting your reply,

"We are, yours faithfully,

J. & W. HUNTER."

SIR.—Will you permit me to inquire if there is any gentleman in London who will undertake to assist a country medical man in preparing for the fellowship examination? The writer of this notice, having been in active practice for several years, has got rusty in anatomy and physiology, and wishes an opportunity of acquiring a practical knowledge of the subjects examined in.

November 9th, 1871.

I am, etc.,

ASSOCIATE.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

ANALYSIS OF WATER.—Sir: A Poor Curate is, I fear, suffering from the effects of impure water. I cannot analyse the water, and he is unable to pay a large fee for so doing. Will any of your readers inform me how or where I can get it done cheaply? Address Mr. Chas. M. Thompson, Sevenoaks.

ERRATUM.—In the article on "Abdominal Puncture in Tympanites", Nov. 11th, page 563, the tenth line of the extract from Sir Thomas Watson's Lectures, the word "impossible" is a misprint for "improbable".

SUBCUTANEOUS FOREIGN BODIES.

SIR,—As the following cases appear somewhat difficult of explanation, I shall feel obliged if you can find space for their insertion in your JOURNAL; and I shall be happy to learn the opinion of any of your readers respecting them, and to ascertain whether similar instances have been met with.

About sixteen years ago, I was requested to see a child, three years old, who had a small swelling in the calf of one of the legs. On examination, I found there was something movable under the skin; and, on making a small incision, a little serum escaped, when I extracted an entire crochet-needle. The parents could offer no explanation of the case; they had never known the child to complain of any pain, and had never observed any lameness. There was no external wound before I made the incision; and as a little serum then escaped, the needle was, no doubt, encysted, and had probably been *in situ* for some time. How had it entered? It could hardly have penetrated the skin and become imbedded subcutaneously without considerable force, which must have caused pain and lameness that could not have escaped the notice of those having the care of the child. Although needles have been known to pass some distance from the part where they have originally entered, yet one can scarcely suppose that this crochet-needle was accidentally swallowed, and then passed from the stomach to the place where it was found, as it could not have traversed the hip and knee-joints without causing much lameness.

Soon after this case occurred, I saw a schoolboy, about ten years old, who had a small swelling in his left side near the sternum. I readily detected some foreign body under the skin; and, on making an incision, a sewing-needle was extracted. In this case, there was no external wound when I saw the boy; he had no recollection of a needle having entered the skin, and had had no pain until just before I saw him. When his mother was informed of the occurrence, she said that she remembered having swallowed a needle when pregnant of him, which she had never seen afterwards. In this case, I suppose the needle must have passed from her stomach into the gravid uterus, and thence into the child, where it remained for some years without its presence being revealed.

Two months ago, an infant, aged six weeks, was brought to me on account of a small swelling near the left nipple. I was told that, a day or two previously, the child, until then quite well, had appeared feverish and restless, as if in pain, and a few hours before I saw it, the swelling in the side was observed. As there was evidently something under the skin, I made an incision, when I extracted a darning-needle, measuring two inches in length. Neither the mother nor nurse had any recollection of a needle having entered the child; and there was no wound, or mark of one, when it was brought to me.

I am, etc.,

JAMES ORWIN, M.D.

Granville Terrace, Notting Hill, October 1871.

BRITISH MEDICAL BIBLIOGRAPHY, by Dr. KENNEDY, late of Ashby-de-la-Zouch. This work was promised to the members of the Old Sydenham Society in the 1849 Report. Has it been published? if so, when and where?—G. S. S.

ROYAL COLLEGE OF SURGEONS.

THE following were the questions submitted to the candidates at the primary examination in Anatomy and Physiology. 1. Describe the Anatomy of the Colon, including its minute structure. State its position in reference to the exterior of the abdomen; and mention the internal parts and structures with which it is in close relation.—2. State how the first act of Breathing is induced in the New-born Infant, and explain the physiological effects of respiration.—3. Describe the dissection required to expose the Internal Maxillary Artery; then give its course, relations, and branches in the order in which they arise, and their distribution.—4. Give the position, attachments, and function of the Ciliary Muscle. Describe its microscopic structure.—5. Describe the Os Hyoides, and mention the muscles and ligaments connected with it; and state the nerves by which the former are respectively supplied.—6. Enumerate the various Excretions. Give the principal constituents of each, their mean amount in the healthy adult subject in twenty-four hours, and the sources whence each of these constituents is derived.

The following were the questions on Surgery, etc. 1. Describe the action of a ligature and of torsion in arresting hæmorrhage from a severed artery; and state what is the effect of a ligature upon an undivided artery, as in an operation for Aneurism; and how the continuity of the artery is permanently interrupted after the separation of the ligature.—2. Give the Surgical Anatomy of the Ulnar Artery as far as the wrist; and describe the operation for its ligature in the middle of the forearm, indicating the precise relations of the vessel at the point at which it is tied.—3. Describe the symptoms, consequences, and treatment of chronic enlargement of the Prostate Gland.—4. Mention the different tissues and localities in which the formation of Pus causes the greatest local pain and constitutional disturbance. State (giving examples) the circumstances that would induce you to open an abscess early, and those in which delay or non-interference would be preferable.—5. Describe the deformity produced by simple Dislocation of the Foot outwards at the ankle; mention the structures which are necessarily broken or lacerated in this accident. State the mode of reduction and the means you would have recourse to under circumstances of unusual difficulty.—6. Mention the various kinds of Cataract; give the diagnostic characters of each, and state the usual conditions under which the different forms occur; and describe the operation of Extraction.

The following were the questions on the Principles and Practice of Medicine. 1. A day or two after exposure to cold, a patient is taken with feverishness, difficulty of breathing, and uneasiness at the chest. What are the different forms of disease which may probably be commencing, and how would you severally distinguish them?—2. What are the chief deposits which may be found in the urine? Under what circumstances do they severally occur? and how would you recognise each form?—3. Mention the remedies which are commonly described as *nervine tonics*, and state in what cases you would use them, and the doses in which they may be given.—Write a prescription for the exhibition of one of these medicines.

SIR,—Can you or any of your correspondents inform me what books to study on the manufacture, and mode of fixing in the mouth, of artificial teeth?

Byers Green, November 13th, 1871.

I am, etc.,

G. O. MCKANE.

H. A. B.—We have read attentively, since receiving our correspondent's communication, the article to which he refers. It is not at all surprising that our contemporary should, under the circumstances, be ignorant of its part, and oblivious of its endorsement of the suggestions with which it now asserts it did not coincide. But the careless ignorance displayed in the course of the article is to be regretted. It involves a gross injustice to the many eminent men, medical and others, who have, at a heavy sacrifice, devoted an unusual combination of skill and varied knowledge to a work of charity, which, under great difficulties, they administer with singular success and with ability of which all the skilled critics who really witnessed the result have testified their warmest admiration.

DR. MARKHEIM (Paris) and Dr. CHRISTIE (Ealing) are requested to complain to the Post-office authorities. Their journals are duly posted. Some four thousand journals are weekly transmitted by post from this office. This work is a great labour which, so far as our inquiries enable us to judge, is performed with conscientious care. An average failure of arrival occurs in about one per thousand. Sometimes, however, a marked carelessness is shown by the Post-office officials at particular places; and we are always desirous of being kept informed of the instances in which the journals are not carefully delivered. In the metropolis, an extensive hand-delivery is organised; and part of our circulation passes through the hands of agents. In any case, it is requested that complaints of want of punctuality may be made to the chief office, 37, Great Queen Street, London, W.C.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Shrewsbury Chronicle, Nov. 10th; The Dudley Guardian, Tipton, Oldbury, and West Bromwich Journal, and District Advertiser, Nov. 1st; The Brighton Herald, Nov. 11th; The New York Tribune; The Liverpool Albion, Nov. 13th; The Morpeth Chronicle; The Irish Times; The Deptford Chronicle, Nov. 11th; The North British Daily Mail, Nov. 14th; The Isle of Man Times; The Freeman, Nov. 1st and 12th; The Irish Times, Nov. 1st and 12th; Saunders's News, Nov. 1st and 12th; The Dublin Evening Telegraph; The Liverpool Albion, Nov. 11th; The Croydon Times; The Brighton Advertiser; The North Middlesex Advertiser; The Edinburgh Courant, Nov. 14th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. W. Stokes, Dublin; Dr. Wilks, London; Mr. Husband, York; Dr. George Johnson, London; Dr. Sansom, London; Mr. Hill, London; Mr. Dalby, London; Mr. Augustin Prichard, Clifton; Dr. E. Symes Thompson, London; Mr. P. Le Neve Foster, London; Dr. H. Barnes, Carlisle; Dr. Kidd, London; Our Dublin Correspondent; Dr. Hilliard, Glasgow; Dr. Althaus, London, The Secretary of the London Institution; Dr. Behrend, London; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. Chas. Steele, Bristol; Dr. F. J. Brown, Rochester; The Secretary of the Manchester Medical Society; Dr. Wm. Royds, Reading; The Secretary of the Clinical Society; Messrs. Johnson and Sons, London; An Associate; Dr. Bryan, Northampton; Mr. H. J. Broom, Pembrey; Mr. T. Watkin Williams, Birmingham; Dr. Shapter, Exeter; Mr. Bartleet, Birmingham; The Secretary of the Hunterian Society; Dr. G. Symes Saunders, Exminster; Our Vienna Correspondent; Mr. T. Charters White, London; Mr. Van Praagh, London; Dr. John Ogle, London; Dr. Martin, Stonehaven; Dr. John Dougall, Glasgow; Dr. Maunsell, Dublin; Dr. Morley Rooke, Cheltenham; Dr. Newman, Stamford; Dr. A. T. H. Waters, Liverpool; Mr. Andrews, Plymouth; Major Leicester, London; Dr. Christie, Ealing; Dr. Markheim, Paris; Dr. Styrup, Shrewsbury; Dr. Brown, Berwick-on-Tweed; Dr. Finney, Dublin; Dr. B. W. Foster, Birmingham; Dr. Meadows, London; Dr. Percy, London; Mr. Thompson, Sevenoaks; A Member of the Association; Mr. Robert Freeman, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. St. George Mivart, London; The Secretary of the Pathological Society; Mr. Osman Vincent, London; Mr. Milner M. Moore, Devonport; Dr. Bruce, Glasgow; Mr. A. Matthews, London; Mr. J. M. Hobday, Aylesbury; Dr. Wrangham, Wragby; Mr. Abbott, Earls Colne; Mr. Bradford, Bournemouth; Mr. B. Browning, Littlebourne; Dr. J. H. Balfour, Edinburgh; Dr. Thorowgood, London; Mr. Barber, Manchester; Dr. Ritchie, Edinburgh; Mr. Hinton, Warminster; Our Berlin Correspondent; Our Leeds Correspondent; Miss Murphy, London; Mr. Campbell De Morgan, London; Mr. Hulke, London; Mr. Erichsen, London; Dr. A. Hollis, Dorchester; The Editor of the "Pharmaceutical Journal"; Mr. Benson Baker, London; Mr. Gray, London; Dr. Jagielski, London; Dr. Grimshaw, Dublin; Mr. G. F. Weston, Stafford; The Secretary of State for India; Dr. Turnbull, Bombay; Dr. Bottle, Wolverhampton; Dr. Parsons, Dover; Dr. Roberts, Chester; Dr. J. N. Vinen, London; Mr. H. G. Hardy, Byers Green; Mr. J. Waley, Stoney Stratford; Our Paris Correspondent; Dr. A. B. Steele, Liverpool; Mr. Fleischmann, Cheltenham; Dr. S. Haynes, Malvern Link; etc.

BOOKS, ETC., RECEIVED.

The Seventh Annual Report of the Tewkesbury Rural Hospital, 1871.
Monthly Report on the Health of the Parish of St. Marylebone during October 1871. By John Whitmore, M.D.
The Water-Supply of London: a Speech delivered in the House of Commons, May 23rd, 1871. Also, a Preface on the Metropolis Water Act. By N. J. Kay-Shuttleworth, M.P. To which is appended, by permission, a Speech delivered on the same Debate. By Dr. Lyon Playfair, C.B., M.P., F.R.S. London: 1871.
Notes on the Treatment of Skin-Diseases. By Robert Liveing, A.M., M.D. Cantab. Second Edition, with Additions. London: 1871.
Report on Vaccination throughout the Bombay Presidency and Sind for the year 1870-71. Bombay: 1871.

RETROSPECTIVE ADDRESS

OF THE

PATHOLOGICAL SOCIETY OF READING.

Read September 27th, 1871.

By WILLIAM ROYDS, L.R.C.P.Lond.

MR. PRESIDENT AND GENTLEMEN,—I have not the presumption to undertake, without misgiving, the honourable task which your kindness has paid me the high compliment of imposing. To give an appropriate *résumé* of the proceedings of your Society for the past year, to review your papers and discussions, and fairly to recriticise your criticisms of the various subjects which have been brought before you, would require much greater knowledge and experience than I, a young member of your Society, can pretend to; and when I look back upon the long list of the names of those who have ably performed the duty which now devolves upon me of delivering the retrospective address to this the oldest Pathological Society in England, I feel that I must crave your indulgence whilst, to the best of my ability, I endeavour, by recapitulating the work of the past session, to perform the task which shall add my name to the roll.

The session 1870-71 has been in many respects a successful one. The meetings have been well—I believe, unusually well—attended, and the papers and discussions have not lacked interest; although I am struck, on looking through the list, at the scarcity of subjects having an interest purely medical, and venture to think that more of our time might profitably be devoted to medicine in the more limited application of the term, and especially in endeavouring to aid in filling up the “greatest gap” in the science, namely, that to be found “in its supreme and final stage”, “the stage of therapeutics”.

The variety of the past session has not been great, and I think I may best adopt the somewhat crude classification of medical, surgical, and obstetric subjects, and shall then have a few cases or papers which do not aptly fall under any of these heads, and to which I must refer as miscellaneous.

I. MEDICAL CASES.—Cancer of the Brain.—Dr. Reid read the following interesting case, illustrated by the specimen which he presented. The patient was a female, aged 34. In May 1870 she underwent, at the hands of Mr. Weeden Cooke, an operation for the removal of a cancerous tumour of the breast. The wound healed, and all seemingly went well with her until the beginning of August, when she was suddenly seized with loss of power in the right side and defect of speech. These symptoms passed off, but recurred with violent headache at the beginning of September. Another remission took place, leaving, however, impairment of speech, and persistent dull headache. In the beginning of October she suffered another attack of hemiplegia with aphasia. The symptoms became more and more intensified, the right arm ultimately remaining in a state of rigid flexion, and she died on December 2nd. The periods at which marked aggravation of the symptoms was noticed in each instance immediately preceded the appearance of the catamenia. On examining the brain after death, two deposits of cancerous matter were found in the surface, and in the substance of the left cerebral hemisphere; each was about the size of a pigeon's egg, and the anterior one occupied the third left frontal convolution. The case thus formed an interesting addition to the rule of the production of aphasia by a lesion so situated. It is said to be rare to find more than one adventitious deposit in the brain; and where more than one exist, they are usually symmetrical. In this case it was not so. The nature of the disease had been diagnosed by Mr. May, and the situation of the deposit had been correctly predicted.

Aneurism of the Aorta: Tracheotomy.—The next case is one usually classed as a medical case, but in which surgical treatment was adopted unfortunately too late to be of much avail in prolonging life. A paper was read by Mr. Crisp on a case of aneurism of the aorta. H. D., aged 39, an officer's groom, consulted Mr. Crisp for an illness, which he stated to be of some weeks' duration, and to have commenced with cold, difficulty of breathing, alteration of voice, and cough. At the time when Mr. Crisp saw him he was in a very depressed and nervous state, unable to speak beyond a whisper; his voice, cough, and breathing, were markedly laryngeal. The left side of the thorax, anteriorly and superiorly, was more prominent than the right. There were deficiency of respiratory movements, and increased præcordial dulness. The

breath-sounds were especially deficient, posteriorly and superiorly, on the left side. From the symptoms, Mr. Crisp judged that an intra-thoracic tumour, probably an aneurism, existed. The same evening the patient was seized with a sudden and violent attack of spasmodic breathing. This passed off, to recur several times within the next forty hours, the last attack leaving him in a state of utter exhaustion, perfectly unconscious, with his face pale, relaxed, and sweating; pulse undetectable; heart-sounds inaudible; respiration quite arrested. His friends considered that death had actually taken place. Tracheotomy was now rapidly performed, and artificial respiration was resorted to with the result of inducing respiratory efforts, and some return of the heart's action and of consciousness. The hopes thus raised of temporary relief being afforded were not, however, to be realised, as death ensued in about ten minutes from asthenia. The necropsy showed some chronic thickening about the cartilages of the larynx, and a diseased state of the aorta, and, at the termination of the transverse portion and the descending portion, an aneurism of the size of a goose's egg. The recurrent laryngeal nerve was in close contact with, and firmly adherent to, the tumour, and appeared to be somewhat hypertrophied. In this case death appeared finally to result from the exhaustion produced by the repeated attacks of laryngeal spasm, caused by the pressure of the aneurism on the recurrent laryngeal nerve. Death from asphyxia was obviated by the admission of air by an artificial opening; and the partial success of the operation would give encouragement for its earlier performance in any future case. The opinion of the Society was, that in a clear case the operation ought not to be deferred after the occurrence of the second attack of any violent spasm. One case occurred at the Winchester Hospital, in which the operation was resorted to with temporary relief.

Apoplexy.—Dr. Wells presented the left hemisphere of the brain of a woman, aged 57, who was admitted into the hospital unconscious and with paralysis of the right side. She lived forty-two hours after admission. The left ventricle was found distended and broken up by effused blood. An interesting point in the history of the case was, that two of her brothers had also died of sanguineous apoplexy.

Perforation of the Stomach.—Dr. Wells also read notes of a case of perforation of the stomach in a female, aged 59, whom he saw but once, and whose death occurred suddenly. An aperture of the size of a fourpenny piece was found in the upper curvature of the stomach near the cardiac end. Close upon its margin lay a lump of thickened tissue of the size of a pigeon's egg, apparently cancerous. The points of interest he stated to be as follows. First, although it was evident at the time of his visit that the patient was suffering from severe peritonitis, there was no indication that perforation existed. She was lying on her left side without any appearance of collapse, the pulse not being above 100. Death was sudden and unexpected. He supposed that the aperture had been closed by contiguous parts; and that, on its suddenly opening, the discharge of the contents into the cavity of the peritoneum occasioned a sudden shock to the system, in which she rapidly sank. Secondly, he noticed the relationship of the perforation to the mass of indurated tissue contiguous to it. The aperture did not look like the usual ulcerated opening from cancerous disease, but more like the smooth bevelled perforation which occurs from defective nutrition in chlorotic females.

Osseous Developments.—Mr. Harrinson read an elaborate paper on some osseous developments. The first part had reference to hydrocephalus and rickets, both of which, he maintained, contrary to the opinion of some authorities, might be congenital. He gave many points of distinction between the two diseases, and considered that the effusion of fluid into the cranial cavity in rickets resulted “not from any inordinate power of secretion, but from diminished resistance of the cranial parietes” due to the absorption, as quickly as formed, of the osseous tissue allowing dilatation, whereas in chronic hydrocephalus the distension depended upon compulsory dilatation, the parietes being normal. He gave the history of one case of congenital rickets which he had treated with suitable diet and a long course of phosphate of iron; marked improvement had already resulted, and he expressed great faith in the treatment, from which he hoped for ultimate restoration. Notwithstanding one distinguishing mark of hydrocephalus, which Mr. Harrinson laid down, viz., “its tendency to get worse under any treatment”, there seemed in the discussion which followed to be a strong opinion that the employment of iodide of potassium in what might, considering the tender age of the patients, be called heroic doses was likely, in some cases at least, to be productive of great benefit.—Another case of Mr. Harrinson's, illustrated by photographs, which he exhibited by means of the cosmoscope, was that of a girl who, at the age of 11 years, began to have a swelling about the anterior third of the lower jaw on the right side, which in a few weeks increased to such a size as to produce great deformity. A London surgeon of eminence recommended its removal as an exostosis. A dentist advised

delay. The latter course was adopted; and, as Mr. Harrinson had ventured to predict, the rest of the jaw "grew up" to this "anticipatory development", and, at the age of 16, the swelling was scarcely noticeable. Although the result was thus good, Mr. Harrinson considered that the proper procedure would have been to extract an offending carious tooth, and scoop out the dental cavity, so removing the exciting cause of the excessive deposit.

Colloid Cancer of the Spleen.—Mr. Maurice exhibited a specimen from a case of colloid cancer of the spleen, involving also the peritoneum, in a man, aged 36. It was remarkable for the large size and extent of the disease which existed without sooner fatally interfering with functions necessary to life. The mother and aunt of this patient had previously died of mammary cancer.

II. SURGICAL CASES.—*Scirrhus Breast.*—Mr. Maurice showed a remarkably large breast, which he had removed from a female, aged 40, for scirrhus disease. The question of operating was much debated, and the operation was at last undertaken with the hope that the patient's life might be prolonged, and the prospect afforded her of a more easy death than was probable were the disease left to take its course. The tumour, at the time of operating, was rapidly increasing and threatened speedily to involve the skin in ulceration; the axillary glands, too, were somewhat implicated. Whether either object of the operation was attained, is at least doubtful; for although, when the paper was read, the patient was reported to have made rapid progress, to be very nearly well, and able to get about the house, before the wound had entirely healed the disease returned in it, and the patient speedily succumbed, and died within five months of the operation. Such cases are painful reminders of the shortcomings of the surgeon's art, and lead us to look anxiously, though scarcely even yet hopefully, for some means, other than surgical, whereby we may more successfully grapple with this hitherto unconquered foe.

Fungus Hæmatodes.—Mr. Maurice described a case of fungus hæmatodes, for which he had performed amputation just above the knee. H. T. R., aged 54, but looking older, was admitted into the Royal Berkshire Hospital on Nov. 19th. He had a large inflamed swelling over the lower third of the left leg; on the anterior surface a small slough was protruding, about the size of a filbert. He stated that about two years ago he began to find pain in his leg at the seat of an old fracture (which occurred thirty years previously). Twelve months ago it began to swell; but nine weeks since the swelling became more persistent and was afterwards lanced, but there was not much discharge. After admission, another incision was made at the most prominent part of the swelling, and about two drachms of matter were evacuated. The lower end of the fibula was found to be diseased. Soon afterwards large unhealthy fungoid granulations appeared, which bled freely. These continued to increase in size, and the lymphatics of the leg became somewhat inflamed. On the 8th of December the limb was amputated just above the knee. The patient made a somewhat tedious recovery towards a tolerable state of health, and was discharged from the hospital. His recovery was never complete, and he died within a few months at a distance from Reading. The cause of his death was unknown. His life was probably prolonged and his death rendered more easy by relieving him of what, had its progress been unarrested, must have been a foul and unendurable incumbrance.

Excision of the Knee.—Mr. Moxhay reported a most interesting series of eight cases of excision of the knee, which he had performed in the Royal Berkshire Hospital. These have been published in the *Medico-Chirurgical Transactions*, and show the excellent result of seven recoveries, but one amputation (and that in a patient whose age and constitution rendered the operation almost a forlorn hope), and no deaths. These cases may surely tend to help the operation in winning its way to the entire acceptance of medical men, a result which, the author of the paper thought, had yet to come to pass.

Resection of the Hip.—Mr. Moxhay read an interesting paper on a case of resection of the hip, which he had performed on one of his hospital patients, a lad aged 16. The disease of the joint came on very insidiously either during an attack of fever, or during the convalescence, whilst he suffered from a troublesome bed sore, for which last he was admitted into the hospital on November 2nd, 1869. In October, 1870, Mr. Moxhay removed the portions of bone exhibited, consisting of the greater part of the articular surface of the head of the femur, which was found lying loose in the healthy acetabulum, and the neck and part of the great trochanter. The bone was completely carious in much of its extent, and was found resting on a roughened surface of the dorsum ilii. In January, 1871, union had taken place so firmly as to allow his being pushed up in bed by pressure on his heel. A note in May states that the wound was soundly healed, that he could flex, extend, and rotate the limb inwards, and to a slight extent outwards, and that he was able to bear the weight of the body on the toes.

In Mr. Moxhay's remarks, referring to the union which had taken place, he says, "It is evidently not bony, and yet it is very strong. It is at the same time somewhat yielding, for he can move the limb very freely by voluntary effort. Of course it must be ligamentous union, and we can only thank the beneficence of nature for providing such a means of repair where firmness and mobility are so much required. It is only surpassed by the original construction of the natural joint. This union is wonderfully different from what takes place after excision of the knee-joint. There you have the firm knitting together of the bones, which renders the limb more liable to fracture either at the femur above, or the tibia below the seat of union."

Mr. Moxhay considers that the great difficulty in deciding on the advisability of operative interference in these cases, lies in the fact "that one cannot know beforehand how much disease there may be in the acetabulum and neighbouring bone"; and that, the disease being generally caries and not necrosis, the difficulty of being certain that you have gouged away the whole of the diseased bone, is a real one. One valuable means, however, of getting rid of the first named difficulty, lies in making an exploring cut and using the finger as a probe to ascertain the extent of the disease.

Whilst on the subject of hip-joint disease, I cannot refrain from noticing the method of treatment now being brought before the profession in England by Dr. Sayre, which promises to revolutionise the practice followed in this too common ailment. By a comparatively simple instrument he renders practicable what has heretofore been an unfulfilled desideratum; viz., the application of a sufficient amount of extension to the femur to prevent the painful and injurious contact of its head with the acetabulum, at the same time allowing the patient to make use of the limb for the purpose of taking exercise. Whether the disease be looked upon as one generally of local or of constitutional origin, there can be no doubt that the prolonged confinement required in the carrying out of the important indication referred to by the usual means of splints applied to the limb or of weights attached to it, has a tendency to protract the case.

Median Lithotomy.—Mr. G. May brought forward two cases of calculus, in which he had performed the operation of lithotomy according to Allarton's method. The first patient was a man aged 68, who presented decided evidence of kidney-disease, but on whom, in consequence of the severity of the symptoms produced, Mr. May ventured to operate. The stone was a large one of phosphate of lime, with a lithic acid nucleus, and much difficulty was experienced in its removal. Although at first promising well, the case terminated fatally from collapse on the third day. The other patient was a youth of 19. A small oxalate of lime calculus was readily removed on September 2nd, 1870. On the third day all the urine passed *per urethram*, and the patient appeared to be recovering rapidly; but on the seventh the wound reopened, apparently in consequence of the urethra being obstructed by tenacious mucus. It continued open for a week, and then gradually closed, and he was discharged cured three weeks after the operation. In Mr. May's remarks he characterised the operation selected in these cases as one unequalled for facility of execution and for the safety and success of the results. He further remarked that it is not, however, a brilliant operation; for, to ensure success, it is important that the prostate be slowly and gently dilated, or incontinence of urine may result. A method which he thought it would have been better to have followed in the first case is one recommended by M. Dolbeau, to dilate the prostate slowly by a six-bladed dilator, and if the stone exceed an acorn in size to crush it by the lithotrite. This operation has been followed by greater success than any yet known.

Mr. Maurice referred to a case in which he had performed the lateral operation. He acknowledged its greater difficulty, but quoted a high authority for the opinion that incontinence of urine was a much too frequent consequence of Allarton's operation. I find, however, that Dr. Little of New York, as the result of forty cases of median lithotomy lately published, gives, amongst other advantages, that the patient retains control over the bladder.

[To be continued.]

TESTIMONIAL TO ROBERT ROBERTS, ESQ.—On the 7th instant, a public meeting was held in the Assembly Room, Blaenau, Festiniog, for the purpose of presenting Mr. Roberts, Surgeon to Oakley's Hospital and Festiniog Slate Quarries, with a testimonial, as a token of the regard in which he is held by the inhabitants, and in appreciation of his valuable services rendered as a medical practitioner. The testimonial consisted of a purse containing £220, together with an address, and a book, elegantly bound, containing the names of the subscribers from half-a-crown upwards.

ON THE PREVALENCE AND DISTRIBUTION OF FEVER IN DUBLIN.*

By THOMAS WRIGLEY GRIMSHAW, M.D. Dub.,

Fellow and Censor of the King and Queen's College of Physicians; Physician to the Cork Street Fever Hospital; Physician to and Lecturer on Materia Medica in Dr. Steevens's Hospital; etc.

IN bringing forward the following remarks at the present time, I am performing an unpleasant duty; unpleasant, because I have to show not only that fever is more prevalent in Dublin than it had been during the past few years, and that it is on the increase, but that the form of fever considered by sanitarians as the most preventable is the one most increased; that fever is widely spread through Dublin; and that the conditions which favour the spread and production of fever, and with it all forms of zymotic disease, are so rife in our city, that we cannot expect any permanent diminution in fever without some great change in our present sanitary system. It has been my intention for some time to arrange and map out certain information which I have been collecting with regard to the distribution of fever in Dublin, with especial reference to those cases admitted into Cork Street Fever Hospital. I did not intend to make these observations public until after the close of the hospital year in March next; but certain circumstances have recently occurred which have induced me to hurry on these observations, and to add to them some remarks on the prevalence of fever in Dublin.

I do not wish again to refer to the discussion which took place during the autumn, in the Dublin papers and in the *BRITISH MEDICAL JOURNAL*, and in which I took a prominent part; yet I think I may state that, although it may have been attended with some disadvantage to all engaged in the discussion, the public are likely to derive some advantage therefrom, and have been incited to take an interest in the prevention of contagious disease. This occurrence of the discussion to which I have referred caused me to bring forward this paper at the present time. I do not purpose to enter upon the general question of the sanitary condition of Dublin, as I understand that within a short period that question will be fully brought forward by a gentleman who is fully investigating the subject. This paper will naturally divide itself into two parts—the prevalence of fever, and its distribution.

I shall first consider the question of the prevalence of fever in Dublin. I have prepared a table showing the fluctuations in fever and zymotic disease in Dublin during the fifteen years ending March 31st of the current year. This table includes some other diseases not of the febrile zymotic class; but practically these make but little difference in the fluctuations. Fever is practically one zymotic disease; and all the illustrations to the cases in the diagram may be considered as due to the increase or decrease of that disease. The numbers for the years 1857 to 1869 inclusive are derived from the returns to the Dublin Hospitals Board, as published in the reports of that body. The numbers for the last two years are from returns kindly made out for me by Mr. Wilson Hughes, the Secretary to the Hospitals of the House of Industry, and Mr. Eustace, the Registrar of Cork Street Hospital. I have calculated the average from the figures found in the report of the Hospitals Board only, as these are public documents, and can be consulted by any one interested in the matter.

It is thus shown that, commencing with the year 1857, when the Board of Superintendence furnished their first report, fever fell until the year 1859, when it rose again for one year (1860); it then fell again for one year (1861), to rise again continuously until 1866, when the number of admissions reached 3,562. In this year cholera also prevailed; and as that disease is included in the Hardwicke Hospital returns to the number of 187, this number may fairly be taken off the total, leaving the number 3,375, almost the same as the preceding year. Cholera cases are not admitted into Cork Street Hospital. Fever prevailed to a greater extent during the year 1866 than at any other time during the period under consideration. The numbers in Cork Street Hospital on one day reached 185, these being nearly all typhus cases. From 1866 (year ending March 31st, 1867) fever steadily decreased, until the year 1869, when the admissions reached but 1,821. It has, however, been since rising; the admissions having been 2,264 and 2,345 respectively for the two years ending March 31st, 1871. It will thus be seen that the rate of admission to the fever-hospitals was much the same during the year ending March 31st, 1871, as it was ten years ago. The rate of admissions into Cork Street Hospital, I find, corresponds with the rate of the total admissions into the two hospitals; the only exception being in the year 1864. The admissions into the Hardwicke Hospital do not so closely correspond with the total admissions. I

believe that the close correspondence between the admissions into Cork Street Hospital and the total admissions depends on the fact that the accommodation in Cork Street is practically unlimited, as for only one day during the fifteen years under consideration was it necessary to give notice that no more patients could be received, and fortunately this notice had not to be acted upon. Another reason is that, as far as practicable, none but contagious febrile diseases are admitted into Cork Street Hospital. The close proximity of the hospital to the worst fever-districts is an additional reason why the admission-rate should so closely measure the prevalence of fever. From this account we see that fever, which had decreased, has been on the increase for the past two years.

We may test this question, again, in another way, but not for so long a period, by consideration of the death-returns of the Registrar-General, as published in the weekly slips for Dublin. I have arranged the number of admissions into Cork Street Hospital by quarters, for the five years ending September 30th, 1871, and the deaths from fever registered during the same period. I have for each year divided the number of admissions by the number of deaths; and though the result is always the same, the correspondence appears to me to be surprisingly close. If we compare the annual death-rates with one another, we find that for the past two years fever, and deaths from fever, have increased to nearly what they were five years ago; and both are above the average of the five years under consideration.

I have thus shown that fever has not been permanently checked in Dublin, but is in nearly the same state as it was ten years ago, and is above the average of the last five years. I believe that the low fever-rate of the years 1868 and 1869 was but one of those temporary fluctuations which occur from time to time, and that it cannot be ascribed to action taken under the Sanitary Act of 1866; or if it can be ascribed to such action, then the measures taken must have been so relaxed that fever is resuming its old sway in Dublin.

I have next to consider the relative prevalence of late of the different forms of fever. In considering this question, we may leave relapsing fever out of the question, as but two cases of that disease have been admitted into Cork Street Hospital during the past two years. From the tables and diagrams which I have constructed and here show, it will appear that, while typhus and simple fever have been on the decrease, enteric fever has been on the increase. Thus, in the year ending September 30th, 1870, typhus was above the average during eight months; while the following year it was above the average for but four months. On the contrary, enteric fever was but one month above the average in the first year, while in the second it was above the average for nine months. It is worth remark here, that the increase of the simple forms of fever generally accompanies, or immediately precedes or follows, increase in some one of the other forms. When it is remembered that enteric fever is generally considered by sanitarians to be dependent on bad drainage or impure water-supply, it is difficult to account for the sudden increase of that form of fever in Dublin, as we show that the water-supply is nearly perfect, and that the drainage has been steadily, though slowly improving. It has been suggested to me that the stirring up of dirt, consequent on the construction of new drains, might be the cause; but I cannot see that this can account for it, as I find fever connected with local unsanitary conditions, and I have not, in any of the fever-nests which I have visited, discovered that there has been any such stirring up, for the very good reason that there has been no attempt at forming effectual drains for these houses. I do not believe that the Vartry water is the cause; as, if it were, the increase of enteric fever should have occurred before the present year. I admit, however, that I have heard of a suspicion of sewage-pollution of the Roundwood reservoir. There is one way in which the Vartry water may have indirectly caused pollution of drinking-water; namely, people not liking the Vartry have taken to an old pump; and I have given a considerable number of instances of this kind. I think, however, we must look to the peculiarity of the weather which we have lately had, especially its dampness, as a cause. But here I am again puzzled, as I have found that an increase of moisture favours an increase of typhus, and showed this to be the case in a paper read before this Society on January 17th, 1866; but this will not explain the production of enteric fever under similar circumstances. I believe myself that the conditions favourable to the production and spread of typhus and enteric fevers are more closely allied than is generally supposed to be the case. I shall presently show that all forms of continued fever are frequently produced under identical circumstances.

I must now proceed to the second part of my subject; namely, the distribution of fever in Dublin. If we look to the distribution of fever in Dublin, as shown by the death-returns of the Registrar-General for the five years ending September 30th, 1871, it will be seen that of the 1,476 deaths from fever during that period, 922 were on the south side of the city, and but 554 on the north side. This is not merely owing

* Read before the Medical Association of the College of Physicians, November 15th, 1871.

to the larger population of the south side than of the north; for the ratio of deaths to population on the south side of the city was 1 in 149.8, while it was but 1 in 177.5 on the north side; the annual average being 1 in 977.3 for the north, and 1 in 746.1 for the south side. This state of things is easily accounted for when we compare the population per acre on the north and south sides: it being but 57.9 per acre on the north, while it is 70.8 per acre on the south side; and this gives but a faint idea of the density of the population in the fever-districts. Thus, in Woodquay Ward, which includes a considerable portion of the worst fever-district, the population is 145 per acre, which we may compare with Fitzwilliam Ward, part of which nearly touches on the fever-district, where the population is but 52 per acre. It thus appears that the great bulk of the fever of Dublin occurs on the south side of the city. To this side I shall confine the rest of my remarks with regard to the details of the distribution of fever, and the localities whence the Cork Street Hospital patients are derived. This portion of the inquiry will consist of three parts: (1) the districts where fever prevails; (2) the streets which furnish the largest number of patients; and (3) the homes of the patients. With a view of making the inquiry as complete as possible, I have taken into consideration the streets which have furnished fever-cases during the past ten years; but, as it would be of little practical utility to know the exact locality where fever prevailed several years ago, I have only gone minutely into the inquiry for the two years ending September 30th, 1871. This inquiry embraces the south side of the city only, which I may call the Cork Street Hospital fever-field; while the north side may be called the Hardwicke Hospital fever-field. Some cases of fever pass from the south side to the Hardwicke Hospital; and some—perhaps a greater number—come from the north side to the Cork Street Hospital; but practically, Cork Street gets all from the south, and Hardwicke all from the north side. The same allowance has also to be made for the cases admitted into Steevens's, the Meath, Sir P. Dun's, the Adelaide, and City of Dublin Hospitals. These act as disturbing causes, especially each in its own locality, and, of course, impair the accuracy of some of the results as marked on the map; but they will not, I think, affect materially my conclusions as to the distribution of fever on the south side of the city. This inquiry extends over two years, and embraces investigation into the circumstances connected with 1,825 cases of fever (including only simple, typhus, and enteric fevers) derived from 1,190 houses, and from 266 streets, lanes, courts, and alleys. Although an inquiry into the distribution of scarlatina, small-pox, and other forms of contagious febrile diseases would be of great interest, yet, as these diseases are less within the control of sanitary measures than the continued fevers (small-pox excepted), and as it would tend to complicate the present inquiry, I have excluded these from consideration in this paper, and confined my attention to the continued fevers only.

On looking at the marked portions of the map on which I have marked the fever-houses with red dots, any one well acquainted with the south side of the City of Dublin will at once see that the fever-streets are naturally distributed among three districts, and these districts are not only naturally divided by the lie of the city, but also by the nature and age of the streets and houses contained therein, and, what is more important for our present purpose, by the prevalence of fever in each.

The south side of the city may be divided into four districts by two lines of streets. Of these, three are fever-districts—the north-east, north-west, and south-west. The fourth—the south-east—may be said to be free from fever, except a small portion south of Lower Mount Street, which might fairly be included in the north-east division. For my present purpose, I shall name three districts as follows: 1. Coombe Valley (south-west division); 2. West River (south-east division); 3. East River (north-east division). I have numbered these in accordance with the prevalence of fever in each, the first furnishing by far the largest number of cases. Each of these districts has some outlying districts, to which I may have to refer again. Besides these, there are certain places outside the south city, from which a considerable number of cases are derived. There are also several public institutions which send cases to Cork Street Hospital. The East River district is lower lying, and, therefore, less easily drained than the West River, but has the advantage of being more open to sea-breezes and fewer nuisances; for, although the vitriol-works are objected to by some, yet I think these must be considered as rather wholesome than injurious, as they are constantly diffusing disinfectants through the neighbouring atmosphere. So much for the districts. I shall next consider the distribution of fever through these districts. I have divided the houses furnishing fever-cases into three classes; namely, 1. Those furnishing five or more cases during the two years ending September 30th, 1871; 2. Those furnishing three or four cases; 3. Those furnishing one or two cases only.

From the table I now show, it appears that the bulk of the fever-

cases are furnished from the Coombe Valley district. While the average proportion of fever-cases to each fever-house is nearly the same in each district, the proportion of fever-houses per street is much greater in the Coombe Valley than in the other districts, being 5 per street against 3 and $2\frac{3}{4}$ in the West and East River districts respectively, showing that the fever-houses are more closely set together in the former than in the two latter districts. The proportion of bad fever-nests to fever-houses generally is less in the Coombe Valley than in the West River district, and about equal to that in the East River; and this is also true of houses furnishing three or four cases: thus showing that the cases are more concentrated in individual houses in the two latter than in the former district. In fact, fever is more equably and closely distributed over the Coombe Valley than the other districts.

We have now to consider the streets, lanes, alleys, and courts whence the fever-cases come. The streets are generally characterised by being composed of old—many of them once fashionable—houses, with bad rear accommodation, or no back yards at all. It is not essential, as many suppose, that fever-streets should be narrow and tortuous; on the contrary, two of the worst fever-streets—Meath Street, the very worst, and Francis Street—are wide and straight. It is the age and condition of the houses, and proximity of narrow courts and alleys that especially characterise these streets, together with the want of proper house-drainage, ash-pit, and privy accommodation in the houses themselves. As examples of the worst fever-streets, I may mention Meath Street, with its 95 houses, 36 or more than a third of which furnished in all 73 cases of fever to Cork Street Hospital during the two years. It contains one fever-nest furnishing six cases, and ten others furnishing three or four cases each. Francis Street, with 140 houses, has 28 fever-houses furnishing 55 cases; there are in it two fever-nests furnishing more than five cases, and a house furnishing three or four cases each. The Coombe contains 129 houses, and has 46 fever-houses furnishing 78 cases, one house furnishing five cases, and four others furnishing three or four cases each. These are sufficient detailed examples of fever-streets, but I could mention many others nearly, though not quite, as bad. The lanes and alleys are probably more than the streets, but must be merely looked upon as streets on a smaller scale. The courts (comprising yards and squares) are most to be considered. These are perhaps the most prolific fever-beds, as few of them have failed to produce fever-cases during the past two years. Fever-streets are generally skirted by these courts, notably those which I have already given as special examples of fever-streets. There are several kinds of courts: (1) those originally constructed as such; (2) those closed up at one or both ends; and (3) back yards and gardens that have, by the cupidity of the owners, been built upon, the out-offices being converted into dwelling-houses, thus crowding together a large number of small tenements in a very comprised space. These latter are generally known by the name of yards, or are only designated by the number of the house behind which they are situated. Few people, besides clergymen and medical men, are acquainted with the existence of these places.

Examples of the first form of court may be found in abundance off South Great George's Street and King Street, and a considerable number in the neighbourhood of Townsend Street. They are, in fact, narrow blind lanes, and have usually an open sewer running down the centre through the whole length, and emptying itself into the adjoining street, or into a trap near the entrance to the court. These traps are frequently choked, and large quantities of sewage accumulate. There is usually a privy, seldom more than one, situated in each of these; as also in the other form of courts, the drainage from this privy of course finds its way down the open sewer already described in the centre of the court. The square may be considered as the best of these forms of court examples, of which are Gell's Square, off Cole Alley; Neil's Court, off Marrowbone Lane; Doby Square, off Nicholas Street, etc. These squares have usually no drainage, and are surrounded by miserable, old, overcrowded houses, and are generally strewn over with rubbish and filth, consisting to a great extent of human ordure, and have one or two cesspools near the centre. I have already indicated the nature of the yards, several of which may be found in Marrowbone Lane, Cork Street, and the Coombe. The houses in all of these are of the most filthy character, and the front house or houses to the street generally indicate the nature of what is behind, having the usual character of a fever-nest, to which I shall presently refer more particularly. The ground of all these courts is saturated with decomposing organic matter, chiefly human excrement.

I have already pointed out that the houses from which fever-cases have been derived number 1,190, with a few more added since my list was made out; in round numbers, 1,200 of these houses furnished 1,825 cases, with some additional ones not included in the classified list, making in all, in round numbers, 2,000 cases. Of these infected houses,

41 furnished five or more cases each; the nature of the cases furnished by each are put in Table 6; again, 81 houses furnished three or four cases, which are particularised in Table 7; the remainder of the houses furnished but one or two cases each.

The analysis of these tables give the following result:—

| 53 houses furnished | 3 cases each. |
|---------------------|---------------|
| 28 „ „ | 4 „ „ |
| 16 „ „ | 5 „ „ |
| 12 „ „ | 6 „ „ |
| 2 „ „ | 7 „ „ |
| 3 „ „ | 8 „ „ |
| 1 „ „ | 9 „ „ |
| 2 „ „ | 10 „ „ |
| 2 „ „ | 11 „ „ |
| 1 „ „ | 17 „ „ |
| 2 „ „ | doubtful. |

122

The total number of cases furnished by these 122 houses was 534, or more than a fourth of the whole number, showing how prolific these fever-nests are, and how much they endanger the health of the community, which is particularly suggested by 48 of these houses having fever-houses next door to them. The kind of fever furnished by these houses is an interesting point. Of the houses furnishing five or more cases—

| 13 houses furnished cases of three kinds of fever. |
|--|
| 19 „ „ „ simple and typhus. |
| 4 „ „ „ enteric and simple fever. |
| 4 „ „ „ typhus and enteric. |
| 2 „ „ „ simple only. |
| 0 „ „ „ typhus only. |
| 0 „ „ „ enteric only. |

This shows that the most infected houses, as a rule, furnish more than one form of continued fever, proving that any one case of fever occurring in a house should at once direct the attention of the sanitary authorities to that house, with a view of arresting its spread, and the probable production of all kinds of fever. It is far from improbable that many of these houses which have furnished but one or two cases of fever are just commencing their career as fever-nests. I may mention that several of these fever-nests have also produced small-pox, scarlatina, measles, and cholera; of the last, I may mention the notorious house, 22, City Quay, where cholera first made its appearance in 1866.

What are the characters of a "fever-nest"? The best way to answer this question is by describing one or two. I shall begin with the worst on my list, 58, Bridgefoot Street, now celebrated as a fever-nest, defying the sanitary authorities. This house is entered from the street by a passage with a black and rotten floor, in which are open chinks communicating with the cellar below; the boards are damp and sodden with dirt; going upwards, we find things somewhat better, but the whole upper part of the house is dilapidated; going downwards, we first come to the entrance to a small back yard, a place covered ankle-deep with human filth, a privy and ash-pit totally unapproachable without passing through a sea of dirt, a water-tap running and washing such of the dirt as is within reach into a pipe-sewer which runs through the cellar of the house, and which has a hole in it, through which the sewage passes into the cellar, converting it into a cesspool. This cellar was immediately beneath two rooms inhabited by a family of fifteen, every one of whom had enteric fever. In the same street I found another house with all these characters repeated, except the broken sewer, but this house had no sewer at all—a house in Chancery Lane, which furnished eight cases of fever (seven of typhus and one enteric). I was met on entry by a horrible stink, proceeding partly from a filthy back yard, and partly from slaughter-house at the rear of a neighbouring house in Bride Street. The cellar of this house had been filled up, a very proper measure if rightly carried out, but the filling-up material consisted of such material as to fill the cellar with a decomposing manure-heap. The passage, back yard, and upper part of the house were similar to those already described at 58, Bridgefoot Street. I find similar conditions, varying, only in degree, in almost every fever-nest. The less prolific fever-nests I find with less accumulated dirt, and notably less wet dirt. In many places where there was comparatively little dirt, what did exist was made to do the maximum amount of damage by being kept in a continued state of moisture, for want of proper drainage, or from drainage-water from the roof or elsewhere running into the house by the doors, or through imperfectly or not at all closed cellar-openings. These damp cellars, often nearly filled with rubbish, are to be found in all fever-streets and most fever-houses. Many houses have no receptacle for rubbish except the cellars; this is particularly true of corner houses

and houses near corners, many of which, if not public-houses, are fever-nests.

We have next to consider the remedies for this state of things; these may be easily summed up in three words—cleansing, draining, and clearing. I believe the only cure for many of these places is a complete clearance of the ground. I consider that all closed courts should be abolished, either by an opening up to the main street, or by complete demolition of the houses themselves. Perfect house-drainage should be insisted on; all cellars should be filled up with dry mineral materials; all privies and ash-pits should be cleansed by the authorities—not left to be done by the owners, who will not, or the occupiers, who cannot do it. The person receiving the rent from the occupier should be made responsible for the proper sanitary conditions of the house; no excuse should be taken about the existence of another landlord. All tenement-houses should be regularly inspected, not by policemen, whose fellow-policemen often own or farm these houses, or collect the rents, but by proper and well qualified health-officers, and no better could be found than the dispensary medical officers. Houses where fever has once occurred, should be constantly watched and reported upon. Street-lists of infected houses should be kept, such as I made when I undertook this inquiry.

Three preventive measures seem to me to have been altogether neglected. In Dublin, no proper sanitary organisation seems to exist; there is but one health-officer, and he is badly paid; the sanitary inspectors are policemen, who go to inspect the houses of their friends; and the reports of infected houses by the hospitals and dispensary medical officers are systematically ignored until they are sent to the newspapers; but as these are matters of public notoriety, which have now gone for months without any public contradiction, I shall not further refer to them, but appeal to my professional brethren to use their influence with the public to compel the authorities to do their duty, and prevent the spread of contagious diseases in our city.

ON A REGULATED TEMPERATURE IN THE TREATMENT OF DISEASE, ETC.

By ALEXANDER ROBERTSON, M.D.,

Physician to the Town's Hospital and City Parochial Asylum, Glasgow.

AMID all the changes in medical opinion regarding the therapeutic value of the agents with which we seek to conquer disease, none have sustained their time-honoured reputation so well as heat and cold. Without exaggeration, it may be said that, in one or other of the modes in which they are employed, they are of universal application, and that their power in alleviating pain and in promoting the restoration of health is acknowledged by all. We appear, however, to be only now beginning to form a proper estimate of their exceeding importance as remedial agents in certain forms and stages of disease. In illustration of this remark, I need only refer to the observations which have been recently made on the reduction of hyperpyrexia in febrile conditions of the system, due to various causes, by means of the cold bath. In this direction, a wide field seems to be opened up, which promises richly to repay the labours of many explorers.

In the beginning of this year (February), when considering the different classes of remedies employed by medical men in the exercise of their vocation, I was forcibly struck by the fact that these agents, heat and cold, as they are used through the medium of poultices, fomentations, and cooling lotions of various kinds, are not, as a rule, prescribed with any attempt at precision. To take the case of the poultice: it is clear that its temperature often differs widely, according to the skill and care exercised by the nurse in its preparation. It is also equally evident that, though applied as warm as the patient can bear it, before long it parts with its excess of heat. But, so far as I have been able to ascertain, no exact observations have hitherto been made to determine the length of time during which it retains a temperature higher than that of the part with which it has been in contact, and how soon a renewal of the application is required. No certain indication can be gathered from the practice of medical men in treating similar conditions of disease; for some order fresh poultices every hour or two hours, while others are contented with having them changed three times a day.

Similar observations may be made with equal propriety regarding fomentations. However, they are usually changed more frequently than poultices; though, upon the whole, there is not much greater uniformity in practice.

Considering these facts, it occurred to me that in many instances it might be an advantage to maintain these agents at or near the degree of heat which was originally applied; and, further, that various zones of temperature, so to speak, might not improbably yield different therapeutic results; for instance, that ranges from 140 to 145 deg., 115 to 120 deg., 105 to 110 deg., and others down to the freezing point, might each be expected to produce effects somewhat dissimilar to those of the others, either in degree or kind, both locally and constitutionally, when continuously maintained for definite periods. Moreover, though as a minor consideration, where the maintenance of an equable temperature did not seem necessary or desirable, it promised to be of considerable importance to have it in our power to renew the heat of the original application without uncovering or otherwise disturbing the patient; as it is apparent that much of the advantage obtained by the use of the poultice or fomentation is lost in many cases from the exposure and annoyance to which the sick person is subjected by its renewal at short intervals.

As a preliminary inquiry, I thought it requisite, for reasons which I have already indicated, to institute a series of observations in order to determine how long these agents, the poultice and fomentation, as they are ordinarily employed, retain a heat higher than that of the surface on which they have been resting. I have also made a number of investigations with the view of ascertaining the direct effects of the mustard and mustard-and-linseed poultice on the functions of some of the leading organs in different forms of disease. This subject seemed worthy of special consideration on its own account; but my chief object was to obtain data, as exact as possible, with which I might contrast the results of the application of a regulated temperature, afterwards to be recorded.

Both series of observations, it is proper to remark, were made by myself. I shall first refer to the poultice and fomentation, in relation to the rate of cooling only. Certain general remarks are applicable to the inquiries with both of these agents. Thus, in both cases, the patients selected were all adult males, the great majority of whom were from twenty to forty years of age, the oldest being forty-nine. None were chosen in whom there was any material disturbance of the system. The temperature of each person was taken in the axilla before beginning the observation, and the range was found to be from 97.6 to 99.6 deg.; only two attained the latter degree, the great majority being at or within 0.4 of 98 deg. The subjoined temperatures are to be understood as the average of the results obtained for each group of cases. The Fahrenheit scale was employed throughout all my investigations.

I. Poultices of Linseed-meal.—Observations were made in forty-one cases, which are arranged in ten groups. The poultices were applied to the arm and the chest during successively increasing periods; viz., half an hour, an hour, two hours, and four hours. Some of them were covered with vulcanised cloth, others with flannel. I subjoin only one group in illustration of the others. *Group 8.*—Three cases. Poultice to chest for half an hour, covered with vulcanised cloth and under-flannel shirt. Applied at 140 deg., fell to 102.6 deg., next skin; 103 deg. next vulcanised cloth: loss 37 deg. Highest temperature on application, 144 deg.; lowest 135 deg.; highest at close, 105 deg.; lowest, 101 deg. Temperature of room, 62 deg.

Similar investigations were made with fomentation. The number of cases was twenty-two, which were arranged in four groups.

The general conclusions at which we arrive from a consideration of the results of these observations are, with respect to the poultice, the following. 1. However warm it is when applied, in the course of half an hour it will fall to within two or three degrees of the axillary temperature; in exceptional cases, it may be four or five degrees higher than the armpit, but in others it will be a degree or two lower. 2. Its loss of heat afterwards becomes gradually slower, so that at the end of an hour, on an average, it is not lower than the axillary temperature, and in a very few cases may be a degree or two higher. 3. However long it may be applied, its temperature does not fall more than five or six degrees below that of the axilla. 4. A moist poultice retains its heat somewhat longer than a dry one.

With respect to the fomentation, we find that it loses heat more rapidly than the poultice, so that even at the end of half an hour its temperature is lower than that of the axilla; but that, like the poultice, it does not descend more than five or six degrees below that point.

I need scarcely say that, in parting with their heat, these agents are obedient to the laws which regulate the cooling of heated bodies in general; and that the above conclusions might, for the most part, have been anticipated by a consideration of these laws. But though this is doubtless true, it seemed to me, from the great importance of the subject in a practical point of view, that it was desirable to submit them to the test of actual observation.

As a corollary to these conclusions, I remark that, if we consider it

right to maintain a temperature higher than that of the body in the treatment of disease, we ought to change such applications every half hour or hour. No doubt benefit is often derived from them when the heat is not greater than that of the axilla, partly, of course, from the associated moisture. But, though this is admitted, I think it is equally well ascertained that they are more beneficial when hotter than the surface to which they are applied. Even the instincts of our patients tell us so: for it is within the experience of every one that, when either of these agents is considerably warmer than the painful or inflamed part under treatment, a soothing comfortable sensation is experienced.

But, on the other hand, were we to renew the poultice or fomentation as often as the foregoing conclusions indicate to be necessary, the sick would suffer not only discomfort, but positive injury from the exposure and disturbance to which they would be subjected. It must, I think, have been observed by most practitioners, that such results do follow their renewal at short intervals. I hope, however, to show that, by means of apparatus which I have designed, this difficulty may be obviated.

We now turn to the action of the mustard poultice, and mustard-and-linseed poultice, on the functions of the leading organs of the body, both in health and disease, but chiefly in the latter condition.

Mustard Poultice.—Five patients, all men, aged from 51 to 64, except one at 22; all suffering from bronchitis, or bronchitis with emphysema, of moderate severity, with one exception, which was severe. Mustard was spread on cotton cloth, covered with muslin, and applied for thirty minutes to the front of the chest. The temperature of the poultices on application was from 76 to 98 deg.; at the close, it varied from 91 to 95 deg.

Results.—(a) *Pulse per minute.*—In three cases there was an increase, viz., from 64 to 74, 82 to 88, 120 to 126; in one case it remained the same, 70; in the other one, a decrease of six is recorded, but this man's pulse was irregular. (b) *State of Skin* in regard to perspiration.—In three cases, no change was observed; in two, where slight perspiration existed on the application of the poultice, the surface generally was drier on its removal. (c) *Respiration per minute.*—In two cases, there was no difference; in one, there was one less, 29 instead of 30; in two others, it had risen respectively from 28 to 31, and 28 to 34. (d) *Temperature of rectum.*—Two continued the same, viz., 98.8 and 100 deg.; in two, there was a reduction in each of 0.2 deg., viz., from 101.2 to 101 deg., and from 99 to 98.8 deg.; in one, there was an increase of 0.8, viz., from 104.4 to 105.2 deg.

Two of the patients considered that they were relieved, to some extent, of pain and oppression in the chest; three did not experience any benefit.

These cases indicate that, when the functions of respiration and circulation are affected by the application of mustard in bronchitis, and probably in other forms of disease also, it is in the direction of increased exercise. It is worthy of note that, in two cases where the heart's action became more rapid, there was a decrease in perspiration.

I would direct special attention to the case in which there was an increase of 0.8 deg. in the temperature. The patient's age was 51. He had been bronchitic for many years. The poultice was applied at 8 P.M. At that time, his condition was as follows: temperature of rectum 104.4 deg.; respiration 28; pulse 120; skin dry; while at the close, the temperature was 105.2 deg.; respiration 31; pulse 126; skin dry. This aggravation of the symptoms may, no doubt, have been caused by the rapid increase of the disease; but it was more probably produced by the poultice, as it occurred within half an hour after its application. The results in this case, and in the group generally, show that the mustard poultice excites some of the leading organs to increased action, especially in the more severe forms of disease, and suggests that the morning or early part of the day is the more suitable time for applying it, so that the evening exacerbation, so common in acute disease, may not thereby be increased.

Mustard-and-Linseed Poultice.—Seven cases were observed, six males and one female. The ages ranged from 30 to 64, except one, a boy of 13. They suffered: four from bronchitis, one from phthisis pulmonalis, one from lumbago, and one from spinal disease; and the disease in each was of moderate severity. The proportions of the ingredients were, one of mustard and three of linseed, which were thoroughly mixed. The average temperature of the poultices on application was 135 deg.; maximum, 146 deg.; minimum, 121 deg. The average temperature at the close was 91 deg.; maximum, 95 deg.; minimum, 88 deg. In five instances it was applied for two hours; in two others, respectively for an hour and half an hour. The application was made to the front of the chest in five cases, and to the spine in the two others. I have classified together the five which were continued for two hours.

Results.—*Pulse.*—In three, there was a reduction varying from 2 to 20; in the remaining two, there was an increase: in the boy, aged 13, of 22,

and in the woman with spinal disease, of 10 per minute. *Temperature.*—In four cases, it was observed in the rectum. In three of these, there was no change; in one, there was a decrease of 0.8 deg. In the case of spinal disease observed (in the axilla), there was also a decrease of 0.8 deg. *Respiration.*—By an unfortunate omission, the respirations were not counted, except in two cases; in one of these, no change was noted; in the other, there was an increase of four per minute. As to the state of the skin in regard to perspiration, no difference was observed in any of the cases.

In the case where the poultice was continued only for an hour—one of bronchitis—the pulse fell eight, the temperature of the rectum was 0.2 deg. less, and the number of respirations was the same. In the other person, also a sufferer from bronchitis, but of greater severity, the pulse was ten fewer, falling from 128 to 118; the respirations were four more; the temperature of the rectum was 0.4 deg. less. No change was observed in the state of the skin in either patient.

The general results obtained, though not very decided, were in most cases favourable, more so than with the mustard alone. This observation is supported by the decrease both of the pulse and temperature in some of the patients. The boy aged 13 was, however, a marked exception, as his pulse was 22 higher at the close. Struck by this fact, it occurred to me that it would be desirable to contrast it with the effects of a similar application on a thoroughly healthy child. Accordingly, I selected for observation a lively, good tempered boy, aged 10, apparently in excellent health. The following were the conditions: 2.40 P.M., an hour after dinner; temperature of apartment, 64 deg.; in bed, under two pairs of blankets and cotton coverlet; pulse 80, of average strength. The skin in all parts was warm and soft, but not perspiring; temperature of rectum (six minutes), 99.6 deg.; the respirations 23 per minute. A poultice was then prepared, consisting of one tablespoonful of mustard and three of linseed meal thoroughly mixed, spread on cotton cloth to about three-fourths of an inch in thickness, and applied at a temperature of 124 deg. to the front of the chest, muslin intervening between it and the skin. I had intended continuing it, if it could be borne, for two hours, and purposed recording the effects every half hour during that time; but, after thirty-three minutes, he complained so much of pain, that I was under the necessity of removing it. His pulse then was 106, and there was no appreciable change in the state of the skin generally, nor in the temperature, as observed in the rectum. He complained much of pain, and was so restless that the respirations could not be counted till a quarter of an hour after the removal of the poultice, when they were 23 or 24 per minute. Ten minutes after it had been taken off, he felt the surface still hot and sore; but the pulse had fallen to 96. In ten minutes more, the pulse was 80; he was calm, and said that he was almost free from pain.

We see, then, that in a healthy child, the mustard-and-linseed poultice very decidedly excites the heart's action, and also produces considerable pain and mental irritation. From what we know of the still greater susceptibility of the very young, we may consider it nearly certain that these effects would be even more marked in a healthy infant. An excited action of the heart, pain, and mental irritation, can scarcely be regarded otherwise than evils; so that, in applying poultices either partially or entirely composed of mustard to young patients, we have to consider whether the advantage we expect to obtain will more than counterbalance the directly injurious effects of the agent itself; and also if the desired result might not be procured in some other way, either without these accompanying disadvantages, or in a subdued and milder form, if they cannot be avoided altogether.

[To be continued.]

ON THE TREATMENT OF NOCTURNAL ENURESIS AND SPERMATIC INCONTINENCE.

By D. CAMPBELL BLACK, M.D., L.R.C.S. Edin., Glasgow.

I AM induced, in consequence of the perusal of a paper by Dr. Bradbury of Cambridge on the above subjects (see BRITISH MEDICAL JOURNAL, April 8th, 1871), to make the following brief observations.

While I am perfectly willing in all cases to accept recent additions to our pharmacopœia, and accord to them their due credit, I am painfully sensitive to the inordinate enthusiasm which all such additions evoke; and I am persuaded that, in consequence, old and valuable medicinal agents are too frequently consigned to unmerited desertion. It is a pleasant thing, in the practice of physic, to be able to lay hold of ultimate facts, and my experience in the treatment of the affections under consideration affords one or two, of whose reality I am thoroughly convinced. I make a claim, therefore, for old agents of the pharmacopœia.

The analogy between nocturnal enuresis, spermatic incontinence,

and all other involuntary actions of muscular fibre, and epilepsy, which Dr. Bradbury points out, is to me not novel. A due equilibrium of nervous influence is at all times essential to normal function; and, when undue elevation or depression on either the psychical or the somatic side occurs, normal function, so to speak, becomes unhinged, and functional or organic changes ensue. The machinery—to carry out the analogy—whereby nervous influence is regulated, consists of the sensory or afferent, and the motor or efferent nerves. The sensory nerves, under the influence of stimuli, transmit, probably by molecular action, impressions to the central organ—the brain—through which they are communicated to the motor. In this manner, abnormal peripheral irritation may occasion functional disease; and, thus guided, the cause of the irritation must be ascertained in every given case, and treated as its peculiar exigencies demand. On the other hand, the very converse of this may happen, through the influence of the mind. This being the psychical disturber of nervous balance, its cause must in like manner be determined, and the appropriate remedies enjoined.

That the various secretions of the body, and many of the organic or involuntary muscular movements, are powerfully influenced by mental emotions, is an universally acknowledged fact. Thus strong mental emotions may arrest the secretion of milk; the salivary glands, in cases of urgent thirst, are stimulated to increased secretion by the mere idea of water; the action of the heart is accelerated by anger or other violent passion, or depressed, as in syncope, by fear, etc. This law—that of emotional stimulation, as it may be termed—finds expression in the old aphorism, *Ubi stimulus, ibi humorum uberior adfluxus*.

The close relationship of functional aberration of the genito-urinary system with the brain, and consequently their mutual interdependence, is further illustrated in the distribution of the sympathetic nerve. It is peculiarly through this nerve that the conditions enumerated influence secretion. This very important nerve, or rather nervous system—that of common feeling (*coenæsthesia*, *κοινὸς αἰσθησις*)—is to a great extent independent of the brain and spinal marrow. It has been separated, for purposes of description, into three distinct foci: (a) the focus of generation, (b) the phrenic focus, and (c) the solar plexus. The thoracic portion of the sympathetic is situated on the side of the vertebral column as far as the last two dorsal vertebræ. During its course, its ganglia are twelve in number; and its branches are divided into branches of communication and branches of distribution. At the termination of the pneumogastric is situated the solar plexus. From this centre, accompanying the branches of the aorta as “governors”—to carry our analogy still further—of secretion, the sympathetic distributes branches. In addition, therefore, to the diaphragmatic, gastric, hepatic, splenic, suprarenal, renal, mesenteric, and aortic, we have spermatic plexuses. Besides these branches, the pelvic organs derive branches from the lumbar and sacral portions of the parent trunk: hence there are described the hæmorrhoidal, vesical, prostatic, vaginal, and ovarian plexuses. Our position, therefore, is this—that functional diseases of glands, organic muscular fibre, etc., may be either of psychical or somatic origin, *i. e.*, due either to peripheral or to central irritation; and that, accordingly, their rational treatment resolves itself into psychical and somatic appliances. I am thus a firm believer in the ancient creed which associates hysteria with some disturbance of ovarian, vaginal, or uterine coenæsthesia; the abundant secretion of urine which accompanies this disorder clearly demonstrates the influence of the sympathetic over this secretion; while, in respect of treatment, the efficacy of some powerful mental emotion of a counteracting nature is very manifest. Thus the cold-douche treatment, which is so successful, finds explanation, doubtless, in a feeling of indignation having overcome a different mental impression; and so on. A familiar illustration of the same influence occurs in the curing of hiccough by the creation in the mind of the patient of some powerful emotion, by being charged with the commission of some derogatory act, etc.

With respect to enuresis, the disturbing influence I believe to be generally of a somatic nature; while, in the case of its prototype, spermatic incontinence, it may be either psychical or somatic, either of them, or both. Enuresis generally occurs at the periods of infancy and declining years; and, according as it may so occur, its cause admits of different explanations. In childhood, it is almost invariably traceable to the irritation of worms, congenital phimosis, calculi, or perverted secondary assimilation causing urinary density and acidity. These causes being removed, the sphincter muscle recovers its tone, and a cure is effected. But, if the hyperæsthesia have been long continued, a debility of muscular fibre ensues, and a tonic treatment is indicated in addition. In advanced life, the conditions mentioned are generally absent; and the cause of the enuresis is found in enlarged prostate, a general enfeeblement of muscular structure, and affections of the spinal cord, or calculi. Such being the pathology of this affection, I have invariably treated it with narcotics and tonics, or rather a particular

tonic; and I claim for camphor, opium, belladonna or hyoscyamus, with the tincture of the muriate of iron, properties, I am satisfied, inferior in their influence over the bladder to no preparations in the pharmacopœia. But it is indispensable, according to my experience, that the tincture of steel be given much in excess of the usual dose. Of this, however, more in the sequel.

With respect to spermatic incontinence—an infirmity which has been made so much stock of by quacks both in and out of the profession—my experience of the use of the agents mentioned has been equally satisfactory. Into the consideration of the psychical origin of this infirmity, I do not at present enter. It may vary in intensity from a slight impression to erotomania; and it is an admitted fact that enfeebled health may be traceable alone to an intense occupation of the brain by lascivious ideas. On the other hand—the somatic side—local irritation (how caused, I do not stop to consider) is, in my experience, seldom or never absent. When consulted regarding such cases—a numerous class in city practice, and requiring the tenderest consideration on the part of the practitioner—my invariable custom is to pass a catheter or bougie, and, in nine cases out of ten, a peculiarly tender condition of the prostate is discovered. It is, therefore, through the prostatic branches of the sympathetic that this disturbing influence acts. The indications of treatment are consequently obvious—viz., to allay the irritation; and, if its long continuance have induced muscular debility, to restore the lost tone. In the accomplishment of these objects, we must be guided by the severity of each case.

The prostatic irritation may in most cases be removed by the occasional passing of a catheter, perhaps once a week, or, in more urgent cases, by the application of caustic to the prostatic portion of the urethra, by one or other of the numerous instruments devised for this purpose. Nitrate of silver may be applied in a solid or fluid state; and so persuaded am I of the soundness of the views on which this practice is based, that I protest against the published opinions of recent writers on this subject, and assert that the practice, if judiciously performed, is attended with no risk whatever. I may remark that I prefer the application of the caustic in its fluid form. But, in a very large proportion of cases, this supposed extreme measure is not required: to accomplish the object in view, we possess the old medicinal agents above mentioned.

I shall select for illustration the two following cases, out of very many, to indicate the good results thus obtained.

On the 10th of March last, I was consulted by a medical student, aged 17, who was much annoyed by the very frequent occurrence of seminal emissions, to the extent of two nightly at times. I simply prescribed the following: *R. Pulv. camphoræ gr. xvij; pulv. opii gr. xij; ext. hyoscyami q. s. ut fiat massa, et divide in pilulas xij.* One pill was ordered to be taken at bedtime; and forty minims of tincture of steel to be taken thrice daily in a wineglassful of water. Ten days afterwards, the patient called upon me, delighted to find the source of much annoyance removed.

I was consulted by a patient at a very considerable distance, regarding the same affection. In a communication dated December 10th, 1867, after a truly amusing description of his symptoms, but one displaying almost “a mind diseased”, the patient stated: “I have emissions almost every night, and sometimes twice a night. It is about two years since I suffered from them.” I ordered my usual prescription. On the 28th March following, he writes: “I have had only one emission during the last thirty-three days.” I advised that the dose of the tincture of sesquichloride of iron should be gradually increased to ninety drops. My patient was evidently so satisfied with its efficacy, that he exceeded my allowance. “I am at 120 drops now, thrice daily”; and he adds, “I am quite cheerful at present.”

Dr. Bradbury remarks: “Wherever, therefore, there is reason to believe that nocturnal urinary and seminal incontinence are due to spasm (not the result of irritation reflected from a fissured anus, worms, urinary calculi, congenital phimosis, or of structural disease of the walls of the bladder, etc.), hydrate of chloral will be found a most serviceable drug in their treatment, in consequence of the acknowledged efficacy of this drug of allaying spasm, as observed in tetanus and other spasmodic disorders.” My belief is that no abnormal spasm ever takes place without some primary irritation. Is there no irritation in tetanus? Is hysteria not traceable to uterine, ovarian, or vaginal hyperæsthesia? Does the removal of the testicles in cases of epilepsy in the insane, and the marked benefit attending the operation, not indicate the removal of a source of irritation? And wherein does Mr. Baker Brown’s operation of clitoridectomy differ from this operation? Is erotomania not insanity? It is a wise advice that of two evils we should choose the lesser. And can the “culpability” of removing the clitoris with the consent of the sane, or without the consent of the insane, be urged against the bodily risks and appalling spectacle presented by an epilep-

tic, and the moral degradation of a debased practice, or the instrumental prostitution of these latter days? What of the cases of partial paralysis from reflex irritation, caused by congenital phimosis and adherent prepuce, as recently reported by Dr. Sayre, of New York?

While it is very possible, then, that hydrate of chloral may act beneficially in cases where irritation alone is to be contended against, I am very doubtful of its efficacy where muscular debility has been superinduced by chronic hyperæsthesia.

In a word, my experience of the use of the above drugs, is that they will cure urinary or spermatic incontinence (confining this term to the exceptional cases in which this condition absolutely exists as a pathological state) in the great majority of cases, always providing that the tincture of steel be given in the large doses mentioned, and sufficiently diluted. And contrary to what might be anticipated when the system becomes thoroughly saturated with the tincture, the bowels become rather loose than costive. As a narcotic in the cases under consideration, I cannot decide between hyoscyamus and belladonna. I sometimes use the one, sometimes the other. I have pushed belladonna to the extent of causing dryness in the throat and impaired vision, and I have never known it, as Dr. Bradbury has, to cause diarrhoea. These are subjects upon which very much might be said, and on which too much of a kind has been said. In the meantime, I content myself with confidently recommending an older treatment than that by chloral, and with expressing satisfaction at the appearance of Dr. Bradbury’s paper.

ABSTRACT OF CLINICAL LECTURE ON SUPPOSED CASES OF HYSTERIA.

Delivered at St. George’s Hospital on October 30th, 1871.

By H. W. FULLER, M.D.,

Physician to the Hospital.

GENTLEMEN,—In the absence of any new form of disease in the hospital, I propose to speak to you of two interesting cases which were admitted as cases of hysteria. The one is in the Pepys Ward, and the other in the Holland Ward. The first instance is a remarkable one. The girl’s physiognomy was that of hysteria, and she had attacks of a very violent character. In her fits there were the most terrible struggles; but throughout them she possessed consciousness, and she would try to bite any one attempting to hold her. She had no true convulsions, as in epilepsy, yet she had violent muscular jactitations, and appeared to have little control over her movements, so that she would injure herself severely by knocking her head against the wall or bedstead, unless she were prevented. She reported that she was a healthy girl till a week or ten days before her admission, when she received a blow on the head. From that time, she generally had great pain in the head. Two days after receiving the blow she had the first attack, and those who saw it regarded it as hysterical, and treated her accordingly. She was the picture of health, with clean tongue, normal pulse, etc. However, on inquiring into the case, I found that she did not sleep well, that she had a peculiar heavy look, and complained of increased pain in the head before the attacks. She was observed in her sleep to put her hand to her head. One day I saw her in an attack, one of the most violent I ever witnessed; and in it, although the muscular movements were so violent that four persons could scarcely hold her, she retained a considerable amount of consciousness. Her tongue was protruded, but was not bitten; she made frequent attempts to bite those who held her, and she did not go to sleep when the fit was over. In many respects, then, the attacks resembled attacks of hysteria; but, coming on as they did, irregularly, preceded by heaviness, restlessness, and severe pain in the head, I am inclined to regard them as denoting some mischief about the brain—a kind of hysterical epilepsy. In the first instance bromide of potassium was given, and for a month she took it in full doses of half a drachm four times daily, but no appreciable effect was produced. The fits recurred as often as ever—not unfrequently two or three times a day; the same heaviness of aspect continued, and there was the same constant complaint of headache. I therefore put her upon the biniodide of mercury, and from that time she began to improve, and for the last week has not had another attack. Whether this will continue remains to be seen; but certain it is that she has greatly improved since she began this treatment. My impression is that in this case we have to deal with real mischief—not with mere hysteria—with local cerebral congestion and irritation occasioned by the blow, the hysteria being only superadded to it; and I would warn you that you may get into great mistakes and trouble in these cases if you do not note carefully *all* the symptoms before allowing yourselves to arrive at a conclusion. I remember a man in the King’s Ward who was regarded

by everybody as hysterical or hypochondriacal, and was treated for that disease by assafoetida, etc.; but one day the man fell down in a fit and died. An abscess was found in his brain. He complained of one painful spot in his head day by day, and maintained that nothing removed it or influenced it. Where you find such a pain complained of continually, and without variation in its seat or character, you will do well to pay heed to it, and not to regard the patient as a hypochondriac. One young lady whom I knew complained always of a pain just at the junction of the spine with the neck. The pain was constant, and was invariably referred to the one spot, and all other suffering was disclaimed with an earnestness not common in hysteria. The constancy and severity of the pain made her nervous, and she was regarded as hysterical, and treated accordingly by the physician attending her. One day he was hardly out of the house when he was hurriedly sent for, but she had fallen down dead. A small aneurism was found, causing erosion of the spine, without giving rise to any of the ordinary symptoms.

Dr. Fuller then noticed a case of true hysteria in the hospital, and contrasted the symptoms presented with those of the girl first brought under notice. He then referred to cases of hypochondriasis connected with the excretion of excessive quantities of nitrate of urea, and pointed out how the symptoms in these cases differ from those met with in hysteria. He then proceeded to allude to the connection between hysteria and uterine irritation, and deprecated the course often pursued of employing specular examination in young girls who presented no symptoms of uterine mischief other than that of leucorrhœa. He believes that the great majority of such cases have a constitutional origin, and are to be remedied by treatment addressed to the improvement of the general health. In many such cases the bowels are habitually costive, and, as long as the secretions from the bowel are allowed to continue scanty and unhealthy, so long the remedies employed will usually fail; but as soon as a free daily action of the bowels has been induced, the source of irritation seems to be removed, and in most instances not only will the general health improve, but the uterine and hysterical symptoms will disappear.

THE ANTISEPTIC TREATMENT OF SMALL-POX.

By ARTHUR ERNEST SANSOM, M.D.Lond.,

Physician to the Royal Hospital for Diseases of the Chest, and to the North-Eastern Hospital for Children.

THE interesting communication of Dr. Hjaltelin on "Small-Pox imported into Iceland by French Fishing Vessels, stamped out by Quarantine and Sulphurous Fumigations" (BRITISH MEDICAL JOURNAL, November 4th, 1871, p. 519), affords most valuable evidence in support of the opinion I have often submitted—that the course of zymotic diseases can be modified in intensity and in duration by the internal administration of antiseptic agents. The following case, though, of course, individual instances can have but little value as evidence in regard to the major proposition, may serve to illustrate the method of putting in force the antiseptic treatment of the disease.

I was called on October 13th, 1871, to visit Miss E. T., aged 18. She had high fever, subdelirium, and vertigo. The pulse was 128. Temperature, 105 deg. Fahr. The tongue was red, dry, with brown streak down the centre; the pupils were widely dilated. A few spots closely resembling those characteristic of typhoid existed on the abdomen, but there was no abdominal tenderness, distension, nor diarrhœa. The diagnosis was complicated, for the young lady had lately been staying in a locality wherein typhoid was prevalent. There was no lumbar pain. I gave a guarded diagnosis, but considered it most probable that the case would prove to be one of typhoid. I ordered cool sponging; milk and beef-tea; half an ounce of brandy every four hours; a scruple of sulphite of sodium in solution every four hours. On October 14th, the pulse was 124; the temperature was reduced to 102 deg. Fahr. Several papulæ were present upon the face. The case now assumed the aspect of variola. On October 15th, papulæ were abundant over the face, arms, and legs. On October 16th, all signs of general discomfort had subsided; the patient only complained of irritation of the papules, which began to become pustular. On the 17th, I touched the centre of each pustule on the face (over sixty in number) with a fine camel's-hair pencil, dipped in strong liquid carbolic acid, taking care not to allow any to reach the sound skin, and ordered a solution of one part of carbolic acid in three of olive oil to be applied over the individual pustules night and morning. On October 18th, the patient slept well, all irritation from the pustules having subsided. The carbolic liniment was continued; the surface of the skin was sponged now and then with oatmeal water. The temperature from this date never rose above the

normal; there was no discomfort whatever; the pustules all dried up, and, on the eighth day, a large number had completely fallen off, leaving no cicatrices; the others were quite dry and scaly. On October 23rd, the sulphite of sodium was discontinued, and sulphocarbolate of iron given in five-grain doses three times a day. The surface of the body was washed with coal-tar soap to aid disinfection.

The double principle of the antiseptic method of treatment is the arrest of the disease-process in the individual, and the prevention of spread to the community. The same class of agents which common experience declares to be disinfectants, can be administered to the living body with at least a fair hope of their accomplishing that destruction of disease-germs which they accomplish externally to it. Carbolic acid has been administered by many, especially by French, physicians. But I believe that, in many cases, carbolic acid and its compounds can be advantageously replaced by other antiseptics—especially in those wherein head-symptoms are prominent. I think it very probable that we shall find certain antiseptics are best suited to the treatment of certain diseases; in scarlatina, diphtheria, and all zymotic ailments in which the throat is involved, I have found the sulphocarbolates specially valuable. In his successful cases of variola, Dr. Hjaltelin employed the ordinary sulphurous acid in fluid-drachm doses every third hour. I have rather inclined to the use of the sulphites recommended by Polli—they are powerful and direct antiseptics, easily administered and readily absorbed. I believe that in this country the error has been made of administering them in insufficient doses, or else of employing the hyposulphites—purgative salts, and far less efficient as antiseptics.

The external treatment of the pustules is most important. No agent seems to me so valuable as carbolic acid; its application in the pure form to the summit of each pustule is perfectly painless. It is not necessary to touch each individually at one visit, but at subsequent times to touch those which have been omitted previously. I have found nothing so effectually disguise the odour of carbolic acid, without impairing its antiseptic efficacy, as oil of wild thyme (*oleum origani*). Thymic acid is itself a well-known antiseptic. The effect of the application of the carbolic acid is at once apparent; the pustule first becomes white, and then dries up. The carbolic oil afterwards applied, penetrates amongst the purulent crusts, and is far more efficient than any watery application. The general surface of the body may likewise be sponged with any soluble antiseptic. I believe the coal-tar soap to be very valuable for washing the surface of the body. By the antiseptic method of treatment, external as well as internal, the patient is really disinfected from the onset of his malady, and the benefits are manifest alike upon himself and upon those subject to the contagion.

OBSTETRIC MEMORANDA.

FLEXIONS OF THE UTERUS.

THE case of retroflexion of the uterus described by Dr. Boulton in the number for November 4th, raises in my mind the doubt whether it is necessary or advisable to shore up the simply retroflexed uterus (especially if in a virgin) by the contrivances therein described. As a general practitioner, such cases frequently come under my care, and are generally complicated with some inflammatory or ulcerative mischief in the os or cervix. I have always treated first the inflammatory or other affection; and generally find, when that is cured, that no inconvenience arises from the retroflexion. Should any pain or discomfort continue, I find a simple Hodge's pessary answer every purpose, without danger or inconvenience to the patient.

J. WALTERS, M.B., Reigate.

LABOUR OCCURRING WITH AN UNBROKEN HYMEN.*

On Tuesday, October 17th, 1871, at 1.30 A.M., I was called to attend Mrs. F. of Lancaster in her first confinement. She was in her twentieth year, had always enjoyed good health, and menstruated regularly previous to her marriage. On making the usual examination, I found the vagina closed by a firm membrane, through which I could detect no opening, nor could I feel any pressure against it during the pains. On examination by the rectum, the head could be obscurely felt at the brim of the pelvis. She had strong pains till 4 A.M.; when she fell asleep, and I left her. At 9 A.M., I visited her again, and found she had had slight pains. After a very cautious examination with the finger, I found a small slit, like the orifice of the female urethra, and with some difficulty introduced a finger and felt inside the os uteri slightly dilated and the head presenting. At half-past 10, I met Mr. Howitt in the

* Read before the Liverpool Medical Institution.

neighbourhood and took him with me to the case. He passed first one and then two fingers, and satisfied himself that the os uteri was within and behind. No pains occurring, I left her till 1 P.M., when strong labour set in. At 2 P.M., the liquor amnii came away; the os uteri could then be distinctly felt, about half dilated, and about half an inch higher than the orifice. Labour progressed steadily. At 4, a portion of caput succedaneum made its way through the opening; and at half-past 5, the whole child passed, and delivery took place. After delivery, a circular band remained round the vagina. The patient did well; the child was a well-developed boy. I gave her no medicine, and in no way interfered with the natural course of the labour.

C. JOHNSON, F.R.C.S.E., Lancaster.

RUPTURE OF MEMBRANES SIX WEEKS BEFORE DELIVERY.

ON October 2nd, 1871, I was sent for to attend Mrs. S. in her confinement. On my arrival, I found the membranes ruptured, the os uteri of the size of a shilling, and the head presenting. The pains occurred at intervals of about ten minutes, and were accompanied each time by a free discharge of liquor amnii. Mrs. S. was the mother of ten children, and all her previous confinements had been perfectly natural. She was of opinion that she had gone her full time, and believed that labour had commenced. No progress being made during the hour or so that I stopped, I told them to send for me when the pains became more severe. As I received no message during the day, I called in the evening, and found my patient free from pain and all signs of labour; the abdomen was notably smaller, and she expressed herself as easier than she had been for a month. Matters continued much in the same state for the next six weeks; she gradually increased in size; and when the abdomen attained a certain dimension, periodic pains ensued, accompanied by a copious discharge of liquid, which always gave great relief. Besides these occasional floodings of water, there was a constant drain going on, so that she found it impossible to keep herself dry. At length, on November 15th, 1871, labour-pains really commenced, and in less than an hour she was delivered of a fine male child, just six weeks after the rupture of the membranes.

S. MESSENGER BRADLEY, F.R.C.S., Manchester.

THERAPEUTIC MEMORANDA.

THERAPEUTICAL RELATIONS OF ASTHMA AND GASTRALGIA.

THE perusal of the paper in the JOURNAL of November 11th, on the relations of asthma, angina pectoris, and gastralgia, leads me to send some short observations which I find in my hospital note-book of the date April 28th, 1870. Mrs. W., a patient who had had pure typical gastralgia, was at that date amending, partly under the influence of one-drop doses of Fowler's solution, and she has been discharged cured. At the very same date, Miss W., daughter of the above, was under my care for asthma, against which I had placed in my notes "pulmonary neurosis". She was speedily and effectually relieved by two-drop doses of Fowler's solution in infusion of calumba. About the same time a man was for a long time under my care for flatulent dyspepsia and most intense neuralgia of the fifth nerve. I cannot say arsenic did him any good, though bismuth seemed of some service for a time. Premature greyness of the hair seems to me common in some of these cases of dyspepsia of gastralgic type.

JOHN C. THOROWGOOD, M.D.

November 15th, 1871.

REVACCINATION BY VESICATION.

IN several letters which have appeared in the JOURNAL respecting the method of introducing the vaccine lymph into the system, which I have brought before the profession, it is recommended to use the liquid vesicatory for producing the blister. I have for a long time past discarded this as uncertain, and I recommend all who wish to try this method of vaccination to do so in the following manner. Take a piece of soft adhesive plaster—that spread on "moleskin" is best—about an inch and a half long by three-fourths of an inch broad; upon this place two or three small bits of emplastrum lyttæ (the old-fashioned and excellent blistering plaster), pressing them firmly, so as to make them adhere to the plaster beneath. These pieces of blister-ointment must not exceed the size of a split pea, and may even be less with advantage. The plaster thus charged with the vesicating spots is to be firmly pressed

down upon the arm in the usual position and made to adhere. This is done the night before, and next morning the tiny blebs are opened, the serum let out, and the vaccine-charged ivory point introduced, one into each spot. When carefully done, success is absolutely certain.

ROBERT ELLIS, Sloane Street.

COLO-PUNCTURE IN TYMPANITES.

THE numerous and valuable communications elicited by the publication of my paper on "Colo-Puncture", in the JOURNAL of October 21st, prove that this operation had been both recommended and practised at an earlier period than either other writers on the subject or myself were aware. I think, however, that the operation had become neglected and not appreciated as a legitimate surgical procedure until some four years ago, when it was revived by several independent thinkers. It is evident from Mr. McBride's communication, that colo-puncture in the human subject is not (as was supposed) an analogous operation to that performed on cattle. We have now, however, so considerable an experience of the operation of colo-puncture, that we may fairly claim to form an opinion on its merits. There are four cases reported in the *Practitioner* for this month by Dr. Clifford Allbutt, which must be added to those already quoted. Dr. Fonssagrives, in his paper before the Academy of Medicine, cites eighty-four cases, in which, in all probability, are included some of the cases recorded in this country. The evidence appears to be unanimous in favour of the great relief which can be afforded by puncture in these distressing cases of tympany, and that the possible risks of the operation are not borne out by *post mortem* examination.

Let us for a moment inquire what are the risks attendant on puncture of the intestine. They appear, to my mind, to be two—viz., extravasation of fæculent matter into the peritoneal cavity, and the infliction of a lesion on the peritoneum, already perhaps in an acute inflammatory state. The size and character of the puncture, when made with a fine trocar and cannula, are such, I think, as to bring the chances of extravasation very low. The puncture merely separates the muscular fibres, and, on the withdrawal of the cannula, the muscular planes immediately readjust themselves, or a protrusion of mucous membrane takes place, which entirely prevents the escape of the intestinal contents, as was demonstrated by Travers in cases of punctured wounds of intestine where the incision did not extend beyond three lines in length.

The influence of pressure of the abdominal walls and contents in cases of non-protruding wounded intestine is clearly shown by Mr. Erichsen (*Science and Art of Surgery*, p. 403, fourth edit.), where he states that fæces escape from a smaller aperture in a protruding than in a non-protruding intestine. He also refers to two cases of wounds of intestine without any extravasation. A similar case occurred in my father's practice, where a man while killing a pig stabbed himself accidentally in the abdomen; the intestine did not protrude, but the patient passed a large quantity of blood *per rectum*. He recovered without a single symptom of extravasation. Clinical experience, therefore, shows that punctured wounds of the intestine (non-protruding) of less than three lines in diameter, may be said not to allow fæcal extravasation. The lesion in colo-puncture comes so much within these limits, that I venture to think it may not deter us from resorting to this method of, at the least, relief. As has been ably shown by Dr. Braxton Hicks, the tympanites which often accompanies peritonitis adds so much to the distress and danger of the patient, that I quite agree with him in the propriety of puncture, even when the peritoneum is acutely inflamed. The well-known case of ovariectomy during an acute attack of peritonitis, by my friend, Dr. Alfred Wiltshire, demonstrated the justifiability of producing a most severe lesion of the peritoneum when our object is to relieve a state that at any rate aggravates matters.

J. HANCOCKE WATHEN, L.R.C.P. Edin., M.R.C.S. Eng., etc.
Fishguard, November 14th, 1871.

MUSCLE-GRAFTING.—Dr. Benjamin Howard, referring to the generally expressed belief, formularised by Mr. Steele in his clinical lecture in the BRITISH MEDICAL JOURNAL (December 10, 1870), that "It is evident that all that is essential is the papillary layer of cutis, no matter how small, capable of developing cuticle," relates two cases in which he employed small muscle-grafts. They had precisely the same beneficial effects in these cases, of which details are given (*New York Medical Journal*, Sept. 1871, p. 279), as we are now accustomed to observe in successful cases of skin-grafting. Dr. Howard concludes "That neither the increased vascularity of the surface of the wound, nor the centripetal cicatrization induced by the skin-graft, is in any way due to the epithelium in the graft." He does not, however, of course propose muscle-grafting as a substitute for skin-grafting.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.

UNIVERSITY COLLEGE HOSPITAL.

CASES OF LITHOTRITY.

(Under the care of SIR HENRY THOMPSON.)

ON operation day at this hospital, two cases of stone which presented some features of interest were operated upon by Sir Henry Thompson. In the first case, the patient, a man about sixty years of age, had been sounded in the usual way some days previously, and a small stone discovered. The sound used was a No. 8. On Wednesday the patient was put on the table and the lithotrite, of the size of a No. 13 or No. 14 catheter, was introduced, but would not pass into the bladder after various attempts had been made. A little blood flowed from the urethra. Under these circumstances, Sir Henry Thompson remarked that it was undesirable to proceed. He would leave the patient alone for a week, until the excoriation of the urethra had subsided, before he again introduced any instrument. It was occasionally found that the lithotrite could not be introduced without difficulty; but, in his experience, such cases were of the rarest occurrence. There could, however, be no ultimate difficulty, after preparing the urethra by dilatation, in introducing the lithotrite and crushing the stone.

A second patient, suffering from calculus in the bladder, was operated upon the same day. The patient was also about 60 years of age. The stone was of such a size that Sir Henry Thompson had at first remained uncertain whether it was suitable for crushing; but, as the stone was just on the borders of a lithotrity case, he had decided on crushing it. The instrument was accordingly introduced and the stone was crushed. One of the fragments was then seized and also crushed. The *débris* brought away between the teeth of the instrument showed the stone to consist of lithic acid and phosphates. No chloroform was used in either case, the pain produced by the operation being thus expressed by the second patient: "You have," he said to Sir Henry Thompson, "punished me less than the stone."

Several other cases were operated upon. In one, exploration of a diseased ilium was performed by Sir Henry Thompson, the clinical interest of this case resting on the fact that, as the patient's urine contained a large quantity of albumen from chronic kidney-disease and his legs were oedematous, it was thought inexpedient to interfere to any extent. No diseased bone was discovered after the sinuses had been enlarged. Under the circumstances, further interference was considered undesirable.

Mr. Berkeley Hill removed from a young child a testicle affected by encephaloid cancer.

CHARING CROSS HOSPITAL.

DISTURBED ACTION OF THE HEART.

(Under the care of Dr. GREEN.)

IN the out-patient department of this hospital, we lately observed a case of some interest under the care of Dr. Green. It was that of a man aged 47, who during the last three years had suffered from time to time from violent palpitation of the heart and dyspnoea. The patient was a labourer, and had led a somewhat irregular life. The palpitation was, more or less, continuous, and was much aggravated on taking the least exertion. The patient's general health was exceedingly good; he had no dyspeptic symptoms, and the palpitation was not increased after food. The heart's action was exceedingly irregular, both in force and rhythm. The impulse was distinctly heaving, and extended over a somewhat larger area than normal. The centre of the area of impulse was a little below and a little inside the left nipple. During a prolonged auscultatory examination, a systolic murmur was occasionally audible at the apex.

Dr. Green regarded the case as one of disturbed cardiac innervation, quite independent of reflex stimulation. The hypertrophy was the result of the increased action, and, as the centre of the area of apex-impulse was unaltered, it probably affected both the left and the right ventricles. The intermittent mitral murmur was probably due to the irregular contraction of the papillary muscles. The patient was almost immediately relieved by fifteen-minim doses of tincture of digitalis; whilst taking this remedy, he was able to continue his employment, and the symptoms did not recur.

MIDDLESEX HOSPITAL.

A CASE OF FATAL ANÆMIA.

(Under the care of Dr. GREENHOW.)

THE following report, with remarks, is by Dr. King, the medical registrar of the hospital.

S. D., aged 27, housewife, was admitted on September 7th, 1871. There was no history of gout, rheumatism, phthisis, nervous disorder, or other hereditary tendency in her family. The patient had the usual diseases of childhood, and was always rather delicate, and subject to palpitation. The catamenia appeared at fourteen, and since then she had had more or less menorrhagia and leucorrhœa. She never, however, had any serious illness till about a year ago, when she began to suffer from diarrhoea and vomiting, with occasional vertigo, but did not complain of pain after food, nor did she vomit blood or pass any *per rectum*. The palpitation now became worse, and was accompanied with pain between the shoulders. These symptoms continued for two or three months without any appearance of jaundice. She then got better, but three months afterwards was attacked in the same manner, with the addition of a slight yellow tinge of the skin and conjunctiva, and was again laid up for two months. After this, a second remission occurred, and she remained comparatively well till two months before admission, when the old symptoms returned as before. The patient was married five years ago, but had no family. She said that she had lost flesh a good deal during the last twelve months.

On admission, she was pale and delicate looking, but not emaciated; she complained of pain between the shoulders, palpitation, great weakness, vertigo, and depression. The pulse was 128, exceedingly weak, small, and compressible; respiration shallow, no cough or expectoration; temperature 100.4. There was no discoloration of the skin, which was almost as white as wax. There was, however, a faint jaundiced tint of the conjunctiva. The lips were wholly devoid of colour, and the tongue, though clean and moist, was pale, rough, and small. The extremities were deficient in heat, and shivered if exposed to the air. There was a loud double murmur over the precordial region, having a friction-like character, and a maximum intensity at a point just inside and a little above the left nipple. There appeared to be no enlargement of the liver or spleen; and beyond some slight tenderness at the epigastrium, probably due to frequent retching, there was no evidence of other abdominal mischief. The urine was acid, of specific gravity 1013, free from albumen or bile-pigment.

The further progress of the case was marked by increasing debility, constant nausea, and occasional vomiting. On September 20th there was some diarrhoea, but neither at this nor at any other time was blood observed in the motions. The pulse, respiration, and temperature remained much the same throughout, the latter never exceeding 102, and only on one occasion descending as low as 98.8. On October 3rd she vomited during the afternoon, and frequently during the night. The sickness continued, and she sank exhausted on Oct. 5th, at 8.50 A.M.

Necropsy twenty-six hours after death.—Rigidity was moderate. The body was not emaciated, but exceedingly anæmic. The arachnoid membrane lining the dura mater was spotted with minute ecchymoses, and a small quantity of slightly turbid fluid coated the surface of a portion of the hemispheres and dipped in between the convolutions. The brain itself was completely bloodless, but otherwise apparently healthy. There were a few old adhesions between the left lung and thoracic parietes, where also there was a small quantity of imperfectly formed lymph, the result of recent pleurisy. Both lungs were healthy, but minute ecchymoses, like those on the arachnoid, were observed on the pulmonary pleuræ. The pericardium contained about three ounces of clear fluid. Both heart and membrane were perfectly smooth, and free from any appearance of recent inflammation. Not more than about an ounce of thin pale and watery blood could be obtained from the heart and large vessels; and that was perfectly fluid, refusing to coagulate. On microscopic examination, the white corpuscles were not found to be in excess. The liver, spleen, kidneys, suprarenal capsules, lymphatic glands, pancreas, stomach, intestines, and uterus, were minutely examined; but, though all were intensely anæmic, no trace of organic disease could be detected in any of them.

REMARKS.—The abnormally high temperature during life, associated as it was with a nearly exsanguine condition of the body, and the complete absence of any organic mischief which would account for the symptoms and fatal termination, seem to point almost conclusively to a nervous origin of the disease. Blood ceased to be formed in sufficient quantity to maintain life. Yet the most attentive examination of the spleen, suprarenal bodies, lymphatic glands and other organs, failed to reveal any more serious morbid condition than that of simple anæmia.

Nevertheless, we cannot suppose that arrest of function ever occurs independently of morphological change; if, therefore, the organ by which such function is normally performed, present no trace of anatomical lesion, we must look to the nerve- or blood-supply on which the working of that organ depends. The submaxillary gland, for example, though structurally healthy and plentifully supplied with blood, will fail to secrete saliva if its ganglionic influence be removed by division of the chorda tympani, through which channel its cellular elements derive that attractive and selective force, which enables them to abstract from the blood the particular kind of material required for the formation of salivary fluid. As with secretion, so it is with nutrition; for, in all the more highly differentiated animals, it is through the medium of a nervous system that trophic force is furnished to preside over the growth and maintenance of tissue. Nor can we deny for the fluids of the body that which we admit to be true of the cellular instruments by which those fluids are elaborated. I think, therefore, that we may fairly assume that, just as arrest may take place in the formation of saliva through the suspended influence of a known centre, so also may arrest take place in the formation of blood by morphological changes occurring in nerve-cells, with which we are unacquainted.

On such a view, the case which has called forth these remarks must be regarded as one of defective blood-nutrition, or neurotic atrophæmia as it might be called, due to morbid changes occurring in nerve-centres connected with the sympathetic system, centres which normally preside over the blood-vascular and lymphatic glands, superintending the production of that highly complex fluid which it is the special function of those glands to elaborate.

Further, I think we can scarcely fail to be struck with the close resemblance between the symptoms observed in the above case during life, and those commonly ascribed to suprarenal disease, from which affection it seems indeed to differ, merely in the absence of pigmentation and capsular lesion. What little we know of the causes which give rise to pigmentary deposit, points to nervous origin; while the fact that both suprarenal capsules may be reduced to masses of cheesy material without leading to cutaneous discoloration, rather tends to show that these two morbid conditions may be the effects of a common neurotic cause, incomplete hæmatinic metamorphosis giving rise to pigmentation of the skin, and suspension of trophic influence resulting in capsular disease. Be this as it may, we are bound to admit that there are other constituents of the blood quite as important as its pigment, which, though not dependent on the capsular bodies, are none the less indebted to trophic nervous influence for their proper elaboration; and if this be true, I see no reason why nerve-lesions should not exist, analogous to those which appear to be the cause of Addison's disease, giving rise to nearly the same train of symptoms, the same cachectic condition, and the same fatal termination, without necessarily leading to the development of those characteristic features by which the neurosis is commonly recognised.

BRISTOL ROYAL INFIRMARY.

AMPUTATION OF THE FOREARM IN AN OLD MAN.

Under the care of Mr. C. STEELE.

GEORGE ALDEN, aged 74, a short, thick-set old man, was admitted on May 10th, for extensive disease of the left carpus. The history which he gave was that three years previously he sprained the wrist; that it became inflamed, was lanced, and disease of the bones followed. Sinuses formed a year and a half after the accident, and had since continued to give vent to discharge. He had been unable to work for a year and a half. He carried the hand in a sling, resting on a splint, and felt little pain except when any movement took place; he felt weakened by the discharge. The hand and wrist were much swollen; a considerable amount of foetid pus escaped during the day. When the hand was taken hold of on each side and moved, the bones grated on each other like stones in a bag, showing that they were all necrosed, denuded, and loose. A probe inserted proved the metacarpal bones to be necrosed. Mr. Steele explained to the patient that the only surgical treatment which could be adopted was amputation, but that he and his colleagues left it to his own decision, as the disease would probably remain in its present condition during his remaining years; whilst, however, if the limb were removed, and he survived the operation, he would, besides losing all discomfort, become much stronger. The patient returned home to Wales to consult his friends; by some he was strongly urged to retain his hand; by others to undergo the operation. He at last determined to have the question settled by losing the member; and accordingly returned on July 7th to be operated upon.

On July 9th, Mr. Steele amputated by Teale's operation at the middle third of the forearm. A number of rigid-walled vessels had to

be ligatured. The shock was very slight. Most of the extremity of the flaps united by first intention; pus was formed in the interior on the second day, and escaped at the lower border, where a plug had been inserted at the time of operation. The patient felt very well, and wanted to get up on the third day, and hoped he would be allowed to go home in a fortnight. On the eighth day after operation, the discharge became offensive; chloralum lotion relieved but did not destroy the foetor; sulphocarbolic lotion was tried, but with no better effect. The ligatures separated from the fifth to the eighth day. A gland in the axilla inflamed and suppurated, forming an abscess, which required to be opened on the eighteenth day after operation; linseed-meal poultice was applied for five days, and then simple ointment. The stump was dressed with simple ointment for some time; afterwards the granulating surface becoming rather languid, sulphate of zinc lotion was used. His appetite was good from the first; he generally slept well, was soon out of bed, and, before long, able to go into the garden. He left the Infirmary on August 25th, with the stump nearly healed, and feeling much relieved.

He came on October 20th to inquire about an artificial hand. The wounds were all healed. He had a very good stump, and felt well and much stronger. He was advised to wait some time longer before having any appliance made, until the stump had lost all swelling and tenderness, and had become settled in size.

REVIEWS AND NOTICES.

A SYSTEM OF MEDICINE. Edited by J. RUSSELL REYNOLDS, M.D., F.R.S. Vol. III, containing Local Diseases (continued). London and New York: Macmillan and Co. 1871.

THREE years have elapsed since we welcomed the publication of the second volume of Dr. REYNOLDS'S *System of Medicine*—a sufficient interval for the preparation and editorial supervision of the articles which are to complete the work. The editor informs us, however, that he "did not receive, many months after he expected to do so, the MSS. of those articles which were necessary to complete the section on Diseases of the Circulatory System, several of the papers on which subjects had been for a long time printed. A short time ago, therefore, in order to avoid further postponement, he decided to change the order of sequence originally intended, and to publish first the section on Diseases of the Respiratory System." The present volume contains those articles which complete the section on Diseases of the Digestive System, and those which contain an account of Diseases of the Respiratory System. The fourth and last volume is expected to contain Diseases of the Circulatory System, of the Blood-glandular, of the Urinary, the Reproductive, and Cutaneous Systems.

This present volume is the more welcome, that we have been kept waiting for it; and, with the advantage of so many able pens and so accomplished a physician as its editor, it cannot fail to have many merits and to be well received. Sooth to say, however, its protracted gestation seems to have injured its development. It possesses all the faults of its race in an exaggerated form; and we do not remember ever to have seen a book containing so much good material, which is yet so seriously injured by bad arrangement, careless repetitions, irregular proportions, internal discordance, and generally by all the defects which editing is intended to avert or to minimise. Dr. Reynolds must allow us to say, with great regret, that, in respect to this volume, his authors, his publishers, whose enterprise and taste have laid the profession under a heavy debt, and the medical public, who must perforce buy a volume which is one of a series, have almost equal reason to complain of him. This volume is in truth no part of a system. It is a bundle of ill-matched, ill-assorted, and ill-proportioned essays, including many of a high degree of individual excellence.

The first article in the present volume treats of diseases of the Mouth, Fauces, Pharynx, and Oesophagus. It is not easy to understand why this did not precede the article on Diseases of the Stomach in the former volume. Dr. Squarey's article on the subject bears evidence of having been written by a physician who is well versed in the literature of the subject, but bears very little trace of practical familiarity with its theme. The remarks which he makes on lancing the gums are judicious, but not novel. Its author has borrowed very liberally throughout from Dr. West's book on the *Diseases of Infancy and Childhood*.

The essay on Enteralgia is by Dr. Wardell of Tunbridge Wells, and reflects no small credit on that provincial physician. It is work-

manlike and thorough, as are the rest of the essays which he contributes to the present volume. Dr. Bristowe, of St. Thomas's Hospital, furnishes the articles on Enteritis, Obstruction of the Bowels, Ulceration of the Bowels, Cancerous and other Growths of the Intestines, Diseases of the Cæcum and Appendix Vermiformis; and, as might be expected from his well known reputation, treats of all these subjects in a masterly manner. The first disease in this category is treated as a simple inflammatory affection, and divided according to an anatomical arrangement. The author says; "The intestinal tissues are all of them liable to inflammation, either separately or in combination; and the inflammatory process, as it occurs in each, has a tendency to present characteristic peculiarities, and to be associated with special symptoms." (P. 56.) Inflammation, as affecting the mucous membrane of the bowels, is again subdivided into (a) catarrhal, (b) croupous, (c) chronic inflammation and degeneration. Dr. Bristowe is of opinion that young children, especially during the period of dentition, are specially liable to catarrhal inflammation of the intestines. He also quotes Dr. Fenwick's opinion as to the affection being generally attendant on scarlatina and other specific fevers. We quite agree with the statement that "croupous" (diphtheritic or membranous) inflammation of the intestines is far from uncommon. We had lately under our care a case in which shreds of false membrane were passed by the bowel, and in which there was no diarrhoea or hæmorrhage from the bowel, but, on the contrary, constipation. Dr. Bristowe's remarks on the treatment of the more severe forms of enteritis (as affecting the whole thickness of the bowel) seem to us especially valuable. He says that these cases should be treated according to two main principles, which are, "first, to relieve pain, and prevent, so far as may be, all movements of the bowels, by means of opium; secondly, to avoid every attempt (at least until all grave symptoms have ceased) to force the bowels by the administration of purgatives. . . . No absolute rule can be laid down with regard to the quantity of opium which should be given for a dose, or to the frequency with which the dose should be repeated. The patient should, however, be got well under the influence of the drug, and should be kept under its influence." If the stomach reject the opium, he recommends that it should be administered in the form of suppository or enema, or injected subcutaneously. In his article on Obstruction of the Bowels, the author acknowledges his obligations to the excellent work of Dr. Brinton on *Intestinal Obstruction*, and to Dr. Fagge's excellent paper on the same subject in the *Guy's Hospital Reports* for 1869. In all cases of sudden obstruction, especially when attended with enteritis, the author says that purgatives must be discontinued, and opiates and other sedatives given in doses sufficient to alleviate pain and to ensure rest. He recommends their administration by subcutaneous injection. With regard to operations for the relief of obstruction, he says that they "are rarely followed by satisfactory results; nevertheless, if there seem a chance, however remote, of lengthening the life of a patient who is otherwise doomed to speedy death, few would hesitate to catch at that chance." (P. 103.)

Passing on to the articles on Colic, Colitis, and Dysentery, we are compelled to find fault with the editor. All these articles are really superfluous, the first subject having already been treated of under the head of Enteralgia, the second under Enteritis, and Dysentery having been discussed in the first volume by Dr. Maclean. Why should non-epidemic dysentery be separated from the epidemic form, and treated of separately?

Certain diseases of the Rectum and Anus are ably described by Mr. Curling. Although strictly belonging to a work on surgery, these articles will be found very useful to the physician.

Dr. Ransom of Nottingham contributes the article on Intestinal Worms, which, for completeness, leaves little to be desired. The descriptions of the more important entozoa which infest man are illustrated by drawings from Leuckart and Davaine. Viewing the articles on Diseases of the Intestines and of the Peritoneum as a whole, the defect of editing, which allows the same subject to be repeatedly treated of in more than one place, is very striking. Thus not only are the articles on Colic and Colitis, as we have just pointed out, altogether unnecessary, in consequence of these subjects having been fully discussed under the general heads of Enteralgia and Enteritis, but Villous Growths in the Rectum are described both by Dr. Bristowe and Mr. Curling; Perityphlitis by Dr. Bristowe and Dr. Wardell; also Enteritis in Children by the same writers; and other instances of the same repetition might be cited, did space permit. In the second part of the volume, as we shall see, some of the essays read as though expressly written with the view of refuting others in the same volume.

The first paper on Diseases of the Liver is an ingenious discussion by Dr. Anstie, on "Hepatalgia", which is defined as "an affection characterised by attacks of deeply seated pain in the region of the liver; intermittent, in the manner of neuralgias; attended

by no organic changes or febrile disturbance; not necessarily involving an interference with secretion; but occasionally attended with arrest or perversion of the biliary secretion, and consequent jaundice and stomach-derangement." The author speaks highly of the value of muriate of ammonia in this affection. Dr. Maclean contributes carefully prepared and interesting articles on Congestion of the Liver, Suppurative Inflammation of the Liver, and Gangrenous Inflammation of the Liver; whilst Dr. Goodeve gives good accounts of what is known on Jaundice, Biliary Calculi, Cirrhosis of the Liver, and Acute Yellow Atrophy of the Liver. The last named author quotes extensively from the classical works of Frerichs, Budd, Harley, and Murchison, but affords us reason to regret that he has not drawn more extensively on the results of his own Anglo-Indian experience.

The remaining articles on Diseases of the Liver—viz., Fatty Liver, Cancer of the Liver, Hydatid Disease of the Liver, and Waxy Disease of the Liver—are by Dr. J. Warburton Begbie of Edinburgh. This accomplished clinician, curiously enough, modestly leans chiefly upon the works of his predecessors; and the essay is more remarkable for its apt and full references than for that peculiarly clear and thoughtful summary of bedside experience which often distinguishes his works.

[To be continued.]

REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINE-CHEST.

WE have had brought under our notice a very convenient and inexpensive medicine-chest, manufactured by Messrs. Green, Wenman Street, Birmingham. The contents appear to be of good quality and well selected, and include everything which is necessary for family use or for the medical practitioner in an emergency. We think that it satisfies a want, and will be much valued by parents of families. It will be of no small service to medical practitioners whose patients reside at a distance.

PHARMACEUTICAL PRODUCTS.

AMONG the most interesting and important exhibits in the pharmaceutical department of the Annual Museum of the Association at its Meeting in Plymouth were those of Messrs. Southall, Son, and Dymond, of Birmingham, which we noticed briefly in our review at the time. They comprised, *inter alia*, a series of specimens of opium, which, though they appeared to the naked eye of about equal merit, had yet been proved by analysis to vary, as regarded the morphia they contained, from 2 per cent. to 10.5 per cent. This very striking difference shows how important it is that, in making such preparations as tincture of opium, the opium should not be estimated by its market price, this too often being fixed by its naked-eye appearance, not by its actual alkaloidal value, which can be ascertained only by analysis. It also explains very readily how it is that laudanum may differ so much as it is practically found to do in energy.

Not less interesting and important was a new preparation of the cinchona alkaloids. The able Report of the Indian Cinchona Commission shows that the various alkaloids derived from the cinchona barks have about an equal therapeutical value. Sir R. Christison is of opinion that, of all galenical preparations of cinchona, the simple powder is the most trustworthy. Its nauseousness and bulk drove it out of practice, and the elegance of the present age will most certainly keep it out. Messrs. Southall have skilfully managed to restore to us the use of the powder without its nauseousness. In quinoa, as they term it, we have, in the shape of a brownish powder of not very bitter taste, all the active elements of cinchona without its woody fibre. This is capable of being made up in several elegant and agreeable forms. It may be given in pills, or in the shape of liquor quinoiæ. The Museum contained specimens of quinoa combined with chocolate in the shape of pastiles, which are most agreeable to the taste for children or fastidious persons. We have recently examined these preparations carefully, and can speak very highly of them. The quinoa pastiles are admirably convenient.

THE Subscriptions to the Association for the year 1871 became due in advance on January 1st. All which are not already paid, should be forwarded to the General Secretary, Mr. T. Watkin Williams, 13, New Hall Street, Birmingham; or to the Secretaries of Branches.

BRITISH MEDICAL JOURNAL.

SATURDAY, NOVEMBER 25TH, 1871.

THE COMING RACE.

MR. BERKELEY HILL addresses to us a communication which may be commended to the attention of students, of metropolitan and provincial examiners, and of the examining body and councillors of the College of Surgeons. It affords a graphic and trustworthy commentary on the statements which we assumed, at the commencement of the session, to have been made in a "missing introductory lecture", but which, from the tenor of all the information which has subsequently reached us, we can hardly venture to hope were really made. That they were well founded and much needed, Mr. Hill testifies from the evidence of his senses, and by an easily acquired experience, which other teachers can, we feel sure, readily command.

The habit of self-gratulation is easy, but it is fatal; and the mutual compliments and felicitations in which students, lecturers, and colleagues of all grades, are self-indulged on the first day of each succeeding October, are to us, and we believe to reasoning beings generally, becoming nauseous, by reason not only of their indigestible sameness, but of their flimsy material. We doubt, and we have reason to doubt, whether there be one course of therapeutics (*materia medica*) given in the metropolis which is fully worthy of the name. We doubt whether there is any school in which sufficient systematic and really complete teaching is afforded to all the students in practical surgical anatomy and minor surgery. There are a few in which practical physiology is being adequately taught—not one in which it is being adequately learned—two very different things. Clinical teaching is still very largely a formula—something which is put down in every prospectus, but which, in the large schools more particularly, only a few students and a few teachers realise. There are one or two schools where all the students are drilled in bedside study, and compelled, by questioning and by alternate spells of duty, to observe and comprehend clinical phenomena. The good example set in this respect by Dr. Hughes Bennett at Edinburgh has extended to some two or three London and provincial Hospitals, but only partially; and in few other hospitals is clinical teaching secured otherwise than partially, fitfully, to favoured or studious individuals, or not at all. It is a common fallacy of hospital teachers to suppose that an occasional clinical lecture, and a few hurried observations as they traverse the wards, realise the requirements of a system of clinical teaching. The result of all this looseness and imperfection in our schools is apparent in the results seen at the examining boards. Many of the ablest lecturers were at one time—and not without reason—much given to saying severe things of the examiners of the College of Surgeons. They had reason; and we have helped to wing the arrows which stimulated those once conservative and retrospective censors of youth to ascend to a higher level, and to join hands with a younger generation versed in the requirements of these later days, and disposed to look steadily at the present, and glance wistfully at the future. And now the tables are turned. The accusers are weighed in the balance, and found wanting; and the new tests, light and well-poised as they are, have pierced the weak places of the accusers' armour. This healthy reaction in affairs we wish also to promote. Such aid is the more necessary from us, because the examiners are somewhat tied by official reserve, and are silent

while progress suffers. They are, however, so courteous and so wise as to welcome the teachers at their examinations; and, if all would testify with the same candour as Mr. Berkeley Hill, redress must follow. It is the fact that a large proportion of the students who now present themselves to the College of Surgeons—and we do not doubt that it is the same at the College of Physicians—possess a very low average level of knowledge in some of the most essential respects. A certain proportion of students present themselves who, at the end of four years' study in hospital and school, have learned to point out on the surface of the body the course of the principal arteries, and the spots at which they could be compressed; who can apply a tourniquet, select and use a bandage, manipulate an ordinary dislocation, and dress a wound; who have used the microscope enough to name an ordinary urinary sediment and the normal tissues of the body; who have even also tested urine for albumen, can recognise sugar, and interpret specific gravity; can map out the abdominal edge of the liver, and detect and name a very distinct *bruit*. But these every-day elements of practical knowledge are the possession of a chosen few. The gentlemen across whom Mr. Hill stumbled, who would compress the middle of the thigh-bone with Signoroni's tourniquet for a femoral hæmorrhage, bandage a leg with a rib-roller, and puzzle over the position of the scaphoid in the skin-covered foot, are sadly numerous among those whom the schools send up as finished specimens of their teaching. The result is, that not only are a great many plucked, but the normal standard of examination is perforce dragged downwards. The examiners, brought constantly into a struggle with a dead level of ill-informed mediocrity and imperfectly taught crudity, must perforce condescend to the quality of their material. *Artifex materiem mutare non potest: hæc passa est.* They strive in vain to elicit sparks from the elements of dulness; and at this moment the faults of the schools are reacting injuriously on the spirit of the examiners. We suggested a remedy. Mr. Berkeley Hill, whose experience as one of the earliest and most assiduous teachers of practical surgery in the metropolis entitles his opinion to be well considered, accepts that suggestion, and endorses it. It is far from being novel in conception; nor has it the charm of audacity. But it is simple, natural, tolerably certain in its action: perhaps these are some of the reasons why it has not yet been adopted. Gentlemen who are so much given to the assiduous repetition of self-laudation, as are many of the authorities of our schools, might object to the establishment of data which would disturb the uniformity of gratulation and suggest the necessity of correctives. Our remedy is publicity, that universal panacea of publicists and bugbear of corporations. Let the College of Surgeons and the College of Physicians—let the Conjoint Board of Examiners, when it comes into work—publish tables annually showing the number of students sent annually from each school, the number passed, and the number rejected. Mr. Hill suggests that, for those who pass, it should be indicated by a suitable mark whether they passed very well, well, or fairly. Under the system adopted by the College of Surgeons, and indeed by most Boards of Examiners, this could easily be done; and it would be both just and useful to provincial and metropolitan schools. It would be just, because the merits of those schools which send up a comparatively large proportion of well trained candidates would appear on the face of the returns. It would be useful to two classes of persons—the teachers, who would learn to appreciate the strength and the weakness of their different departments of instruction; and the parents and guardians of students, who could profit by an inspection of results, and to whom the published lists of the Colleges would to some extent and in some respects profitably replace the highly interesting prospectuses and calendars of schools, great and small. Where the promise and the performance did not seem wholly to agree, they might pause to solve the difference. These lists would, it is to be feared, be condemned as invidious. They would occasionally be unpleasant, but then probably the most useful. They would

disturb the spirits of introductory lecturers, and flutter some of the gentle and persuasive pens which indite prospectuses. Now and then a dean of a medical school would have a bad quarter of an hour; sometimes the medical tutor would suffer. But they would have many compensations; and for the thin crust of Paradise, on which they often walk with gingerly tread, would be substituted a more reliable and solid earth beneath their feet. The jays might lose, but the peacocks would bear their bravery more nobly; and, if there be jays, why should they not be stripped? Is any one afraid? We think not. We have never heard such fear avowed. And, if there be none to fear that avowedly useful touchstone, the publication of results, why is it not applied? It certainly will help to improve the coming race of physicians and surgeons.

THE REPORTS OF THE MEDICAL COMMISSIONERS WITH THE FRANCO-GERMAN ARMIES.

THESE Reports, much inquired after in Parliament last session, have been produced in a printed volume, having a quasi-confidential character. They are of great interest; and, seeing that they deal with subjects to which free scrutiny from all sources was permitted by the combatants, we may refer to some of the statements made. The Reports are from the pens of Mr. Fitzgerald, D.I.G., Mr. Innes, C.B., D.I.G., Dr. Gordon, C.B., and Surgeon-Major Wyatt.

Mr. Fitzgerald closely summarises the German medical organisation, and compares with it very cautiously, and in facts rather than by comment, our own. The German organisation has been minutely described in our columns, and Mr. Fitzgerald's account testifies to the accuracy of the details furnished by our correspondents during the war. We are very glad to have learned incidentally that the details thus furnished found their way regularly from Berlin through the French territory, and were found useful to more than one of the Government Commissioners. It is unsatisfactory, but of course not surprising, to hear again from Mr. Fitzgerald that we have nothing satisfactory in the way of an ambulance corps, of sanitary detachments, or of *etappen* arrangements. The directions as to the management of flying ambulance stores are stated to be in the crude condition in which they were left by Lord Herbert's Committee, and to be such that the stores could not be packed into the carts; and, if they could be put in, the carts could not carry them. It is quite clear that Mr. Fitzgerald is entirely of the opinion which we ventured to express, upon the strength of Mr. Ernest Hart's inspection of the military organisation of the two armies during the war, that the regimental organisation of the British army is so stiff, inelastic, cumbersome, and costly, that it could not be maintained during war. Mr. Fitzgerald rather leaves this opinion to be inferred, than directly states it; but Dr. Innes and Surgeon-Major Wyatt are more explicit. Dr. Innes speaks quite plainly of the deficiencies of our transport and ambulance system; and Mr. Wyatt states as distinctly that the British medical regimental system, whatever may be its advantages in time of peace, is too cumbersome and costly, too little efficient for the purposes of a campaign, to be upheld under such circumstances. We were sufficiently aware of the unpopularity of these opinions amongst our British army surgeons and assistant-surgeons, who for many reasons cling to their regiments, not to have been cautious in arriving at, and chary in expressing, our conclusions. It is, however, a symptom of coming events, and as such we distinctly intimate that it must be regarded by our military readers and associates, that neither Sir T. G. Logan, Dr. Balfour, Mr. Fitzgerald, nor any other of the eminent officials who were present at the reading of Mr. Hart's paper, expressed dissent from the administrative conclusions; and that the Commissioners with the Franco-German armies appear to be unanimous in their favour. We have, indeed, reason to believe that the project for transmutation has long been under consideration by the authorities; and it may see the light before long. Meantime, a difference in the mode of preparing the *Army Lists* during the last three months, in which the regi-

mental element is somewhat less prominent, appears to be preparing the way for further changes in this direction.

Dr. Innes's Report gives a great number of highly interesting details concerning the German administration. He recommends their elastic scale of dietary (altered during peace, during manoeuvres, and during war), and condemns our own as being relatively less suited for the latter emergencies.

Drs. Gordon and Wyatt had chiefly to study the arrangements of the French army. They condemn unequivocally the system of *Intendance*; but they give a great deal of interesting information as to ambulances, wounds, operations, and diseases, to which we shall again return, comparing it with that collected by Dr. Innes in the hostile camp.

THE PRINCE OF WALES.

HIS Royal Highness the Prince of Wales has, we regret to say, been suffering since the thirteenth of this month with feverish symptoms, which have proved to be the commencement of an attack of typhoid fever. This is now the tenth day of the fever, at which date, as physicians are aware, the symptoms are sufficiently precise to afford distinct evidence of the character of the disease (which in the early days has little or nothing distinctive), and to point to the type of the attack. Sir William Jenner and Dr. Gull are both with the Prince at Sandringham. To-night (Thursday) the attack is pronounced to be sharp, but with no unfavourable symptoms. It may be well to recall at once to mind that, in the natural course of the illness and under favourable circumstances, it is likely to run on for yet another eleven days, before the patient can be pronounced to have passed quite through the attack.

DR. T. LAUDER BRUNTON has been appointed joint lecturer on Materia Medica at St. Bartholomew's Hospital Medical School.

A NURSE at Sheffield has been committed on a charge of dangerous and gross cruelty to a pauper lunatic in the Eccleshall Union.

MR. A. COOPER has been elected Surgeon to the Royal Hospital for Diseases of the Chest, City Road.

THERE are this year sixty-seven students in the Medico-Chirurgical School of Lisbon. Of these, 19 are students of the first year; 15 of the second; 16 of the third; 13 of the fourth; and 4 of the fifth year.

A PROVIDENT dispensary is in course of formation in Camden and Kentish Town. The rules issued by the Charity Organisation Society will be adopted.

DR. FREDERICK BOND EATON, of Nuneaton, North Warwickshire, was thrown from his trap while returning home on Friday night, and died next morning from exposure to the cold.

SIXTEEN Japanese students have matriculated this year in the University of Berlin. Most of them are attending the medical classes; some are students of jurisprudence and natural science.

DR. ELLIS has been called upon by the Local Government Board to resign his appointment at the St. Pancras Infirmary. The Infirmary has, further, been practically closed, and the patients transferred to the Highgate Metropolitan Asylum.

DR. VON SEYDEWITZ publishes an answer to the charge of making an unauthorised *post mortem* examination, brought against him by Mr. Richards, one of the Deputy Coroners of East London, in a manner which we consider perfectly satisfactory. The Magistrate refused to grant a summons; and it would be advisable for Mr. Richards to offer an apology to Dr. Von Seydewitz.

LADY MORDAUNT.

WE have reason to know that the statements which have recently been published, to the effect that Lady Mordaunt had been found to have been throughout, and now to be, in a sound state of mind, are opposed to the fact. This unhappy lady is in a diseased state of mind nearly approaching to dementia; and a certificate of her unsoundness of mind, authorising her renewed detention in an asylum near London, was signed last week by Sir James Alderson, the late President of the Royal College of Physicians, and by Dr. Gull.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

THE fifth anniversary session of this Association is to be held on the 1st and 2nd of December, at the Freemasons' Tavern, Great Queen Street. The anniversary address will be delivered by the President, Dr. Day of Stafford, on Saturday, the 2nd, at 5 P.M.: the subject will be, "The Historical Steps of Modern Medicine." On the previous evening, Dr. Swete will introduce a discussion on "Habitual Drunkenness and its Treatment—Medical and Legislative."

ROYAL COLLEGE OF SURGEONS.

AT the last examination for the diploma of membership of the Royal College of Surgeons, it is stated that 100 gentlemen appeared, of whom 70 obtained their diplomas; 13 were approved in surgery, and, when qualified in medicine, will be admitted Members of the College; and 17 were referred to their studies for six months. Of the 100 candidates for membership, 26 had previously obtained other qualifications; viz., L.S.A., 14; M.D. Queen's Univ., 4; M.D. Victoria Coll., Toronto, 1; M.B. Dubl., 1; L.R.C.P. Edin. and L.F.P. & S. Glasg., 1; L.R.C.P. Lond., 1; L.R.C.P. and L.A.S. Lond., 2; M.B. Aberd. and L.S.A., 1; and M.R.C.P. Lond., 1. At the primary examination for the Fellowship of the College, there were 21 candidates; viz., 9 senior Members of the College, four juniors, five who had passed the primary examination for Membership, and three who had not passed any examination. Of the 21 candidates, 12 passed, and 9 were rejected. There were 7 who had obtained the L.S.A.; 2 were L.R.C.P. Lond. and L.S.A.; 1 M.D. St. Andrew's; 1 M.B. Lond.; 1 M.B. Cantab.; and 1 M.B. Edin.

CHLORAL IN BEER.

BARON LIEBIG lately wrote a letter to a friend in London in which he stated, as a matter of interest, the quantity of chloral that a certain manufacturer turns out weekly. The amount appeared surprisingly great; and the Professor added, as a possible explanation, "Some say it gets into our beer." He probably did not expect that his familiar friend would publish this morsel of unauthenticated gossip. A non-professional journal reads the great German chemist's remarks, and, from small beginnings, the idea has taken shape, and has been extensively repeated in the press in a more or less authoritative form. Dr. Oscar Liebreich, the discoverer of chloral as a medicinal agent, has made a communication to our Berlin correspondent on this subject. He states that there is no ground whatever to suppose that the drug is employed to adulterate beer, and that the public may be at once disabused of this notion. The strong bad taste of the drug fortunately disqualifies it for this nefarious use, and its soporific effects upon the constitution are such as to make it totally unadapted to counterfeit the qualities of genuine beer. The presumed enormous demand for chloral has been authoritatively explained on the ground that the "newest popular vice is to take chloral." Ladies, it has been announced, are especially addicted to it, and it is doing at least as much harm as our old enemy alcohol. The drug is kept in thousands of dressing-cases, and those who begin its use often grow so addicted to it that they pass their lives in a sort of contented stupefaction. One seems to find here evidence of the facile power of generalisation, that writers devoted to social philosophy possess in an eminent degree. If, indeed, so vast a body of women possessing dressing-cases have, within a year or two, come to pass their lives in a sort of contented stupefaction, so astounding a consummation has been brought about without attracting the

notice which it demands. It is just possible that husbands and fathers are so pleased with the contentment and the stupefaction of the ladies, that they have held their peace. In the meantime, it may be well to remember that chloral is used medically, under skilled observation, in the same cases continuously from day to day, and often for periods of weeks and months together, without injury, and the aggregate of all those doses represents a very considerable amount. There are at present no data which indicate its use for other than medical purposes. Such an use would be highly dangerous, and the statements which have been circulated affirming it to exist are mischievous.

A FEMALE BONE-SETTER.

DURING several months past, one of the most prominent personages in the Austro-Hungarian empire has been a certain Regina Dal Cin, who follows the occupation of a bone-setter. She first learned her business by assisting her mother, who was also a bone-setter, at a small place named Vittorio, in the province of Treviso. After the death of her mother, she joined her brother, who kept a public-house, where she exercised her skill on the lame and crippled frequenters of the establishment, and is said to have effected a number of remarkable cures. Gradually coming into notice among persons of various classes of society, she has obtained a wide-spread reputation, and has visited, among other places, Venice, Trieste, Pesth, and Vienna. In each place, crowds of patients, both belonging to the locality and coming from a distance, have flocked to her. She professes especially to treat deformities of the hip-joint, even reducing dislocations of old standing, whether congenital or acquired. She does not operate except in the presence of a surgeon. This, according to one account of her, is a measure taken for her own safety, as she was once interfered with by the Austrian law, for practising without a legal qualification. We have before us a translation of a document issued by the Royal Commissary of the district of Vittorio, dated July 8th, giving her permission "to practise the reduction of human joints, and especially of femoral luxations, provided that she operates in the presence of a physician or of a surgeon." In her treatment, she first applies poultices for some days, for the purpose of softening the tissues; this having been effected to her satisfaction, she operates by rapidly performed process of manipulation. Professional opinion is divided as to her merits. Her supporters allege that her cures, including the reduction of old dislocations, are genuine; that—as Dr. Schivardi of Milan observes—"science ought to be grateful to her for having amply demonstrated by a vast number of facts—(1) that luxations even of long standing can be cured without recourse to great violence, or to the ponderous instruments hitherto deemed indispensable; (2) that small and modest apparatus suffice after the operation to keep the limb in place—nay, are more efficacious than strong instruments; (3) that quiet and absolute repose for eight days, and moderate repose for other twenty days, suffices to enable nature to bring to the new domicile given to the head of the joint all the materials necessary for the fabrication of the fresh ligaments required." On the other hand, her opponents more or less deny her cures, and some regard her as an impostor. Dr. Neudörfer, apparently admitting some of her cures of ankylosed hip-joint, states that the method which she follows is nearly the same as the process of "apolysis," recommended and practised by him several years ago for the removal of fibrous ankylosis. She has recently paid a visit to Vienna, where her proceedings have attracted a good deal of attention, and have given rise to some degree of controversy in medical circles. On the 4th instant, an officially appointed committee, consisting of Drs. Weinlechner, Lorinser, and Mosetig, accompanied Madame Dal Cin in her visits to four patients. Their report was very unfavourable to her pretensions. The substance of it was to the effect that she has only the most superficial idea of the nature of a dislocation or of the means of reducing it; that in one case she mistook the great trochanter for the head of the femur; that her operative proceedings consist in the performance of purposeless and hasty movements, which can neither reduce a dislocation nor remove a contraction; and that her statements as to the comparative lengths of the

limbs are deceptive. In consequence of the unfavourable nature of this report, the permission to practise in Vienna which had been granted to her has been withdrawn, and she has left that city. She is reported to have gone to Gratz. The information which we have here given is the more interesting, that it is said that Madame Dal Cin is likely to visit this country.

THE ROYAL SOCIETY.

THE annual meeting of the Fellows of this Society will be held on the 30th instant. At this meeting, the gold medals of the Society will be awarded to Mr. George Busk, F.R.S., President of the Royal College of Surgeons; and Dr. John Stenhouse, F.R.S. The Copley Medal will be presented to Mr. Julius R. Mayer of Heilbronn.

PYÆMIA FOLLOWING TOOTH-EXTRACTION.

An inquest was held at Liverpool, on Wednesday, on the body of a man who had died from pyæmia. It appeared that he had had a tooth extracted three weeks previously, and that the operation was followed by abscess and pyæmia. A similar case occurred at the Middlesex Hospital about two years ago.

HEALTH OF THE NAVY.

THE annual statistical report for the year 1869 has just been published. It shows an increase in the death-rate of one per thousand, entirely due to the prevalence of yellow fever on certain stations. On the home station, although there was a slight increase in the ratio of cases of that form of disease against which the Contagious Diseases Act is directed, the majority of the cases were contracted in places to which the Act does not extend. The medical officers, without exception, bear testimony to the value of legislation in this direction, and as a rule advocate its extension. The present volume includes reports on the sanitary condition of the great naval establishments, in somewhat excessive detail, but still including much that is interesting. We shall notice this volume at greater length. The naval reports continue to improve from year to year, under the direction of Sir A. Armstrong and Dr. Mackay.

DEATH UNDER THE INFLUENCE OF CHLOROFORM.

ON Tuesday, Mr. Humphreys held an inquest at the London Hospital on Mr. Daniel Ellis, aged 33, who died under the following circumstances. He was an iron merchant, and was superintending the unloading of a quantity of iron, when a piece fell upon his left foot. At the London Hospital, it was found that the first and second toes were fractured. Amputation of the toes was considered necessary. The deceased having undergone the necessary previous examination, chloroform was administered to him; but at first he resisted it, being in a state of excitement. The amputation was proceeded with, when it was found that the pulse had ceased. Remedies were at once used to restore the patient, but life was quite extinct. The verdict was, "Death at the London Hospital, accidentally caused by chloroform."

GUN-SHOT INJURIES.

SURGEON-MAJOR WYATT has, by communications addressed to the public press, drawn attention to a supposed neglect by civil surgeons of the study of gun-shot injuries, and a particular superiority of military surgeons in the treatment of such injuries in civil life. In this communication Mr. Wyatt expresses some opinions which are, we believe, peculiar to himself, and which even he would hardly be prepared to support after deliberate reconsideration. Gun-shot injuries receive a large amount of attention in treatises of British surgery. They have nothing mysterious in their character or treatment. The peculiarities of military surgery are mainly related to the necessities of war—transport, aggregation, and supply—as affecting treatment, and not to the mysteries of the injury inflicted by bullet, sabre, or bayonet. Every man is, of course, likely to know most about that which he has most studied, and of which he has had most experience. Hence military surgeons such as Longmore, Muir, and those who have had experience in war,

are leading authorities on the subject. But during peace the military surgeon has chiefly a medical experience, and is more of a general practitioner than a pure surgeon—a very important, honourable, and valuable characteristic. It follows, however, that the average hospital surgeon is frequently a much better authority and more skilled operator, in cases of gun-shot injury in civil life, than the average military surgeon; and this the best military authorities readily admit. The North Germans appointed, during the late war, civil surgeons as the chief consulting authorities in the great army hospitals of the campaign, to supervise and consult with the regimental surgeons in cases of surgical injury. This was going rather far. But it is an instructive commentary on Mr. Wyatt's observations; and the illustrious Stromeyer's translation and commentary on Mr. Mac Cormac's able surgical performances at the civil ambulance at Asfeld complete the lesson.

THE CONTAGIOUS DISEASES ACTS.

It has been alleged, since the exertions made in favour of the repeal of the Contagious Diseases Acts, that systematic and efficient examinations have been relaxed, and that contagious diseases are on the increase. In answer to our inquiries regarding these statements, Mr. Milner M. Moore, Resident Medical Officer at the Royal Albert Hospital, Devonport, which affords accommodation under the Act, writes:—"With regard to the amount of syphilis, I may say that there is very little in the town. I do not see a Plymouth prostitute the subject of a 'primary lesion' once in six months, but I do see women with such affections who come from the surrounding unprotected districts, to wit, Torquay, Exeter, Falmouth, Penzance, etc. The Acts here are *not* being carried out loosely; the women were never in better order as regards appearing for examination, and they behave in a most exemplary manner when in hospital; moreover, our return of those sent to reformatories and friends is now larger than it has been for some years. The return from the Commander-in-chief's office for the week ending November 8th shows that out of 8000 men only one was sent to hospital for a local sore. All our disease comes from unprotected districts, and our credit suffers thereby. What will the Government do?"

THE HAMPSTEAD HOSPITAL INQUIRY.

WE read with pleasure the following resolution, which seems to us as just as it is graceful. It was unanimously agreed to, at a meeting of the Committee of Management of Hampstead Hospital held since the close of the inquiry. "That the Committee desire to express to the Medical Superintendent, Dr. Grieve, to Sister Frances, and to the sisters and nurses under her charge, their sympathy with them under the unmerited imputations made against them of negligence in the discharge of their duties at this hospital. The Committee cannot but feel that the long and searching inquiry into the management of the hospital has abundantly proved that the grateful thanks of the Committee are due to the medical superintendent, sisters, and nurses, for their untiring labours, watchfulness, and skill, in the treatment and nursing of the sick entrusted to their care during the recent severe epidemic of small-pox."

FOREIGN PRACTITIONERS IN PORTUGAL.

THE session of the Society of Medical Sciences in Lisbon was opened on October 28th, with an address by the President, Dr. Barbosa. He took as his theme the regulations under which the holders of foreign diplomas and degrees are allowed to practise medicine in Portugal; giving, in the course of his address, an outline of the regulations on the subject in force in the various countries of Europe. In Portugal, under a law passed in 1861, all foreign practitioners desiring to practise are obliged to pass the same examinations as those educated in the country; but they are exempted from the necessity of attending a curriculum. There are three institutions authorised to grant diplomas—the schools of Lisbon and Oporto, and the University of Coimbra. In the two former, eleven examinations are required, each of which occupies a separate day. At the present time, a Dutch gentleman, who wishes to

practise ophthalmic surgery in Lisbon, is undergoing a course of these examinations, which commenced on October 17th, and will end on December 7th; there being an interval of five or six days between each two examinations. The subjects are anatomy, physiology, materia medica, external pathology, operations, midwifery, internal pathology, clinical medicine, clinical surgery, legal medicine and hygiene, and pathological anatomy. These examinations having been passed, a thesis has to be written and sustained. At Coimbra, only five examinations are required. Dr. Barbosa suggests that professors in foreign schools of acknowledged repute, should be admitted to practise in Portugal on their titles being verified by a jury of professors from the medical schools of the country; and that other practitioners should be admitted on passing certain examinations, after having presented a diploma from some licensing body of not inferior reputation to any in Portugal. The examinations should comprise anatomy, materia medica and therapeutics, midwifery, operations, practical medicine, and practical surgery; and should conclude with a thesis. Dr. Barbosa believes that, by the plan which he proposes, merit would be duly recognised, and the precautions necessary for the safety of the health and life of the people would be established.

PROGRESS OF CHOLERA.

FROM a daily record of deaths during the month of October now before us, we find that 654 deaths from cholera were recorded at Constantinople in the last twenty days of October, the number of deaths on the last day being 46. The sanitary state of Hasskeni, in which the English were confined by the abominable device of the "sanitary cordon", may be gathered from the statement which our correspondence includes, that "the foul pool of putrefying blood and offal is still disinfected; the open drain rolls its foetid stream down the populous slope into the Horn; and all the conditions which foster cholera are in full activity in the village." Sir H. Elliott seems to have done the best for his countrymen.—Our latest dates from St. Petersburg show 16 or 20 cases under treatment, and no deaths reported since Oct. 21st.—Regulations have been made by which all persons arriving at the port of Smyrna from places where cholera exists are liable to ten days' quarantine on a barren island about twenty miles from the port; and, it is stated, without due provision having been made for the proper care of the persons so detained.—At Helsingfors, in the week ending October 7th, there were 18 cases of cholera and 15 deaths; in the week ending October 14th, 10 cases and 3 deaths; from that date to October 18th, 2 cases and 1 death. The total number of cases since the commencement of the epidemic was 300; the deaths were 165.—Cases of cholera are reported to have occurred at Medina.

THE SALE OF DIPLOMAS.

THE *Boston Medical Journal*, referring to the scandalous sale of diplomas which has long been carried on by a bogus establishment called the "American University of Philadelphia", states that so wide spread is this contemptible and now unlawful traffic, that the officers of the University of Pennsylvania are fairly persecuted with letters of inquiry from Europe and from this country concerning these advertisements and applications for the supposed sale of its degrees. Of course, any one who really knows anything about that school knows that it would be as easy to buy the moon as to buy a degree from the University of Pennsylvania. But the "University of Philadelphia" so closely resembles it in name, that the trick is easily played; and the authorities of the genuine University of Pennsylvania have at last, in self-defence, found it necessary to set forth the following circular as an answer to all applications for its honorary degrees. The circular embodies not only the regulations of the University, but the law of the State of Pennsylvania, which makes this traffic in diplomas a misdemeanor, with a penalty of fine and imprisonment.

"University of Pennsylvania, Philadelphia, September 1871.—Frequent applications are made to the authorities of this University by gentlemen who desire to obtain honorary degrees. As these applications are made in evident ignorance of the rules which govern the Uni-

versity in conferring these degrees, as well as the law of the State of Pennsylvania on the subject, it has been thought best to reprint the existing regulations.

"*Extract from the Statutes of the University.—Of Honorary Degrees in Divinity, Law, Arts, and Medicine.*—1. These may be conferred either at the instance of the Faculty, or in pursuance of a resolution of the Board of Trustees; but no such degree shall be conferred unless the *mandamus* ordering the same be signed by two-thirds of the whole number of trustees, nor unless the candidate shall have been nominated at the Board three months previously to taking the question on conferring the degree. 2. The question on conferring an Honorary Degree shall always be decided by ballot, and the candidate must receive an unanimous vote.

"*An Act to prohibit the Sale of Academic Degrees.*—Section I. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same, That it shall not be lawful for any University, College, or other institution incorporated under the laws of this State with power to grant Academic Degrees, honorary or otherwise, to confer the same upon any person or persons upon the payment or promise of payment by any person in consideration thereof; and any person knowingly signing a diploma or other instrument of writing purporting to confer an Academic Degree when such consideration has been paid or promised to be paid, shall be guilty of a misdemeanor, and, on conviction thereof, be sentenced to pay a fine not exceeding five hundred dollars, and to undergo an imprisonment not exceeding six months, or both, or either, at the discretion of the court. Approved May 19th, 1871."

SCOTLAND.

DR. JOHN RAE, the Arctic explorer, delivered a lecture in the Philosophical Institution on Tuesday, on the two expeditions to the Arctic regions.

A NEW lunatic asylum was opened last week for the Barony Parish at Lenzie Junction, near Glasgow. It will afford accommodation for four hundred patients. The site on which it is to be built extends to one hundred and seventy acres, and has been purchased at a cost of £10,000. The grounds will thus be larger than those of any asylum in Scotland. It is stated that they are rich in minerals, and will in large measure cover the expenses of the building in a few years.

SMALL-POX IN CABS.

DR. W. T. GAIRDNER of Glasgow, in an admirable letter to the *Scotsman*, calls attention to the practice of conveying cases of small-pox to the Edinburgh Royal Infirmary in cabs; and this too frequently from localities quite beyond the municipal boundary, and from which cases should not be sent at all. Such a state of things, he urges, may be easily remedied, provided that Edinburgh is thoroughly prepared for its own obligations as regards conveyance of the infected sick by means of specially constructed and regularly disinfected vehicles for the purpose. He proposes that it should be made known as widely as possible, through an official notice to the newspapers, that every case in which patients suffering from infectious diseases are brought to the Infirmary in cabs is watched by the authorities, with a view to prosecution under the Public Health Act. Under this Act, Portobello has no right whatever to empty out its small-pox cases upon Edinburgh, by means of common cabs. On the contrary, like all other towns, it has, by the provisions of the Act, to provide proper accommodation for its own cases; and as this may be done in three weeks, by constructing an iron hospital, the sooner the fact is made known and acted upon the better. Dr. Gairdner, very properly, protests against the indiscriminate admission of infectious cases into the Infirmary, while an Act may be put in force to compel the local authorities to do their duty by affording accommodation for their own cases. As small-pox is again on the increase in the city, and the City Hospital has been, in consequence, again opened, the Infirmary Managers may well undertake at the present moment the consideration of the whole question of the admission of infectious cases.

IRELAND.

DR. SPOTTISWOODE, at Cahirciveen, has been called upon by the Poor-law Commissioners to resign for neglecting to attend to a red ticket at night. The Guardians, we are glad to hear, will request the Commissioners to withdraw their decision.

A COURTEOUS and handsomely illuminated address of thanks has been presented to Dr. Morrison of Newry, in testimony of the satisfaction of the Managers of the Rathfriland Road Hospital at his successful exertions in the conduct of the institution.

A DUBLIN Surgeon writes to the *Irish Times* to say that he regards the recent manifesto of Sir James Paget and his *confrères* "as an assumption of superiority on the part of the London profession which, though kindly meant, is yet uncalled for."

DR. HANAFIN has been charged by the Rev. B. O'Connor, P.P., with neglect of his duty as a physician in a midwifery case. The Commissioners entirely approve of Dr. Hanafin's conduct, and regret that the Rev. Mr. O'Connor took upon himself to interfere.

REVACCINATION.

BUT for the neglect of revaccination—almost as important as vaccination—small-pox could have gained no foothold whatever in Dublin. Revaccination is now, however, steadily progressing; nearly seven thousand persons have been revaccinated by the dispensary doctors during the last three months. The clergy of all denominations are urging the revaccination of the children of the various schools; it is also advancing amongst the upper classes. We have not been able to discover the slightest bad result, beyond, perhaps, in a few instances, some slight temporary inconvenience.

EXHUMATION OF TALBOT.

WE are glad to say that we have received communications from some of the most eminent army surgeons, emphatically assenting to the opinion which we stated to be universal amongst civil surgeons, that Mr. Stokes's treatment of the case of Talbot was quite in accordance with the most advanced rules of surgery. Among those who have expressed this opinion to us is Professor Longmore, C.B., the most eminent British authority on gunshot wounds. He emphatically endorses the opinion that the death of Talbot was solely due to the pistol-shot wound. In relation to this bullet, we may observe that there is a tolerably wide-spread opinion that, under the peculiar circumstances of the verdict, and of the subsequent statements from the jurors, it would be proper to order the exhumation of Talbot's body, with a view to a search for the bullet, which is supposed, from the published records of the *post mortem* examination, to be still lodged in the body. Its examination would throw light upon the "slug" hypothesis which has been started; and it is still important to clear up all the facts.

DUBLIN OBSTETRICAL SOCIETY.

THE opening meeting of the thirty-fourth annual session of this Society was held on November 18th, in the Hall of the College of Physicians; Dr. G. H. Kidd, President, in the Chair. There was a large attendance of members of the profession. The Report for the past year was read and adopted. It stated that the Society was making most satisfactory progress; and it was announced that arrangements had been made for the regular publication of the transactions and discussions. The President delivered an address on "Recent Advances in Obstetric Science", in which he entered at length into the question of the instrumental treatment of tedious and difficult labour, illustrating his remarks by statistics based on the practice of the Rotunda Lying-in Hospital during the past eighty years. Dr. Joseph Clarke, who was master from 1787 to 1793, used the forceps but once in each 728 cases. As a

contrast, in the three years during which Dr. G. Johnson has now been master, he has employed the forceps once in 14.74 cases. The mortality of the mothers after tedious and difficult labours has fallen from 20.21 per cent. in Clarke's time, to 7.38 per cent. of the present; and of those delivered with the forceps, from 50 to 6.86 per cent. Again, of children born by the aid of the forceps, the mortality had in the same period fallen from 50 to 4.9 per cent. That the use of the forceps was the cause of vesico-vaginal fistula, Dr. Kidd believed to be quite unfounded; on the contrary, this unfortunate accident generally resulted from not using the instrument. Though the use of the perforator and the practice of embryotomy had recently been reduced to a minimum, great advances had been made in the construction of the instrument required in the performance of this operation. In another class of labours, that of transverse presentations, mechanical skill had also done much to overcome most serious difficulties. In the treatment of *post partum* hæmorrhage, again, great improvements had been introduced. Laceration of the perinæum might be remedied in some cases by a judicious application of sutures. Lastly, where the uterine discharges after labour became foetid and putrid, Dr. Braxton Hicks had successfully washed out the cavity of the uterus with a solution of permanganate of potash. In conclusion, Dr. Kidd thanked the members for having again placed him in the presidential chair. Dr. Stokes moved, and Mr. Darby seconded, that the President's address be printed. The resolution was carried. On the motion of Dr. McClintock, seconded by Dr. Ringland, a vote of thanks to the Presidents of the Colleges of Physicians and Surgeons, to the Governor of the Apothecaries' Hall, and to the other visitors present for their attendance, was passed. The President then declared the result of the ballot for the election of officers to be as follows: *President*—George H. Kidd, M.D. *Vice-Presidents*—J. A. Byrne, M.B., and H. J. Sibthorpe, M.D. *Treasurer*—H. O'Hallahan, L.K.Q.C.P. *Honorary Secretary*—L. Atthill, M.D. *Council*—J. Denham, M.D.; T. E. Beatty, M.D.; A. H. McClintock, M.D.; and F. Churchill, M.D.

SMALL-POX IN DUBLIN.

THE present outbreak of small-pox in Dublin is assuming a very serious aspect. The deaths are not numerous, because vaccination has been so thoroughly carried out that the disease, as a rule, assumes a very modified form, but the number of persons attacked is very great. As might have been anticipated, the disease has now extended to the upper classes, and several deaths from it have taken place amongst them during the past week. The spread of the disease is attributed in many instances to the fact that there are no conveyances to bring cases of infectious or contagious disease to hospital but the public cabs. The only hospital that possesses a cab of its own is Cork Street Fever Hospital, which is now virtually closed, not having room for any more cases of small-pox. The Corporation, though empowered to provide vehicles, have done nothing except fine a cabman, who probably could not afford to defend himself. A more sturdy opponent, an ex-policeman, in Bridgefoot Street, whose case has been weekly before the public for the last three months, and who is described by the magistrate as having "shown every opposition he possibly could to the Corporation," now threatens to bring them into the Queen's Bench. This case might have been summarily settled in one fortnight from the date of the first summons. The consequence of this neglect of their duty, by the sanitary authorities, if such there be, is, that small-pox is at present so widely disseminated that children but a few weeks old, and in consequence not vaccinated, come into contact with it; and in a very short time, no doubt, every individual who has either not been vaccinated, or who has been imperfectly vaccinated, will contract the disease. As the Corporation are so very apathetic in this matter, is there no body sufficiently interested in the welfare of the city as to bring the matter before the Lord-Lieutenant? It might perhaps come within the province of the College of Physicians; and the able paper read by Dr. Grimshaw last week must have turned their attention in that direction.

CASES OF SKIN-GRAFTING.

IN a paper published in the *Proceedings of the Medical Society of Upsala* (vol. vi, part 4), Herr C. B. Mesterton describes the operation of skin-grafting, and relates several cases which had come under his care. For the translation, we are indebted to Dr. J. W. Moore of Dublin.

CASE I.—D. J., a cartwright, 41 years of age, on December 11th, 1870, received a charge of shot through the left arm, just above the elbow-joint. He was admitted to Hospital on the 14th. After several grains of shot, pieces of wadding and clothes, and sixteen splinters of bone had been removed from the wound, it was dressed, and daily washed out with an antiseptic lotion. The arm was totally split across immediately over the epiphysis, so that two fingers could be pushed straight through the limb, and the injury appeared, regard being had to the close proximity of the elbow-joint, and to the probability of fissures into the articulation, to indicate immediate amputation. A trial of the antiseptic treatment was nevertheless made, under which the wound took a very favourable turn. There was but little swelling; no redness either above or below the sore; no fever; the appetite was good; there was very slight pain, and favourable suppuration. Granulation was active and healthy; during its course, sixteen more splinters of bone, several grains of shot, and portions of wadding were removed. Six weeks after his admission, the large sulcus of the wound was filled up, and the sore was successfully healing. On February 9th, two portions of skin, each a little larger than a lentil, taken from the arm, were transplanted. When the wound was inspected on the seventh day, the uppermost layer of epidermis came away with the strapping, but in other respects the pieces of skin had entered into organic union with the bottom of the wound, firmly adhering to it, and they had also sunk rather beneath the surface of the granulations. A number of fine vessels gave a lively bright-red appearance to the patches, which were covered by a thin transparent epidermis. On February 24th, the epidermis-formation had so far advanced from the engrafted pieces of skin, that a bridge running right across the sore had become developed.

CASE II.—Charlotte Ericsson, aged 18, was admitted on October 16th, 1870, having had her left forearm crushed in a threshing-machine. Both radius and ulna were fractured, the muscles and tendons were torn, and the skin was completely detached from the entire internal aspect of the forearm. The patient opposed the proposal to amputate, in consequence of which the crushed limb, with fragments of bone sticking out here and there through the torn muscles, was simply laid on a splint and covered with an antiseptic dressing. Some partly gangrenous tissue was thrust off; and after this, the case, without any intervening accidents, went on to a relatively favourable termination. In the end of January of the present year, the numerous fractures had united, while the cicatricial formation in the soft parts had made considerable progress. The great loss of skin on the inside of the forearm made it easy to foresee, however, that the healing process would be extremely protracted, if indeed possible. In this situation, two pieces of skin taken from the back were transplanted on January 31st, with the same favourable result as in the former case. These two cases show, also, the good effect of the antiseptic treatment. In both, early operation was apparently indicated; yet the mode of treatment adopted was successful in rescuing the injured extremities with—at least in the first case—a great degree of usefulness; no irritation worth mention showing itself in the neighbourhood of the wound during the whole period of recovery, nor any suppurative prostration, nor even any disturbance of the patient's general health.

CASE III.—C. R. Anderson, aged 23, a servant, was admitted on the 2nd of March, 1870, for varicose ulcers of the legs. They were treated by means of poultices, diachylon ointment, and Baynton's bandage. Under these, the sores repeatedly healed, but, after a few days, again broke out. On March 13th, a tolerably thin patch of skin, so large as almost to cover one of the ulcers, was excised with a bistoury, and transplanted. When the bandage was removed on the fourth day, the piece of skin was found universally adherent to the bottom of the ulcer, and traversed by a number of fine vessels. Three days afterwards, the entire ulcer had healed, and then presented in the centre a firmer and brighter epidermis than at the edges of the sore, where the cicatrix was thinner and more livid.

CASE IV.—A. W. Ovarnström, aged 47, a servant, was admitted December 13th, 1870, for varicose ulcers of the left leg. They were treated by poultices, diachylon ointment, styrax ointment, and solution of caustic. On February 18th, a piece of skin about the size of a sixpence was removed from the arm with a straight bistoury. A very shallow incision was made, so that little more than the Malpighian

layer came away. The patch of skin was placed in the middle of the ulcer, about three square inches in size, and secured by strapping. After seven days, it was found firmly united; and, from its edges, new epidermis was formed, so that the healing process in the middle of the ulcer, after two weeks, engaged three times as large a surface as the engrafted piece of skin. On March 6th, a new transplantation was tried on another ulcer, which miscarried; on removal of the strapping on the fifth day, the piece of skin came away in a sloughy state. On March 23rd, the operation was repeated with a similar bad result. The rather indifferent state of the sore, and the fact that the knife was moistened with water, were probably the causes of the failure.

CASE V.—P. Pettersson, aged 64, formerly a farmer, was admitted February 15th, 1871, for an ulcer of the left leg, about five inches in length and breadth. The dirty, partly sloughy, sore was treated by poultices, and washing with dilute carbolic acid; after eight days, it assumed a healthy appearance, and the edges began to heal. On March 3rd, eight patches of skin, excised partly from the back, partly from the arm, were engrafted on the superior half of the ulcer, and Baynton's bandage was subsequently laid over the whole sore. On the 9th, the bandage was removed; five of the pieces of skin had undergone organic union with the subjacent granulations, forming small, highly vascular patches, in close contact with the surrounding granulations, and on a level with the newly developed epidermis from the edges of the ulcer. The remaining pieces of skin had formed yellowish-white, pus-infiltrated, soft patches, elevated above the surrounding tissue, but yet tolerably firmly adherent to the granulations. On the inferior portion of the ulcer, three pieces of skin, excised with a straight bistoury, were the same day engrafted, and Baynton's bandage was again applied. When the bandage was taken off on March 16th, not a trace of the last transplanted, very thin patches of skin appeared. From the five former pieces of skin, on the contrary, a very active formation of epidermis was seen going on. Four of these were already united by bridges of epidermis to the superior edge of the ulcer. The other three, infiltrated with pus, had completely disappeared. Three patches of skin cut off from the back were again engrafted, and the same bandage applied. On March 21st, they were also found in a state of mortification. The transplantations had thus, on the last two occasions, completely failed—a result which was supposed to depend on the relaxed spongy appearance which the ulcer had assumed during the last two weeks. Warm poultices and repeated touching with caustic were therefore again employed to excite activity in the granulations. On April 3rd, when the ulcer had once more taken on a healthy aspect, a fresh engrafting was performed with one piece of skin—thinner and larger—cut off by a knife, and with two snipped off by scissors. The patches were placed straight across the ulcer, the first mentioned between the other two. The ulcer, in its entirety, had at the time diminished to about the size of a crown-piece; its upper part, where the first engraftings were made, had perfectly healed two weeks before. On April 6th, the bandage was opened, when the centre patch was found sloughed, the remaining two living and abundantly supplied with vessels. Subsequently, the epidermal formation spread out from them on all sides.

CASE VI.—Beda Charlotte Ericsson, aged 21, was admitted to hospital February 17th, 1871, for periostitis and tuberculous ulcers of the left leg. Iodide of potassium was given internally, and the sores treated by poulticing until they presented healthy granulations. On March 10th, a patch of skin from the back was transplanted. Some days afterwards, all trace of this was thought to have disappeared; but afterwards, on March 23rd, a newly formed island of epidermis was seen rising at the spot where the transplanted piece of skin had been applied. The process of healing subsequently went on without interruption.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—Mr. George Hanbury, of Portman Square, has accepted the office of Treasurer to this old established charity, in the vacancy occasioned by the decease of Mr. John Savory. The hospital has been in existence nearly one hundred and twenty years.

BEQUESTS, DONATIONS, ETC.—Mr. John Barrow, of Westbourne Terrace, has bequeathed £4000 to build an Infirmary within five miles of Southwell, and £6000 for the support of it.—Miss Mary Colton, of Cambridge, has bequeathed her "residuary estate" to Addenbrooke's Hospital, Cambridge.—The Worcester Infirmary has received £100 under the will of Mr. Benjamin Birch Davies, of Broadwas.—The Glasgow Royal Infirmary has received £100 under the will of Mr. William Brown, jun., of Saltcoats.—Mr. Alexander Findlater has given £100 to the Convalescent Home, Stillorgan, near Dublin.—Messrs. Storey Brothers and Co. have given a second £105 to the Royal Albert Asylum, Lancaster.—The Northampton General Infirmary has received £135 under the will of Mrs. Maria C. Johnson.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE next meeting will be held at the General Hospital at Maidstone, on Tuesday, November 28th, at 4.15 P.M.; Dr. ALBERT DAVIES in the Chair.

Dinner will be provided at the Mitre Hotel at 6 P.M.

Business to be transacted.—The election of a member of the Medical-Ethical Committee of the district, *vice* Joy, resigned.

FREDERICK JAMES BROWN, M.D., *Honorary Secretary*.

Rochester, November 13th, 1871.

EAST YORK AND NORTH LINCOLN BRANCH.

THE next quarterly meeting of the above Branch will be held at the Hull Infirmary, on Tuesday, December 5th, 1871, at 4 P.M.; J. A. LOCKING, Esq., President, in the Chair.

ROBERT H. B. NICHOLSON, *Honorary Secretary*.

21, Albion Street, Hull, November 18th, 1871.

SPECIAL CORRESPONDENCE.

BERLIN.*

[FROM A CORRESPONDENT.]

Effect of the War on the University.—Female Students.—The Scientific Meetings and Professor Virchow.—Virchow on the Advantages of Association.—New Books.

IN his address at the opening of the present University Session at Berlin, the outgoing Rector quoted some interesting figures showing the effect of the recent war on the activity of the University. In Oct. 1870, there matriculated in all the faculties 1,236 students, while the number of entries for the winter session of 1869 was 2,421. Of the 1,236 students who entered their names in October, only 904 continued their attendance throughout the winter. The actual number of medical students last winter was 173, while in the previous winter session they amounted to 550. The falling off in numbers extended about equally to all the four faculties; but it appears that none of the theological students who entered at the beginning of the session were required to break off their studies. The courses of lectures, public and private, that were announced amounted to 366, and of these 271 actually came off. Forty students took their degrees—8 in jurisprudence, 19 in medicine, and 13 in philosophy. The number of deaths, so far as was ascertained, amounted to 32. The University seems now to have returned to its full activity, to judge from the crowded state of many of the classrooms. A few of the students are to be seen wearing the ribbon of the Iron Cross.

Two ladies from America have applied to the Berlin University authorities for permission to attend the medical classes. One lady, a Russian, is studying chemistry in Professor Hofmann's laboratory. An American lady has been studying medicine at Breslau, and has sent to an American newspaper a glowing account of her friendly reception at the Silesian University. Another pioneer of the same sex is studying engineering at the Polytechnic School of Aix-la-Chapelle; and two ladies recently joined the University of Prague, where they are studying under the professor of history. During the past summer a solitary American lady, M. D., attended the clinics at the Vienna General Hospital, and appeared to suffer, to the full extent, the inconveniences of being in so considerable a minority.

The autumn season on the Continent, as in England, is marked by the occurrence of various scientific gatherings. At several of these, Professor Virchow has been receiving ovations, which the Berlin newspapers have chronicled from time to time. At the Assembly of German Naturalists and Physicians, held at Rostock, his speech was the great event of the meeting. During the Bologna Conference of Archaeologists, he was entertained at a banquet by the Italian dignitaries and men of science; and at a scientific assembly held in Rome, the audience rose to their feet to welcome the celebrated Berlin professor, who made them a speech in French. In his address to the Rostock Conference, Virchow made some remarks upon the nature of annual scientific

gatherings, of which he himself is an assiduous frequenter. "It was a matter of encouragement to me", he said, "when I read in the proceedings of the recent meeting of the British Association, in the opening address of its renowned President, Sir William Thomson, that Brewster, in his letter by which he called the Association into existence, expressly stated that he was led to this step from considering the great and beneficent results that the German Naturalists' Association (*Naturforscherversammlung*) had achieved during its nine years' previous activity. We were the first to advance among all nations; the English followed, and the number of these associations has gradually increased. They have, by degrees, extended into every possible province of human activity, and we have thereby become accustomed, by the co-operation of the many, to define more clearly the common objects at which the whole has to aim." And again, speaking of the results of these meetings, he says: "Not only the pleasures of fellowship, which are inseparable from a great congress of individuals; not only the amenities of personal acquaintance, which cannot be too highly valued; the forming of friendly ties, where perhaps, under other circumstances, harsh and even bitter opposition would have sprung up; the reconciling of many controversial antagonisms through personal intercourse—all this is the smaller result. There is yet a greater—the communication of knowledge, the explanation of methods, the clearing up of the directions in which research should be undertaken—and these are things which can be nowise better told than by word of mouth." The main subject of Professor Virchow's address was the part that science would have to play in the new national life of Germany. Their work, he held, was to introduce into the popular life of the nation the great and all-pervading idea of evolution. Space will not permit even to give an abstract of his views.

Among the books that have issued from the German press within the last month or two are—the new edition of Virchow's *Cellular Pathology*, much improved and enlarged; Professor Traube's *Contributions to Physiology and Pathology*, in two bulky volumes, one containing experimental and the other clinical researches; a new instalment (the fifth) of Stricker's *Handbuch*; a treatise on Leuchæmia, by Professor Mosler of Greifswald; and an elaborate work, with plates, by Barkow of Breslau, on *Dilatations and Tortuosities of the Blood-vessels*, with special reference to aneurism of the aorta in its various sites.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 14TH, 1871.

H. A. PITMAN, M.D., Vice-President, in the Chair.

ON THE OPERATION OF OPENING THE LARYNX BY SECTION OF THE CARTILAGES, ETC., IN ORDER TO FACILITATE THE REMOVAL OF MORBID GROWTHS. BY ARTHUR E. DURHAM, F.R.C.S.

THE author related in detail five cases in which this operation had been performed in Guy's Hospital: in three cases by himself, in one by Mr. Bryant, and in one by Mr. Davies-Colley. The results in four of these cases had been eminently satisfactory, free respiration and good voice having been regained. The remaining case was still under treatment. Appended to the communication were more or less complete reports of all the cases which the author had been able to find on record. These cases were thirty-two in number, and, with the five detailed in his communication, gave a total of thirty-seven. In nineteen of these, the operation might be regarded as having been completely successful, natural respiration and voice (though in some instances not normal in tone) having been restored. In seven, partial success was obtained, respiration having been restored, but the voice lost or very seriously impaired. In four cases, some temporary relief was obtained. In three, the result might be considered negative, neither good nor harm having been done. The reports of at least two were incomplete. In two cases only, death resulted. In each of these, however, the immediate cause was blood-poisoning. Metastatic abscesses were found in the lungs in one case; in the other, erysipelas and gangrene occurred, and broncho-pneumonia and exhaustive fever ensued, and led to the fatal issue. Comparing the results thus stated with those given by Dr. Mackenzie in his treatise on Growths in the Larynx, the author pointed out that death could properly be attributed to the operation in two only out of the nine cases enumerated by Mackenzie as having terminated fatally, these two being the same as those already alluded to. With regard to the other seven cases, the author specified each, and showed that in each the result of the operation was favourable, or, at any rate, in no degree mischievous, and certainly not fatal. Some of the diffi-

* This letter was unavoidably omitted from our last issue through pressure of matter. See page 576 of that number.

culties liable to be encountered in the operation were then briefly discussed, and the opinion was expressed that such difficulties were really fewer and more easily overcome than appeared to be generally supposed. In conclusion, the author pointed out that it was not necessary to institute any comparison between the dangers and difficulties of this operation and those met with in the removal of growths through the mouth by the aid of the laryngoscope; nor, indeed, was it at all fair to estimate the comparative merits of the two methods of proceeding by bare numerical statements of the results obtained. If, in any case, removal of the growth by aid of the laryngoscope should appear practicable, the idea of resorting to section of the cartilages could not be entertained until fair trial had been made of the minor operation. In very few, if any, of the cases on record in which the larynx was opened, would it have been practicable to remove the growths through the mouth. Indeed, in many instances, numerous abortive attempts through the mouth were made before resort was had to section of the cartilages. With regard to the chances of recurrence, there could be no doubt that the more completely the original growth was removed, the less would be the probability of its reappearance. Neither could there be any doubt that such complete extirpation could be more certainly effected in most cases after section of the cartilages than by any method practised through the mouth. Dr. Mackenzie's conclusions as to the comparative chances of recurrence, as affected by the method adopted, appeared to the author unfair and likely to mislead. Cases of cancer (a malady very likely to recur) were included in one, and excluded from the other, of the sets of cases between the results of which a numerical comparison was made.

Mr. BRYANT considered that Mr. Durham had shown the operation to be worthy of attention on the part of surgeons. The operation in the cases described had been performed only because no other means could relieve the patients; tracheotomy, indeed, might have prolonged life for a short time, but the capital operation alone could save it. In cases of simple growth, this effect might be expected to be permanent; in cases of malignant growth, we could expect to prolong life only for a time. With regard to the operation itself, the great object was to bring the parts well into view. He was startled at hearing that the evidence on which Dr. Morell Mackenzie opposed the operation was of a very weak kind; there being, in his nine cases of death, seven where he could not see how the fatal result could be ascribed to the operation. He hoped to hear an explanation from Dr. Mackenzie. Even admitting that death had been caused by the operation in nine cases out of twenty-two, this would be scarcely a fair ground for condemning the operation. He regarded the operation as most valuable; though, of course, no surgeon would perform it if any other means were available for prolonging life.—Mr. HOLTHOUSE had performed one of the earliest operations of the kind described, in March 1864. The patient was a lady, to whom he was called by Dr. Gibb to perform tracheotomy. On the following day, he enlarged the opening upwards, and removed a number of mucous growths from the interior of the larynx. The patient recovered her voice, and retained it for several months after the operation; she died at the end of a year from extension of the original disease.—Mr. THOMAS SMITH asked whether, in closing the wound, it was necessary to fasten the margins of the thyroid cartilage together, or were sutures through the integument sufficient.—Dr. PITMAN remarked that Mr. Durham's five cases were in patients under 10 years of age; in Dr. Mackenzie's cases, 96 in 100 were above that age.—Mr. DURHAM said that in children the removal of laryngeal growths through the mouth was difficult, on account of the narrowness of the passage and the restlessness of the patients. No doubt, in the adult also, the growths were removed in this way in some cases, after all other means had failed. The amount of suffering produced by the removal of the growths through an opening in the larynx was much less than that which attended repeated operations by the mouth. He regretted much that Dr. Mackenzie was not present. He had informed him of his intention on that evening to take exception to some of his statements.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 1ST, 1871.

J. BRAXTON HICKS, M.D., F.R.C.P., President, in the Chair.

Imperfect Involution of the Uterus.—Dr. SNOW BECK exhibited an imperfectly involuted uterus, and described its microscopical characters. He arrived at the following conclusions. 1. The elements of the different tissues retained a portion of the natural enlargement consequent upon impregnation; but the enlargement was due more to the increased size and amount of the soft tissue in the walls of the uterus, as well as at the internal surface, than to the increased size of the contractile fibre-cells. 2. Although the blood-vessels were large and loaded

with fluid blood, yet there was no evidence to show that any morbid process, similar to inflammation, had at any time been present. 3. The whole of the blood-vessels, to the minute capillary network at the inner surface, formed one continuous system, though the character of the distribution changed towards the inner surface. This distribution appeared to offer a strong argument against the idea that the internal surface could be the seat of inflammation independently of the other portions. 4. The pulpy condition of the tissue at the inner surface, with the loaded state of the blood-vessels throughout, appeared to afford a probable explanation of the frequent hæmorrhages which attended similar enlargements. 5. With regard to treatment, this should include topical applications to the whole of the uterine cavities.

Dr. F. R. HOGG exhibited a Malformed Fœtus. It was referred to a Committee.

Osteomalacia.—Dr. BARNES read an abstract of a memoir on osteomalacia, by Dr. CASATI of Milan. This disease is remarkably frequent in some of the rural districts surrounding Milan. During the eight years that the author had acted as assistant to the late Professor Lazzati, sixty-two cases of clearly marked osteomalacia were admitted into the Lying-in Hospital. Almost all the sixty-two women came from that part of Milan known as the valley of Olona, the same district which also supplies the greatest proportion of cases of pellagra and of petechial typhus to the Milan hospitals. They all came from wretched villages where food was scarce, consisting, for the most part, of maize or rice, often musty. Their houses were ill-ventilated, damp, and built upon clay. The drinking-water was found wanting in saline matter. Twenty-seven of the women were delivered normally after easy labour, four had difficult labour, while thirty-one were delivered artificially, but only two required the Cæsarean section. For the medical treatment, Dr. Casati recommends the use of the biphosphate of lime or of "bone-powder," and cod-liver oil, and the substitution of Liebig's bread for bread made of rice and maize.—Dr. SQUIRE did not agree with the author that the pulmonary and bronchial congestions afforded any argument against the use of chloroform, since these depended on the mode of death; and, in severe labours, the use of chloroform tended to diminish the stress upon both respiration and circulation.

Treatment of Uterine Flexion.—Dr. RASCH read a paper on a novel method of using the uterine sound for redressing a flexed uterus. The part of the instrument inside the uterus should be kept steady in its place, so as to avoid irritation. The sound introduced into the retroflexed womb, with the point downward and backward, should be first used in that position as a lever to lift up the organ as far as possible. Then the movement should be reversed, so that the part in the uterus and its ideal prolongation are made the centre of motion, round which the handle and stem sweep.—Dr. PHILLIPS would be glad to know the comparative frequency with which it was found necessary to use the sound for redressing the reflexed uterus. Doubtless it could not be dispensed with in some cases; but he always attempted to restore a retroflexed uterus without the introduction of any instrument, and he believed that in a large proportion of cases this could be effected.—Dr. GUSTAVUS MURRAY could hardly admit that the method described by Dr. Rasch was new. He had employed it for some years.—Dr. AVELING and Dr. EDIS also said that they had practised the method. Dr. Edis said that Spiegelberg had recently called special attention to the danger resulting from the injudicious use of the sound.

Prolapse of the Female Genitalia.—Dr. CONRAD, of Pesth, read a paper on prolapse of the female genitalia. He maintained that prolapse of the uterus was, for the most part, a secondary affection. Prolapse of the vagina was the most important part in any descent of the female genitals, and uterine prolapse was but a sequel—the prolapsed vaginal walls pulling down the uterus. Of the different forms of vaginal prolapse, that of the anterior wall was most common, though frequently associated with prolapse of the posterior wall. A descent of the latter by itself was rare. Should there be a considerable elongation of the cervix, it might be certainly concluded that the vaginal prolapse was primary. The elongation of the vaginal portion of the cervix was of no diagnostic value, and was simply the result of mechanical irritation. Dr. Conrad believed that elongation of the supravaginal portion of the cervix and hypertrophy of the infravaginal portions were but secondary affections. The most important predisposing causes of prolapse were gestation, parturition, senile atrophy, etc. Prolapse in young girls occurred suddenly from a sudden shock through *contre-coup*. The replacement of a complete prolapsus of long standing should always be preceded by an emptying of the bladder and the rectum. The palliative treatment was best conducted by pessaries, of which the best was Meyer's ring, or Hodge's modification of it. For the radical cure, Dr. Conrad preferred Spiegelberg's operation. The vaginal portion of the cervix uteri, if greatly hypertrophied, was first removed by the galvanic wire. If the posterior wall of the vagina had become pro-

lapsed with the uterus, he performed Dieffenbach's operation by removing a triangular piece of the mucous membrane of the posterior wall, having its apex to the os uteri, and for its base either the pared surfaces of the rent perinæum, when this had been ruptured, to form a new perinæum, or, where this had not happened, the labia minora, so as to contract the orifice of the vagina, and aid in supporting the anterior vaginal wall. Spiegelberg then united the upper portion of the posterior vaginal wall with the inferior anterior, according to Simon's operation.—Dr. EDIS thought that the affection, on account of its great frequency, was too little studied. He had seen cases where a pessary had been introduced with the intention of keeping up an elongated cervix.—Dr. PHILLIPS said that certain cases of prolapsus uteri were doubtless secondary to vaginal prolapse—cases in which the uterus was small. He believed that this class was a much smaller one than that where an increased weight of the uterus itself was the primary cause of its descent. This was associated with relaxation of the surrounding areolar tissue. The arguments brought forward by M. Huguier seemed to him conclusive against the view advocated by Dr. Conrad, that elongation of the supravaginal portion was a secondary affection. He doubted whether any shock would produce displacement of the uterus in young women if the organ were not increased in weight, and there existed no impairment of the surrounding structures.—Dr. HEYWOOD SMITH agreed with what had been said, that the chief cause of prolapsus uteri was an increased weight of the organ producing relaxation of its supports. Another cause, however, was not generally recognised; viz., that as age advanced, the lumbo-sacral curve becoming more or less obliterated, the plane of the pelvis thereby becoming more horizontal, the natural support that the normal position of the pelvis, together with the abdominal walls, gave to the pelvic viscera was removed, and they tended to prolapse from gravitation.—Dr. ROUTH believed that prolapsus uteri without elongation of the cervix was very rare. His own experience led him to agree with the conclusions arrived at by Dr. Conrad. For the relief of prolapsus there were three chief methods which had been practised. First, there was the perineal operation. Secondly, Emmett's operation, or Dr. Rogers's modification of it, consisted in the removal of a large triangular piece of mucous membrane from the anterior, or sometimes from the posterior, wall of the vagina, and bringing the edges together by sutures. Both these operations succeeded in some cases, though not in all. Thirdly, came the plan of removing a portion of the cervix by the *écraseur* or actual cautery. This set up absorptive action in the uterus, and the elongation in many cases gradually but entirely disappeared. Dr. Routh thought that a cure, to be certain and radical, should comprise the three operations conjointly, or, at any rate, the last and one of the other two.—Dr. BARNES said that for some years we had all been pursuing a tentative course to find out the best mode of treating these affections. As to the mode of production of hypertrophy, he was scarcely prepared to agree with Spiegelberg and Dr. Conrad. The traction of the vagina might come in as a factor in the course of the disease, but the initiatory stage was, he believed, congestion and increased weight of the uterus. These cases were rare in women who had not borne children. The passage of the child through the cervix was a violent process: the cervix was forcibly stretched open; the mucous membrane was carried down before the head; the tissues of the cervix were bruised; small vessels were torn. Then, from getting about too soon and other causes, imperfect involution resulted, the lower part of the uterus especially was increased in weight and bulk, whilst the surrounding cellular tissue, having been greatly stretched and weakened, was less able to support the uterus. Hence continued congestion and perverted nutrition of the cervix. Small polypi on the edge of the os frequently complicated hypertrophy. Their structure was identical with that of the cervix from which they sprang. Dr. Barnes could not help thinking that simple prolapsus was far more frequent than Dr. Routh's observations would indicate. He would like to know how far the experience of others agreed with his own as to the usual extent of elongation being exactly five inches. He had found the cases in which this length was exceeded very rare.—Mr. SPENCER WELLS differed from Dr. Barnes in the opinion that restoration of the perinæum was beginning at the wrong end in the treatment of prolapsus of the uterus and vagina. Prolapse of the anterior wall of the vagina was the first step in the progress downwards. But a sound perinæum was the chief opponent to this prolapse. It would be absurd to expect the perineal operation to cure an elongated cervix; but in cases of ordinary prolapse, the perineal operation often effected a permanent cure. He had never seen an elongated cervix grow again after the vaginal portion had been removed.—The PRESIDENT said that when the uterus, from whatever cause, descended, by its pressure on the vagina, it acted like a foreign body and set up reflex irritation and tenesmus, which acting constantly, coupled with defecation and the pressure of the bladder, would tend to extrude and elongate the cervix.

It would clearly be better, before attempting any plastic operation, to endeavour to gain shortening of the uterine supports, either by pessaries or by recumbency.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 6TH, 1871.

ANDREW CLARK, M.D., F.R.C.P., President, in the Chair.

Rhinoplastic Operations.—Dr. LICHTENBERG communicated two cases of rhinoplastic operation. The patients, two females, were shown. He did not bring them forward as models of the plastic art, as he was far from being satisfied with them, but to show that much might be done by the surgeon in such cases. Mrs. K., the first of the two patients, had been for some time under treatment at the German Hospital, for tertiary ulceration of the nose; and, being discharged cured, was sent to him. On examination, he found that the septum, the entire left ala, and also almost the entire right ala, were destroyed. She was admitted into the Tottenham Training Hospital. On March 23rd, 1871, he took two flaps from the forehead; but, believing that he could not obtain a sufficiently large flap without encroaching considerably on the scalp, he merely formed the two alæ, with the intention of providing the septum from the upper lip at a future time. He found, however, that the nostrils, or rather the nostril, contracted so much that he did not consider it warrantable to produce a new deformity, with the doubtful prospect of a tolerably good septum. The second case came under his treatment in the Tottenham Hospital, and was useful in showing what large doses of iodide of potassium could do in these particular cases. Directly this remedy in large doses was given, the improvement was well marked, and the ulceration rapidly healed. He waited some months to see whether the disease was thoroughly subdued, and operated on April 6th. The whole nose, with the exception of some rudiments of nasal bones, was destroyed. He had to form a very large flap from the forehead; but the skin contracted more than he anticipated, and he thought that in these cases the flap could scarcely ever be too large, provided it could be made without creating a larger deformity.—Mr. FRANCIS MASON said that when the pedicle was taken from the centre of the nose, the supply of vessels was scanty. Was the flap applied to a raw surface or an ulcerating one? In a case at the Westminster Hospital he had made three small flaps, one above the aperture, and the others from each side of it, turned these over the opening, and laid the flap forming the nose, and taken from the forehead, over them. After the patient's discharge, some slight ulceration had taken place at the tip of the nose. The nose was now broader and not so symmetrical as those shown.—Mr. W. ADAMS, Mr. DAVY, and Mr. DE MÉRIC also joined in the discussion.

Urethral Rheumatism.—Mr. THOMAS BOND read a paper on so-called urethral rheumatism. This was not the effect of any specific poison or constitutional diathesis; and it often occurred quite independently of gonorrhœa, as well as of very gouty or rheumatic predisposition. It was dependent on a local condition of the urethra; and he called it urethral rheumatism as being the most convenient name. It occurred in men of an anæmic or weakly condition, or when gonorrhœa had been treated too long by copaiba or purgatives. There was a subacute inflammation of the synovial membranes and of the fibrous tissues about the ankles, heels, and balls of the great toes; it gradually affected the shoulders, elbows, and hands. Congestion of the sclerotic was present; and the health suffered severely. Exacerbation took place, with pains in the loins in the morning, followed by profuse perspiration, with loss of appetite and of sleep. The urine was scanty, the tongue coated, the face hectic. The limbs often became permanently contracted, unless great skill and care were used in the treatment. The urethral discharge varied from profuse muco-purulent discharge to the slightest gleet fluid. The disease was not diathetic but septæmic; in fact, a chronic pyæmia. He believed that the altered state of the blood was kept up by the daily absorption of the morbid materials from the urethra. As soon as the supply of the *materies morbi* from absorption was stopped, the blood gradually eliminated the poison and returned to its healthy state. The peculiar immunity of women was owing to the greater thickness and coarseness of the vaginal epithelium than that of the male urethra, and to their not being treated by specifics and antiphlogistics. If the disease were a rheumatic urethritis, and not an urethral rheumatism, why should not women be equally liable with men? Antiphlogistics, copaiba, and iodide of potassium did no good, but rather harm. The proper treatment was full diet, with steel and quinine wine, and porter, and lastly injection, until the discharge was completely cured. A very good injection was tannin and opium with water.—A discussion took place, in which Mr. ADAMS, Mr. BRUDENELL CARTER, Mr. DE MÉRIC, Mr. DAVY, and Dr. A. CARPENTER took part.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, NOVEMBER 15TH, 1871.

ALFRED HUDSON, M.D., President, in the Chair.

Fever in Dublin.—Dr. W. GRIMSHAW read a paper on the prevalence and distribution of fever in Dublin, a full account of which appears at page 605.—Dr. HENRY KENNEDY alluded to the existence of fever as a disease among most divisions of the vertebrata, and feared that, despite all the efforts made, epidemics could never be stamped out. Visitations of this kind he looked upon as beyond human control, at least to a large extent.—Dr. C. F. MOORE quoted Dr. Letheby's opinion that the purest water was not always the best suited for drinking purposes—a statement which might apply to the Vartry water, now extensively used in this way by the poorer inhabitants of Dublin. He believed, too, that the report of the contamination by sewage of the Roundwood reservoir of that water, was in some measure founded on fact. The south side of New Row, a street which ran through the lowest part of the Coombe Valley district described by Dr. Grimshaw, was built over the Poddle River, which thus acted as a tolerably well-flushed drain; and the result was a markedly diminished prevalence of fever in the houses in that situation as compared with those on the north side of the street.—Dr. JAMES DUNCAN observed that the general deterioration of health which took place in ill-drained houses, was an evident cause of increased susceptibility to the action of different poisons on the part of the inhabitants of such houses. As to the law of the usual progression of epidemics from east to west, he suggested that its explanation might possibly depend on the diurnal revolution of the earth on its axis in the opposite direction.—Dr. STOKES would ask, What was the end of sanitary reform? In his opinion, we could not look forward to the complete destruction from amongst us of the causes, be they what they may, of epidemic diseases, as the necessary effect of the action of a perfect sanitary code. It would be more reasonable to consider the beneficial results, which would doubtless follow the full development of hygiene in all its bearings, as depending rather on an improved state of the national health. The human system would, under such circumstances, be in a better position to resist epidemic influence when it approached; and, where an individual had already become affected by it, he would be able to bear up with more success under the particular disease from which he happened to suffer.

CORRESPONDENCE.

CANDIDATES AT THE COLLEGE OF SURGEONS.

SIR,—A few evenings ago I was enabled, by the courtesy of the President, to be present at the *viva voce* examination in Surgical Pathology and Practical Surgery at the College of Surgeons. I was very favourably impressed by the mode of conducting the examinations; but the material to be tested was certainly much inferior to my expectations. I was introduced into the large theatre of the College, where the Court received the candidates in batches of four, each man being taken in hand for ten minutes by two examiners, who led him to a live model stripped, and asked him most elementary and obvious questions on surgical anatomy—for example, the proper place to apply a tourniquet to the femoral artery in amputation of the thigh. It was painful as well as ludicrous to see a candidate, after glibly repeating the points to be observed in order to secure compression of the artery, when told to select a tourniquet and put it on, take a Signoroni and manage to place it halfway down the limb, in such a way that by no possibility could the compress be brought to bear upon the vessel; or, again, as did another candidate when requested to bandage a leg, take a four-inch wide roller, and, blind to the kindly hint of the examiner that he had better try a narrower bandage, persist in using it, until, after two or three failures, he was obliged to acknowledge that he could not bandage a leg. Of course I do not know whether these gentlemen passed, or were referred to their studies for six months; but I sincerely trust the latter alternative was their fate. A third gentleman was utterly unable to point out the situation of the scaphoid or the fifth metatarsal bones in the foot, though exceedingly ready to amputate in an imaginary and not very severe injury to that member. Indeed, so enthusiastic are some of the candidates, that the authorities wisely put wooden amputating-knives into their hands, lest the luckless model, in an excited moment, be shorn of his fair proportions. When their knowledge—in too many cases ignorance—of practical surgery had been tested in bandaging, putting on trusses, etc., on the living model,

the candidates were taken by a second pair of examiners, for another ten minutes, to patients having some obvious surgical malady, to give a diagnosis and suggest the appropriate treatment. The blunders made were past conception; and the novelties in treatment suggested were often as surprising. One gentleman proposed to cut a cancer out of a man's tongue with a scalpel, having, as his only resource against probable hæmorrhage, some solution of perchloride of iron.

Throughout this wearisome occupation, I observed none of the examiners show impatience or want of anxiety to draw out any bit of knowledge the students might possess; and the satisfaction these gentlemen displayed when, as now and then was the case, the candidates proved well able to answer the questions put to them, was pleasant to witness.

On the whole, the examination struck me as being extremely well planned, and by no means an easy one for a simply crammed student to get through. I could only regret that the average level of practical knowledge among the candidates was so low, that the examiners seldom ventured to put any question of serious difficulty.

The suggestion made in the leading article of the BRITISH MEDICAL JOURNAL of October 7th, *à propos* to the advice annually given to students beginning their medical studies, came forcibly to my recollection—namely, that the Council of the College of Surgeons should publish more detail of the causes of failure at their examinations. If an analysis of the candidates' proficiency in the several departments were published, stating the number of gentlemen from every school who passed well, moderately well, or badly, in each subject, the teachers would be made aware of the weak points in their system of instruction. Of course, at every good school, the aim is not simply to "get their men through the College", but to make the students proficient, and to train them in habits of observation and reflection, that, when more advanced, the young men may in their turn contribute to our store of knowledge. If each teacher at the end of the year were made aware of the way in which his pupils had passed the ordeal at the College, he would have the honest satisfaction at reading a good report, or the opportunity of knowing that, to gain success, he must modify his exertions in certain particulars. It appears to me that, were such information set before the teachers at medical schools, the amount of knowledge now necessary to let a man through the College would be rapidly increased; and the recipient of the member's diploma would ere long have the satisfaction of knowing that his qualifications had been fairly tested, and that he had gained a certificate of proficiency in surgery, instead of, as the case now is, having been only proved to possess the smallest modicum of surgical knowledge which it is deemed safe to let him use in practice. It is with the hope of keeping the attention of medical teachers on this point, to which you have already adverted, that I have troubled you with this letter.

I am, etc.,
London, November 1871.

BERKELEY HILL.

WATER-THEORY OF CHOLERA.

SIR,—In reference to your summary of Dr. Cunningham's conclusions regarding the water-theory of cholera, given under the head of "Lessons from India", in your issue of November 18th, permit me to point out that Dr. Cunningham's main argument on the subject, and the only one that calls for any remark, is based on an entire misconception of the facts of the Peshawar epidemic. In paragraph 39 of his paper published at page 263 of the sanitary blue-book for 1871, he writes as follows: "The main water-supply is the small stream which runs through the cantonment, and which is very liable to defilement; but the water from Mackeson's well is of good quality, and from this was obtained what was required both for the 104th Regiment and the Artillery. The 36th Regiment drank of the stream-water; and yet they did not suffer more than the wing of the 104th which remained in the cantonment after the other wing left, and drank of the well-water." Now the fact is, that the wing in question did not remain in the cantonment at all, and that it was in camp at Chumkunni when cholera attacked it with epidemic virulence. I take the proof of this assertion from Dr. Cunningham's sixth Annual Report, in which, at para. 134, he writes as follows: "The right wing, numbering 278 men and 17 officers, unhappily was much less fortunate. On the 13th September, one case occurred among them. On the 14th, there was one; on the 15th, two; on the 16th, one. On the morning of the 17th, they marched to Chumkunni; and on that day, after arrival in camp, there were four cases of cholera. On the 18th, there were fifteen admissions. Next morning they moved two miles off, to some rising ground. This 19th was their worst day, twenty-seven soldiers having been attacked on it."

Chumkunni was suffering from cholera when the troops arrived

there; and, just as at Peshawar, the water-supply was mainly obtained from surface-cuts exposed to every kind of pollution.

It is clear, therefore, on Dr. Cuninghame's own showing, that so long as the wing remained in cantonments, the cases of cholera were few—not more numerous, in fact, than might be expected, when the state of the water-supply in the station generally is borne in mind; and also that, whatever water may be provided for the men in barracks, they must drink, when away from barracks, whatever water they can get; and, with a thermometer near 100 deg. F. in the shade, soldiers are not particular what they drink. The native population, who took their water-supply mainly from the filthy cuts that traverse the station in all directions, were suffering very severely at the time. On their march to Chumkunni, the troops must have drunk largely from surface-cuts of a like description; for the population of that portion of the Peshawar valley have frequently no other source of supply. I submit, therefore, that Dr. Cuninghame is not justified in stating that “the London experiment has indeed been tried in Peshawar, but with a very different result. Here also we have different sections of the community living under similar conditions in every respect except the source from which they drew their water-supply; but there has been little difference in the extent to which they have suffered from cholera.” Indeed, the very reverse of this is the fact; for the officers and others, who were careful about the water they used, drinking mostly good water, escaped with comparatively little loss.

Differences of opinion in the interpretation of facts are inevitable; but the facts themselves should be beyond dispute.

On the general question of the water-theory of cholera, I will only add that, after a careful examination of the available records of the Punjab epidemics and of the localities affected there, I have not found a single instance in which the water-supply was not palpably subject to gross contamination; and, on the other hand, I have found that, in several stations which suffered severely, a bad water-supply was the only sanitary defect of importance discoverable.

I am, etc., A. C. C. DE RENZY, Surgeon-Major.
Kingstown, November 1871.

MORTALITY OF LIVERPOOL: A SECOND PEABODY.

SIR,—I beg to be allowed to draw an exception to some remarks in the last number of the JOURNAL regarding “the coming shower of gold”—remarks wherein the public are led to believe or suppose that Drs. Parkes and Sanderson have demonstrated to the learned and sanitary Town Council of Liverpool, that the *fons et origo* of our excessive mortality over other towns is the excessive intemperance which prevails among the working and lower classes.

Doubtless it is necessary for experts to say something when they are called upon to explain phenomena which have baffled our local savans—to lay hold of anything rather than confess themselves beaten; but allow me to remark that, if the “back slums” of Liverpool be any worse in this respect than the districts of St. Giles, Seven Dials, and the east end of London; if they be any worse in this respect than the east end of Glasgow, or the Cowgate, High Street, Canongate, and the wynds and closes of Edinburgh; if they be worse in this respect than Dublin, Belfast, or Cork, Manchester, Birmingham, Newcastle, Bristol, Southampton, or Portsmouth—let them prove it! I, for one, do not believe that our excessive intemperance bears any relation whatever to our excessive mortality, the cause of which, I hold, has still to be found out.

While pointing out the supposed cause, Drs. Parkes and Sanderson have failed to prescribe the only reasonable remedy. There is only one method of cure for the excessive intemperance of the working classes, and, like many excellent cures in this world, it is very difficult of attainment by or for the poor—and that is, lessening the hours of manual labour; giving the working man a greater interest in his labour and a more just equivalent for his services; providing him with the means of cultivating his higher and nobler nature, his manhood, by affording him the leisure and means of cultivating an acquaintance with nature, with science, with art, literature, poetry, with his fellow-creatures everywhere, and with all things which develop the inner man and which tend to raise him above the mere animal. Only think what we ourselves would be without adequate education, without leisure, without science and literature as the substance, and without books the embodiment of them, without music, poetry, and refined society. We would be much the same as those whom we are so ready to condemn; and, until we have provided the working classes with a national education in the proper acceptation of the term, with free

schools, with feeding schools, as much as possible free from every form of sectarian influence; and until we have lessened the hours of manual labour, afforded more leisure and means for intellectual and moral improvement, and used every means within our power of developing a taste for such pleasures or ways of happiness—we may talk, we may theorise, we may moralise and sermonise on the depravity and intemperance of the working or manual class, and condemn them. But all this is in vain, for we only expose our own intense but pardonable ignorance; we are merely temporising and moralising upon the effect, the intemperance of an overwrought and too much neglected class of our fellow-creatures—the wealth-creators—instead of divining and removing the cause of their intemperance.

Before the second edition of Mr. Peabody reaches the public, or before the worthy and intending donor commits himself and his £500,000 to the tender hug and delicate handling of those who deal in bricks and mortar, I would advise him to take a leaf out of my portfolio. Instead of investing in bricks, let him make bricks of men, and out of the raw material, men and women with developed souls in their bodies, who will, in process of time, reward him by building houses of their own from the interest accumulated by the industry of their own hands and the tear and wear of their own brains, aided primarily by the judicious application of so magnanimous a gift as half a million sterling. Providing for the wants of the poor is the surest way of pauperising them. Teach them how to think for themselves, and how to provide for themselves, and the excessive intemperance of Liverpool, and of the land, yea, of the whole family of man, will be a thing that was.

I am, etc.,

THOMAS SKINNER, M.D.

Dunedin House, Liverpool, October 16th, 1871.

SEWAGE AND ENTOZOA.

SIR,—I observe in your article on Australian Entozoa that, at a late meeting of the Royal Microscopical Society, Dr. Cobbold used terms somewhat to the effect that, “while on swampy ground, as about Croydon and other low-lying districts, where this mode of irrigation was practised,” etc.

Surely Dr. Cobbold has never visited Croydon, or he would be aware that it is neither “low-lying” nor “swampy”. There is nothing like a swamp in any part of the parish. It mainly consists of chalk, with a superstratum of sand or gravel, except at the northern part of the parish, where it meets the edge of the London and plastic clay. At this part, which is the lowest, and close to the western boundary, the river Wandle finds its outcrop. The river runs thence downwards through Beddington upon a chalk and gravel bottom to the Thames. This outcrop, which is the lowest part of the parish, is 140 feet above high-water mark at London Bridge. On the north, the streams called Effra and the Ravensbourne get their tiny springs, which also run downwards to the Thames. Dr. Cobbold has probably been misled by the biased evidence of Mr. Hope, who, curiously enough (though Croydon had won its successes in sewage-irrigation before Mr. Hope was heard of, except as the type of a courageous Englishman), never reads a paper without asserting something to the detriment of Croydon. We are quite aware that our plans are not perfect, for perfection does not belong to human works; but I wish again to give publicity to two facts. First, I have carefully watched for evidence to bear out Dr. Cobbold's theory. If I had found it, I should have published it at once. There is no more evidence now than there was two years ago, when I contradicted Dr. Letheby's deductions at a meeting of the Association of Medical Officers of Health. Secondly, the five hundred acres of irrigated land under our indirect supervision (not in the parish of Croydon) continue to be entirely free from the least particle of evidence that they promote either the distribution of entozoa or the production of enthetic disease. We have frequent returns of the state of health in that district; and during the past half-year the deaths have been at the rate of ten to twenty-seven births; and, with the exception of a case of scarlatina which occurred on a hill more than a mile away from the fields, there is not a single death which can be referred to ordinary removable causes.

It is not necessary to contradict the innuendoes frequently cast out by those who are probably searching after truth as well as myself (though occasionally associated with promoters of a patent); but, when they have the support derived from being quoted in our JOURNAL, I think a correction should be given.

I am etc.,

ALFRED CARPENTER, M.D.

Croydon, November 20th, 1871.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

DR. STALLARD'S STATEMENT AS TO LUNATICS IN METROPOLITAN ASYLUMS.

SIR,—I find that a statement, which is supposed to have been made at the Holborn Board of Guardians, has been interpreted to mean that sane persons have been admitted, and are kept, at Caterham Asylum; and that they have been sent thither by the parochial medical officers, for the sake of a fee of £1:1, to be received for certifying. The latter part of the statement would be so well known to be contrary to fact by the gentleman to whom it is attributed, that I cannot believe he made it. Every one at all conversant with Poor-law administration in the metropolis knows that no fee is received for certifying patients to Caterham or Leavesden Asylums, or for any action whatever connected with them.

That, among the seventeen or eighteen hundred patients sent to the Caterham Asylum during the past twelve months, there were a few who were not proper subjects, is true. Some were liable to paroxysms of violence, and were therefore more suitable for a county asylum, whither, as their cases develop themselves, they are sent. Had the medical officers been anxious to secure the fee, they would have sent these patients to a county asylum at once, in which case they would have received a guinea. A few of the cases have been discharged cured, and therefore were not, strictly speaking, proper cases for this asylum, as, according to the Act of Parliament, no dangerous or curable cases are to be admitted. Until, however, the Act of Parliament provides some infallible means of diagnosing the curability of such cases, I think that the medical officers must continue to send them. This, however, is something quite different from the statement alluded to, which, whether reported correctly or not, requires contradiction. There are no sane cases in the asylum, unless one or two have had their cures completed since the last (fortnightly) meeting of the committee, in which case they will have been discharged before this letter appears in your columns.

I am, etc.,

WILLIAM S. CORTIS, M.D.,

Chairman of the Committee of Managers of the Metropolitan
Asylum, Caterham.

141, Kennington Park Road, November 20th, 1871.

PAUPER LUNATIC CERTIFYING FEES.

SIR,—In your Poor-law Medical Service article of the 18th instant, under the head of "Fees for Certifying to Pauper Lunatics" you say, "... the fee is fixed by the magistrate or justice of the peace before whom the case is investigated." But the case of a pauper lunatic is not always or necessarily investigated before a magistrate or justice of the peace. The "order for the reception of a pauper lunatic (Sched. F., No. 1)" gives as the authorised committees or senders, a justice of the peace or magistrate, or, "a clergyman and relieving officer or overseer." I am moved to point this out to you, possibly because this very event happened to me no later than last week; and, though I am sure the Board of Guardians will in this case raise no objection to give me my fee, yet I ask you to be good enough to inform me and my *confrères* how we should legally enforce its payment if the guardians refused to grant it.

While on the subject of lunatics, I may perhaps be allowed to mention that the clerk to that Board of Guardians, whose servant I am, informed me, no later than yesterday, that in future I must send all lunatics to the workhouse in the first instance, as there was an order to this effect—authority unknown, but either Local Government Board, or the Superintendent of the County Asylum. The reason also is (very unfortunately) unknown; but it is supposed to be either for the benefit of the lunatic or of the medical officer of the workhouse.

Will you kindly inform me whether it is not within my province as district medical officer to decide the destination of my patient—whether he is fitter for the asylum than for the workhouse?

November 19th, 1871. W. H. CECIL TESSIER, M.D.

*** The respective duties of the relieving officer and the medical officer of either a workhouse or district with respect to the certification of pauper lunatics are clearly expressed in the Act of 16 and 17 Vict., cap. 97. It is the duty of the medical officer to give notice in writing to the relieving officer of the union containing the parish to which the

pauper may be chargeable; and such relieving officer must take the requisite proceedings. It is not sufficient for the medical officer verbally to inform the relieving officer or the master of the workhouse, or to enter the case in his book. The Act 16 and 17 Vict., cap. 97, sect. 67, imposes on the relieving officer the duty of causing lunatics to be removed to asylums. In order to avoid the excitement and often painful scenes occurring through the public examination of pauper lunatics in police-courts, the Poor-law Board, on the recommendation of the Lunacy Commissioners, issued a circular letter in 1867 to guardians of the poor, urging them to provide some justice, having proper jurisdiction, to attend at the workhouse or the home of the supposed lunatic, to hear and investigate the case. When a justice cannot be found to attend, a clergyman of the parish and a relieving officer may be applied to for this purpose. The Poor-law Board, however, consider that this latter plan is undesirable, and should not be adopted unless there be very strong necessity; and then due care must be taken that proper medical assistance is rendered in the case, and that the investigation is so conducted that no doubt may arise that the order has been issued after full deliberation, and with all necessary regularity. The examination of pauper lunatics before a magistrate is the rule; and only under very exceptional circumstances is it done before a clergyman. In the very few instances where the lunatic is examined before a clergyman acting in the place of a justice, the Act does not expressly confer the power of fixing and ordering the payment of the fee by the clergyman. If he be also a justice, he, of course, can make the order. It is, of course, open to the medical man to refuse to examine, if he be in doubt as to whether he will be paid for his services or not. The district medical officer has not to decide whither a pauper lunatic is to be sent. This depends upon the settlement of the pauper and the order of the magistrate. The Lunacy Commissioners, through the Poor-law Board, have expressed a strong opinion against sending pauper lunatics to workhouses or retaining them there. On the grounds of economy and humanity, acute cases of lunacy are best sent directly to an asylum, where they can have all the advantages of systematic care and treatment from the onset of their malady.

STIMULANTS IN WORKHOUSES.

SIR,—The table of expense per head for stimulants, and the average of deaths in certain workhouses, published in your issue of November 4th, appears intended to convey the notion that the deaths are in direct proportion to the supply of liquors, and, *vice versa*, that the longevity is proportionate to the deficiency of stimulants, which would seem to be the case if some of the instances be taken; as, for instance, where the highest expenditure corresponds with the greatest death-rate. In almost all other instances, however, the figures tell in the opposite direction; for instance, at West Derby, the cost per head is 5s. 6d., and 1 in 11 die; and if 3d. per head more be spent, as at Lambeth, only 1 in 17 die. Take, again, Glasgow, where, at 9d., the deaths are 1 in 11. It will also be seen from the statement given below, that twopence more gives the lowest death-rate of the whole series. Liverpool, cost per head 1s. 5d., 1 death in 12; Charlton, cost 1s. 8d., 1 death in 14; Leeds, cost 11d., 1 death in 18; Birmingham, cost 10d., 1 death in 20; Aston, cost 1s. 9d., 1 death in 27; Crumpsall, cost 11d., 1 death in 38. There must be some factor of importance beyond the administration of stimulants, that has been omitted in the consideration of the causes of the different percentages of mortality.

I am, etc., S. C. S.

A PUBLIC VACCINATOR writes:—I think it very objectionable that, in appointing Vaccination Officers under the new Act, preference should be given to relieving officers. They are too much under the dominion of the anti-vaccination portion of the Board of Guardians to properly perform their duties in respect of enforcing vaccination. I trust that your influence may cause the matter to be taken up by the local Government Board.

*** We shall be glad to hear from other correspondents on this subject.

OBITUARY.

PHILIP CHILWELL DELAGARDE, F.R.C.S.,

Senior Surgeon to the Devon and Exeter Hospital and Exeter Eye Infirmary; President of the South-Western Branch of the British Medical Association, etc.

MR. DELAGARDE died at his residence, Southernhay, Exeter, on the 17th November, 1871. He was the son of the Rev. Philip Delagarde, sometime Rector of St. Martin, Jersey, and of Sarah, the daughter of Jonathan Chilwell, Esq., of Westerham and Hadlow in Kent. He was born at Chelsea in 1797, and there his father died when he was a year old. He was an only child, and passed his early years with his mother in the neighbourhood of Exeter. Mr. Delagarde received his classical education at the Exeter Grammar School during the time that Dr. Lempriere (also a member of a Jersey family, and the author of the *Classical Dictionary*) was its Master. On leaving school (1813), he became a pupil of Mr. Sydenham Peppin; and in 1816, on Mr. Peppin's death, of Mr. Samuel Barnes. As their pupil, he enjoyed the advantages offered by the Devon and Exeter Hospital, of which they were both surgeons. He thence proceeded to St. Bartholomew's Hospital, where

he studied under Abernethy and others; and, during the final year of his residence in London, was the resident House-Surgeon. He became a member of the College of Surgeons in 1819.

In 1820, he took up his residence in Exeter, styling himself "surgeon-oculist", and commenced general practice. He was early elected one of the three medical officers to the Corporation of the Poor. He soon acquired an extensive practice amongst the wealthy families of the city. In 1836, he was appointed Mr. Barnes's coadjutor at the Eye Infirmary; and henceforth became deeply interested in the practical details of ophthalmic surgery. He had already (1820) published a treatise on *Cataract*. He was an advocate, as was Mr. Barnes, for the cure of cataract by absorption and depression, and never resorted to extraction until within the last two years. He then adopted the linear incision of Von Graefe's operation, but preferred to open the capsule before making the section of the cornea, and sometimes removed the lens with a scoop without removing any iris, with a result equal to that of the flap-operation as to regularity of pupil. He showed to the members of the Association, at the last branch meeting in Exeter, a patient on whom he had performed this operation with very good result.

In 1841, on the death of Mr. S. Luscombe, the senior surgeon of the Devon and Exeter Hospital, he was elected Surgeon. He had long been ambitious to occupy the position and fulfil the duties of a Surgeon; and he repeatedly regretted that he was so far advanced in life (43) before he succeeded to the public exercise of these duties. Until then, there had been no vacancy in the surgical staff of the hospital for twenty-five years.

In 1845, he was selected as one of the hundred and fifty first Honorary Fellows of the Royal College of Surgeons.

He was a good anatomist and operator. Though his hand was perhaps less delicately expert than it might have been, had he from early life practised operative surgery, yet his self-confident and well-established knowledge rendered him a safe and successful operator. His opinion was ever felt to be such as could be relied on. He was an assiduous and careful observer of modern surgical progress, and always adopted such of the new suggestions in practice as appeared to him beneficial. His last operation was in furtherance of conservative surgery—the resection of a knee-joint. He practised midwifery reluctantly; and ever maintained that it would be a good thing for the profession to be disembarassed of it.

In the exercise of his profession, he was conscientious and painstaking, and, for the good of his patients, neglected no effort. For the poor who were under his care, whether in the Eye Infirmary or the County Hospital, his first and chief solicitude was shown. At times, there was perhaps a hasty manifestation of anger; but it was only momentary, and soon passed away. Though apparently calm and quiet, he was excitable and singularly emotional. An act of injustice towards a personal friend would arouse his indignation, as the contemplation of pain or the tale of distress experienced by others would often move him to tears. A few months before his death, he delivered his last public address as President of the South-Western Branch, giving short accounts of some of the more distinguished physicians and surgeons that had preceded him in Exeter. When he came to speak of those with whom he had been personally associated, and for whom he entertained veneration and esteem, his voice and his manner evinced the susceptibility of his mind.

Mr. Delagarde was well versed in the more solid literature of the day. He often contributed short papers to the medical journals. His writings were essentially practical, and filled with details of cases that had passed under his own observation. The most conspicuous type of these was the address on Surgery which he delivered at Torquay in 1860 before the British Medical Association. He also took great interest in archæological investigations, and was one of the founders of the Exeter Diocesan Architectural Association. He contributed papers not only to its *Transactions*, but to the *Archæologia*, and to the *Transactions of the Institute of Civil Engineers*; one of his contributions, a *History of the Exeter Canal*, obtained for him the Telford medal.

In the earlier part of his career, he was a member of the old borough corporation. He was Sheriff in 1832, and, in 1834, Mayor—the last under the old charter. After the passing of the Municipal Reform Bill in 1836, he only on rare occasions spoke in public, and then chiefly on matters connected with his profession. In his diction, he was clear, distinct, and elegant; lucid in arrangement, and self-contained; fluent, and impressive.

He was simple in his tastes, and unostentatious; content with the quiet social sphere in which he moved. He was an English gentleman of the good old fashion; punctilious even in his observance of the unwritten laws of honour; high-minded and independent, staunch to his principles, and of sterling integrity.

In person he was about the middle height, somewhat spare, firmly built, and, for his size, of great muscular power. For many years, he

performed his professional journeys on foot or on horseback; but in late years, attacks of lumbago, and then of bronchitis, obliged him to use a carriage. His features were marked, sharp, and somewhat hard—latterly, he had adopted the fashion of a beard.

He continued in the active exercise of his profession to the last, and may be said to have died in harness. An early summons to an old patient on the 17th of September, was the cause of an illness that attacked him in the course of the day whilst at the Hospital. With difficulty he walked home to occupy the bed from which he never again rose. Naturally of a strong constitution, his physical strength only gradually failed. He retained his mental faculties to the last.

In 1826, he married Susan, the second daughter of his old school-master, the Rev. Dr. Lempriere. She died just one year before him. Of five children, two daughters survive him. His eldest son died early. His second son had given an early promise of a bright career; and Mr. Delagarde had ardently hoped that he would succeed him in the estimation of the public as a surgeon. For a few years, he was his father's coadjutor at the Eye Infirmary, but died before him at the age of 35, leaving an only child, a son, to carry on the name.

GEORGE BULLEN, F.R.C.S., IPSWICH,

Late Surgeon to the East Suffolk Hospital.

WE have to record the death of Mr. Bullen, which took place, at the age of 80, on November 11th. He was born at West Downham, in the Isle of Ely, in 1791, his father being at that time curate of the parish. In 1813, he became a member of the Royal College of Surgeons, and went for a short time as assistant to a medical man at Birmingham. He soon returned to Ipswich, and became assistant to Mr. Stebbing (whose pupil he had formerly been), and at the death of the latter, started in practice in the town. Upon the establishment of the East Suffolk Hospital he was elected one of the surgeons, and held the appointment until about two years ago. He was a very successful operator, and operated for stone more than fifty times, seldom losing a patient. He had a very fine collection of calculi, which are now deposited in the Museum of the Royal College of Surgeons. Mr. Bullen was well read in medical and general literature, and had a good knowledge of the fine arts. He was at one time elected an alderman of the borough, but resigned the office after holding it about six months. He was President of the Public Library, and also a member of the Museum Committee, and of the Dock Commission. Mr. Bullen was twice married, but outlived both his wives. He leaves a family of daughters by his first wife; but his only son, who was a rising medical man in Ipswich, died a few years ago.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The following candidates have successfully passed the examinations for the License to practise Medicine, held on November 1st, 14th, and 15th.

| | |
|---------------------------|-----------------------|
| Coppinger, Charles Philip | Galgey, Otho |
| Crookshank, Harry Maule | May, Walter |
| Doyle, Jeremiah | Ward, Michael Francis |

The following obtained the License to practise Midwifery, at the examination held on November 16th.

| | |
|-------------------------|---------------------|
| Beamish, James Maybury | Galgey, Otho |
| Crookshank, Harry Maule | May, Walter |
| Doyle, Jeremiah | Smith, James Edward |
| Elliott, Christopher | |

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 16th, 1871.

Hoskings, Ethelbert, Woburn Square
Parkhouse, Henry, Braintree, Essex
Whittington, Charles Edward, Tuxford, Nottinghamshire

The following gentlemen also on the same day passed their first professional examination.

Lewis, Frederick William, Middlesex Hospital
Paradise, Thomas Decimus, Guy's Hospital
Warren, Alfred, Charing Cross Hospital
Whitaker, James Sealy, Guy's Hospital

As an Assistant in compounding and dispensing medicines.

Kimber, Benjamin Tindall, Southampton

MEDICAL VACANCIES.

THE following vacancies are announced:—

AMERSHAM UNION—Medical Officers and Public Vaccinators for the Chesham Nos. 1 and 2 Districts: £70 per annum, and Vaccination Fees.

BIRMINGHAM and MIDLAND EYE HOSPITAL—House-Surgeon: £80 per annum, apartments, board, and attendance.
BLYTHING UNION, Suffolk—Medical Officer for the Wrentham District: £43 per annum, and extra fees.
BOSMERE and CLAYDON UNION, Suffolk—Medical Officer for the Claydon District: £42 per annum, and extra fees.
BRADFORD FEVER HOSPITAL—Two Honorary Medical Officers.
BRISTOL GENERAL HOSPITAL—Surgeon.
CARNARVONSHIRE and ANGLESEY INFIRMARY—House-Surgeon.
CHARING CROSS HOSPITAL—Surgeon-Dentist.
CLAREMORRIS UNION, co. Mayo—Medical Officer for the Ballyhannis Dispensary District: £100 per annum.
CRIEFF, Perthshire—Certifying Factory Surgeon.
DERBYSHIRE LUNATIC ASYLUM, Mickleover—Superintendent-Physician: £400 per annum, lodgings and rations.
DEVON and EXETER HOSPITAL—Surgeon.
EVELINA HOSPITAL FOR SICK CHILDREN—Medical Registrar.
GENERAL HOSPITAL, Birmingham—House-Governor and Secretary: £200 per annum, board and residence.
GRANTHAM UNION, Lincolnshire—Medical Officer for the Grantham District.
GREAT NORTHERN HOSPITAL—Surgeon.
HEXHAM UNION, Northumberland—Medical Officer for the Western Division of District No. 3.
LAMBETH—Medical Officer of Health: £500 per annum.
LEEDS HOSPITAL for WOMEN and CHILDREN—Assistant-Surgeon.
LINCOLN COUNTY HOSPITAL—Dispenser.
LIVERPOOL ROYAL INFIRMARY—Physician.
LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Lecturer on Ophthalmology.
MADDERLY, Perthshire—Parochial Medical Officer.
MOUNTMELICK UNION, Queen's County—Medical Officer for the Coolrain Dispensary District: £90 per annum, and Registration and Vaccination Fees.
REETH UNION, Yorkshire—Medical Officer for the Muker District: £22:10 per annum, and extra fees.
ROYAL INFIRMARY, Edinburgh—General Superintendent: £420 per annum, and house rent.
ST. MARY ABBOTTS, Kensington—Medical Officer for part of the Parish of, for six months: at rate of £75 per annum.
ST. MARY'S HOSPITAL and DISPENSARY for WOMEN and CHILDREN, Manchester—Medical Officer: £60 per annum, board and residence.
SOUTH STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton—Physician's Assistant: £100 per ann., with board, washing, and furnished apartments.
STOCKPORT INFIRMARY—Assistant-Surgeon: £60 per annum, board and apartments.
SUSSEX COUNTY HOSPITAL, Brighton—Surgeon; Assistant-Surgeon.
TORQUAY, Devon—Medical Officer of Health: £100 per annum.
VICTORIA HOSPITAL FOR SICK CHILDREN, Chelsea—House-Surgeon.
WANDSWORTH and CLAPHAM UNION—Medical Officer for the Workhouse and Infirmary: £250 per annum, and furnished apartments.
WEST OF ENGLAND EYE INFIRMARY, Exeter—Surgeon.
WOODBIDGE UNION, Suffolk—Medical Officer for District No. 5: £62:10 per annum, and extra fees.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- ***COOPER, Alfred, Esq.**, appointed Surgeon to the Royal Hospital for Diseases of the Chest, City Road, *vice* ***F. Mason, Esq.**, resigned.
- ***ELDER, George, M.B.**, appointed Resident Surgeon to the General Hospital, Nottingham, *vice* **A. G. Mickley, M.B.**, resigned.
- ***HAVARD, D., Esq.**, appointed Medical Officer to the Newport district of the Cardigan Union; also Admiralty Surgeon and Agent at Newport, Pembrokeshire.
- ***LAWRENCE, H. Cripps, Esq.**, appointed Pathologist to the Sophia Nursery for Infants, Fulham.
- PHILIPPS, Sutherland Rees, M.D.**, appointed Assistant Medical Officer to the Devon County Asylum.
- ROWAN, John Foster, L.K.Q.C.P.Irel.**, appointed Medical Officer for the Kilkee Dispensary District of the Kilrush Union, co. Clare.
- SPENCE, Robert, M.D. Edin.**, appointed Medical Officer and Public Vaccinator for the Parishes of Cavers and Minto, Roxburghshire.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

WORKMAN.—On November 16th, at Clarendon Terrace, Teignmouth, the wife of ***C. J. Workman, M.D.**, of a son.

MARRIAGE.

***CHALDECOTT, H., Esq.**, Surgeon, to Emma Louisa, widow of the late **S. DANBY, Esq.**, of Calcutta, and eldest daughter of the late **Allan Webb, M.D.**, Bengal Medical Service, at Dorking, on November 16th.

DEATHS.

BULLEN, George, Esq., Surgeon, at Ipswich, on November 11th.
CAMMACK, Thomas Armstrong, M.D., at Boston, aged 46, on October 27th.
 ***DELAGARDE, Philip C., Esq.**, Surgeon to the Devon and Exeter Hospital, at Exeter, aged 74, on November 17th.
STANFORD, Wm. H. N., A.B., M.B., at Shankill, co. Dublin, on November 13th.

TESTIMONIALS.—Dr. Wallace, of Greenock, has been presented with a silver salver and a sum of between £300 and £400 by a few patients, as a token of regard and acknowledgment, on his going to the Mediterranean for health.—Mr. Thomas Coe, F.R.C.S.E., has been presented with a handsome silver epergne, inscribed as a small token of respect, after thirty years' service, by the officers and brothers of the Loyal St. Edmund Lodge.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Wm. Adams, "A Case of Webbed Fingers treated by Mr. Tamplin's Instrument"; Mr. Alfred Freer (Stourbridge), "Case of Impalement"; Mr. Brudenell Carter, "Ophthalmic Demonstrations."
TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Fairlie Clarke, "On Unilateral Atrophy of the Tongue"; Dr. Priestley, "On Inter-menstrual or Intermediate Dysmenorrhœa."

EXPECTED OPERATIONS AT THE HOSPITALS.

WEST LONDON HOSPITAL, Thursday, November 30th, 2 P.M. External Urethrotomy, and Operation for Vesico-vaginal Fistula, by Mr. Teevan; and Operation for Fistula in Ano, by Mr. Cooper.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FOR replies to questions concerning Poor-law medical questions, see Poor law Medical Department, under charge of Mr. Benson Baker, London, and Dr. Maunsell, Dublin.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

DR. SHAPTER (Exeter) and Dr. LEVY (Berlin) are thanked for their communications.

DR. TILT.—In an early number.

THE requests of Mr. Morris, Mr. Mash, and Dr. Currie Ritchie, have been attended to.

VACCINATION GRATUITIES.—Nox's letter shall appear in an early number.

SIR,—Will you kindly inform me if I am legally entitled to put on my door-plate "Surgeon" as well as "Dr.", my only qualification being M.D.?

November 1871. I am, etc., H. R. H.

P.S.—My diploma states that it gives a right to practise in all the departments of medicine.

. This diploma is only registerable as a medical diploma.

DR. BRAXTON HICKS, Mr. Gaskoin, Dr. Stanley Haynes.—In an early number.

INSUPERABLE CONSTIPATION.

I OBSERVED a notice a fortnight since in the JOURNAL of a paper to be read at the Hunterian Society, of which we should all have been glad to have some further information. You published lately a very useful series of records of the Treatment of Obstinate Constipation by metropolitan and provincial hospital physicians. Mr. Bryant goes a step further, and discusses "Insuperable Constipation and its Treatment." If it be insuperable, I am a little curious to know how it is to be treated?—A. S. S.

. By colotomy, we presume.

WE cannot concur with an Associate, that the remedy which he has found successful in the cure of "nocturnal spermatic emission"—gentian and brandy—is a desirable or advisable means of treatment. Bromide of potassium is amongst drugs the most useful; and the general mental and physical hygiene necessary are well described by most standard writers.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

CAUTION.

IT having come to the knowledge of the Publisher that circulars have been distributed calculated to mislead advertisers as to the circulation of this journal, he feels it incumbent on him to state that its circulation far exceeds that of any other medical periodical, and that it has for many years past steadily increased, and is still increasing.

A YOUNG MEMBER (Liverpool).—On inquiry, we learn that there will be an examination for the License in Midwifery early in the ensuing month. The advertisements will appear next week giving full particulars.

ERRATUM : THE CLINICAL SOCIETY.—Dr. Playfair writes to say that, in the discussion on Thoracentesis, he, in speaking of empyema, said that, when the pleura contained pus, the chances of absorption were reduced to a minimum, and that, therefore, continuous drainage was to be preferred to simple thoracentesis; and then proceeded to describe a method of effecting this without admitting air into the pleural cavity, which he had found of great service. The report as published in last week's JOURNAL was incorrect in representing Dr. Playfair's remarks.

M. does not state his age, nor the purpose for which he requires books on the subjects named. There exist, of course, good elementary handbooks and full treatises on all the subjects; but, on the scanty data which he gives, our advice might be in its results more costly than useful to him.

ROUGH EXAMINATION OF WATER.

SIR,—In reply to the inquiry (in last Saturday's JOURNAL) of Mr. Charles M. Thompson, for an inexpensive mode of analysing water, I can confidently recommend the following, presuming that it is for *organic* impurities that he wishes to test. I owe the knowledge of this simple but valuable plan to Dr. Attfield, Professor of Chemistry to the Pharmaceutical Society.

Brighton, November 20th, 1871. I am, etc., G. F. HODGSON.

* * Half-fill a good-sized decanter (previously quite clean) with the suspected water, cover its mouth, shake well, and then apply the nose. If nothing unpleasant is detected, close the bottle tightly, and set it aside in a warm place—98 or 100 deg.—for two or three days, and then repeat the shaking, etc., as at first. If this time no foul odour is detected, the water is not of very bad quality. Smaller amounts of organic matter, and the exact character of other constituents of water, can only be determined by chemical analysis.

COLLECTION OF SUBSCRIPTIONS.—Notwithstanding Dr. Colville Brown's belief that he is not a member of the local Branch, it appears from the statements of the General and the Local Secretaries that he was so elected, and appears in the printed lists of the Branch. As a member in arrear after October, he ought nevertheless to have fallen under the supervision of the former officer for the collection of the subscription which he has been desirous to pay.

ARRANGEMENTS OF ANNUAL MEETINGS OF THE ASSOCIATION.

SIR,—I am a member of three associations holding annual gatherings for mutual instruction and encouragement, as well as for promoting knowledge we value in the various localities we visit. These three associations for the promotion of general, of medical, and of social science, all pursue much the same plan, and all commit, and persist in committing, the same mistake—they gather together from every part of the country, and often from other countries, men eminent for their abilities, from whom all cultivating the same branch of knowledge are most anxious to learn, but are prevented from learning because the available time is nearly all occupied by listening to papers read, many of which would be far better understood if quietly read at home. It is very true that some of these papers form the basis of useful and interesting discussions; but it is scarcely possible to discuss any one subject satisfactorily, because we always will try to discuss too many subjects at once. It is also true that it is impossible to foretell which of the papers will elicit the most interesting discussion; and those who arrange the meetings are naturally unwilling to omit any promising paper, lest it should be one of those which will prove the introduction for an interesting debate. I submit, however, that it would be possible to get nearly, if not quite, all the benefits of the good papers, without being embarrassed by a multitude of those of little importance, and without occupying the time of many by reading what few may care to hear. All that would be necessary would be, first, to accept no papers that are not sent in for perusal and selection a month or two before the meeting; secondly, to accept none that are not judged to be worth printing: what is not worth printing, is not worth occupying the time of men whose time is valuable. Ten pounds an hour is a very low estimate of the value of the time of twenty of our members; to save that time at a cost of five pounds for printing, would be good economy. Lastly, the papers accepted and printed should be sent to each member to read before the meeting, at which the title only, or at most a short abstract of the paper, should be read, so that nearly all the time now occupied in reading would be available for discussion, the only sensible object for gathering as many as possible of the most eminent cultivators of the same science together, which object is now to a great extent defeated; while our members are mortified at knowing that those who could give them most valuable and interesting information, are compelled to limit themselves to a few hurried observations, and often to be altogether silent.

Along with much good, no little mischief is done by this system of imperfect discussion. Crude and mistaken opinions and injurious fallacies are put forth under the *apparent* sanction of an important association, without being corrected or exposed, which would, under a better system, have a very short life of it.

Men of business, who seldom forget that time is money, have long since adopted the plan here suggested; they attach too just a value upon their time to allow it to be wasted in listening to long reports read slowly at a meeting, which they can quickly examine at their leisure. At most meetings of town councils, railway and other companies, all long reports are printed and circulated beforehand, and at the meeting taken as read, attention being specially directed to the portions needing explanation. By this plan, not only is business done more quickly, but also far better, by attention being concentrated on the subjects needing it. The time is, I trust, not far distant when men of science will show that they also know the value of time.

I am, etc., P. H. HOLLAND.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

ANÆSTHETICS AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

SIR,—Perhaps you would kindly excuse my making a little more clear what I observed, perhaps imperfectly, in the late debate on ether in the Royal Medical and Chirurgical Society. I should not trouble the reader, but that curiously inexact reports of this important discussion have appeared elsewhere, that only mislead and helplessly obscure the subject. The ether of the shops is miscible with water in many instances; and so is very unreliable and tedious. Thirty-six deaths during inhalation of ether have been recorded by Sabarth; so that it is not entirely free from danger as alleged. The paper of the evening called in question Mr. Lister's views as lately explained in the JOURNAL, holding rather the pulse to be the chief test or guide as to the safety of chloroform during its administration, and doubting the views generally of the Scotch school. This, of course, is a question of simple clinical observation; and though I doubt Mr. Lister's necessity for fear when steror occurs, I cannot help thinking he is right as to the pulse, and said so. The necessity for complex inhalers, and mystery as to chloroform administration, are but corollaries on this supposed fact of cardiac syncope and the pulse being a test of danger. Again, as to the methylene chloride, I said I had observed its usefulness in short operations like cataract (it is specially valuable in iridectomy and glaucoma, where it is desirable that the vitreous humour should not be disturbed by vomiting or muscular plunging, such as follows chloroform when not given with skill); it is very uncertain, however, in composition, I also remarked, and has proved far more deadly than chloroform or the nitrous oxide in actual practice, though theory supposed it would be less deadly; on this account, it does not strike one as the best anæsthetic in midwifery or ovariectomy cases, where chloroform is better understood by patients, and acts so admirably. On the whole, it is scarcely judicious to say ether is entirely free from danger, and should supersede chloroform; that only with special apparatus and watching the pulse is chloroform safe; or that the methylene is safer than chloroform or nitrous oxide. Ether relaxes muscular tissue and is useful in reduction of dislocations; this was not mentioned during the evening. This property recommended it (by theory) in midwifery at first; but in America it was observed that it failed, as the perinæum is chiefly made of fibrous rather than muscular tissue, and three or four ounces of chloroform would do as much in a case as almost a pint of this ether of the shops.

I would only here add that, in these impressions as to iridectomy, I am fully borne out by such an excellent observer as Dr. Bader at Guy's Hospital, that in ovariectomy, where Mr. Spencer Wells recommends the methylene so strongly, almost any fluid anæsthetic will answer. I have watched the pulse and breathing in over a hundred ovariectomies; as to ether, too, I remember distinctly Mr. Hayward of America helping in its administration at one or two hospitals, and usually carrying about a quart of it as an ordinary allowance for each capital operation; and it failed utterly at one hospital, as explained at the time by the hospital ether being miscible with water.

I am, etc., CHARLES KIDD, M.D.
Sackville Street, November 12th, 1871.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Freeman's Journal and Daily Commercial Advertiser, Nov. 15th; The Shrewsbury Chronicle, Nov. 17th; The Brighton Herald, Nov. 18th; The Retford, Workop, Isle of Axholme, and Gainsburgh News, Nov. 18th; The Dublin Evening Express, Nov. 17th; The Bedfordshire Mercury, Nov. 18th; The Midland Counties Express, Nov. 18th; The Sheffield Daily Telegraph, Nov. 22nd; The Irish Time, Nov. 18th; The Ipswich Chronicle, Nov. 8th; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Forbes Winslow, London; Dr. Hughes Bennett, Edinburgh; Mr. Berkeley Hill, London; Mr. Husband, York; Dr. Cotton, London; Dr. Tilt, London; Dr. B. W. Foster, Birmingham; Dr. H. Cripps Lawrence, London; Mr. Robert Goodbody, Mountmellick; Mr. Rowland H. Coombs, Bedford; Dr. De Zouche, Berlin; Mr. Casey, Carlow; Dr. W. Ogle, Derby; Dr. Connor, Detroit, U.S.A.; Mr. R. Ellis, London; Mr. Holland, London; Dr. Bradbury, Cambridge; Our Dublin Correspondent; Dr. J. Braxton Hicks, London; The Secretary of the Obstetrical Society; Mr. Creighton, Berlin; Dr. Walters, Reigate; Mr. Charles Woodcock, Bradford; Dr. J. Warburton Begbie, Edinburgh; Mr. H. H. Read, Oxford; Mr. J. Mash, Northampton; Mr. Manson, Howden; Dr. Sheen, Cardiff; Mr. C. H. Carter, Pewsey; Mr. Sydney Jones, London; Mr. C. L. Goehring, London; Dr. Kirby, London; Dr. Madge, London; Dr. Leared, London; Mr. Nicholson, Hull; Mr. de Méric, London; Dr. Carpenter, Croydon; The Secretary of the London Institution; Dr. John Harley, London; Dr. Shapter, Exeter; An Associate; Mr. H. Wathen, Fishguard; Dr. Julius Levy, Berlin; Dr. Campbell Black, Glasgow; Mr. Leeds, Sheffield; Dr. Morton, Glasgow; Mr. Hall, Tunbridge Wells; Mr. Bellamy, London; Dr. Smith, Aberdeen; Mr. Hinton, Warminster; Dr. Rees Philipps, Exminster; Mr. J. L. Morley, London; The Secretary of the Pathological Society; Mr. Moore, Moreton-in-the-Marsh; Mrs. Brookes, Stockport; Dr. Playfair, London; Mr. Gaskoin, London; Mr. B. Wilson, London; Mr. Latimer, Plymouth; Messrs. Ingram and Co., London; The Secretary of the Clinical Society; Dr. Fraser, Colchester; Dr. Sedgwick, London; Mr. Reginald Harrison, Liverpool; Mr. Hodgson, Brighton; Dr. J. Rose Cormack, Paris; Messrs. Black, Edinburgh; M.R.C.S.; Dr. George Johnson, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. R. S. Harvey, Harrogate; Mr. E. Chapman, London; Mr. W. Hopcraft, London; Dr. McAdam, Edinburgh; The Secretary of the Royal Medical and Chirurgical Society; Mr. J. E. Cornish, Manchester; Mr. W. Jones, Ty-Newydd; Mr. R. Freeman, London; M.D.; Our Manchester Correspondent; A Public Vaccinator; Dr. Woodward, Leicester; Our Vienna Correspondent; Nemo; Dr. Woodman, London; Captain Burton, London; Mr. S. M. Bradley, Manchester; Mr. G. Elder, Nottingham; Students; Mr. Benson Baker, London; P. L. O.; Dr. Maunsell, Dublin; Dr. Henry Bennet, Mentone; Dr. Todhunter, Dublin; Dr. Rendle, Clapham, Mr. Jessop, Leeds; Mr. Brown, Littlebourne; etc.

IMPORTANT NOTICE TO THE PROFESSION.

DR. RIDGE'S FOOD is rich in solids and earthy salts. The phosphates of potash and magnesia exist naturally, and are not introduced by any chemical process. As nature has produced them, so are they conserved and kept free. The nitrogenous substances are varied, consisting chiefly of soluble albumen and gluten. In the preparation of this Food, the outer covering of the grain used is carefully removed, for it is well known that the smut (which is a species of puccinia) lives upon the surface of wheat, and is apt to cause diarrhoea in children. The Food is so thoroughly desiccated that neither the *Acarus Farinæ* nor the *Vibroni* can live in it. This renders this article of diet superior to all others, for it not only builds up healthy tissue, but prevents the introduction of any vegetable or animal parasite, which is often the cause of the incessant diarrhoea of children. Medical men, by sending their card to the Manufactory at Bermondsey, can receive a tin of food for trial, free of charge.

Sold in Packets and Canisters by respectable Chemists and Grocers.

THE VICHY WATERS COMPANY, 27, Margaret Street, Cavendish Square,
AND 61, QUADRANT, REGENT STREET, LONDON, W.

General Depôts for the Natural Mineral Waters belonging to the French Government. Importers of all other Mineral Waters. Liberal discount to the Profession. Price Lists free.

NATURAL MINERAL WATERS OF VALS, VICHY, CARLSBAD, SELTZER, KISSENGEN, HOMBURGH, PULLNA, FRIEDRICSHALL, etc., direct from the Springs; also the Artificial Mineral Waters prepared by Dr. Struve and Co., at the Royal German Spa, Brighton, and the **NATURAL BROMO-IODINE WATER** of **WOODHALL SPA, LINCOLNSHIRE**.

Agents—W. BEST and SONS, 22, Henrietta Street, Cavendish Square, London, W.

NATURAL MINERAL WATERS OF VICHY, SELTZER, PULLNA, KISSINGEN,

CARLSBAD, MARIENBAD, SCHWALBACH, FRIEDRICHSHALL, SPA, EMS, KREUZNACH, etc., direct from the Springs.

A Pamphlet on Natural Mineral Waters forwarded on application.—Depôt for the **NATURAL BROMO-IODINE WATER** of **WOODHALL SPA**.

INGRAM and CO. (Importers), 35, BUCKLESBURY, LONDON, E.C.

PEPSINA PORCI.

Messrs. BULLOCK & REYNOLDS

Beg to direct the attention of the Profession to the experiments upon Medicinal Pepsin by Professor Tuson, recorded in the *Lancet*, August 13th, 1870, which incontestably prove the very great superiority of their preparation in point of digestive power over every other Pepsin, British or Foreign. Dose—two to four grains.

Messrs. BULLOCK and REYNOLDS will be happy to forward, post free, a Reprint of Professor Tuson's Paper on application.

3, HANOVER STREET, HANOVER SQUARE, W.

SILVER MEDAL AWARDED 1867.—JUROR 1862.

MORSON'S PREPARATIONS OF PEPSINE. MEDICINAL PEPSINE

(Poudre Nutritive, or "Pepsine Acide Amylacée" of the French Codex).

Contains the active digestive principle of the gastric juice, purified and rendered permanent and palatable. Dose—15 to 20 grains.

PEPSINA PORCI,

A concentrated and NEUTRAL preparation of Pepsine, free from any disagreeable taste or smell. Dose 5 to 10 grains.

These preparations of Pepsine are carefully examined and tested by a Professional Chemist, and certified to answer to the tests indicated. Every bottle containing the preparations named, and bearing the Trade Mark of T. MORSON AND SON, is sold with a guarantee to that effect.

PEPSINE WINE.

PEPSINE LOZENGES.

PEPSINE GLOBULES.

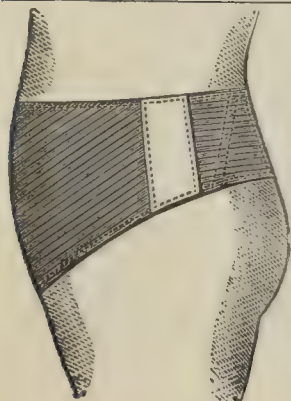
Are convenient forms for the administration of Pepsine.

SACCHARATED WHEAT PHOSPHATES,

A Dietetic Preparation, supplying an important deficiency in the ordinary Food of Invalids and Children.

Manufactured by **T. MORSON & SON, Pharmaceutical Chemists,**

31, 33, and 124, SOUTHAMPTON ROW, LONDON, W.C.



"MILLER'S" IMPROVED BELT,

TO LACE, BUCKLE, OR PULL ON.

W. MILLER,

ANATOMICAL MECHANICIAN,

29, LEICESTER SQUARE, LONDON, W.C.

Van Houten's Cocoa.

The only guaranteed Pure Soluble Cocoa, better and cheaper than any other Cocoa, Cocoa Extract, or any Chocolate.

The British Medical Journal, March 27th, 1860, says:—"Van Houten's Extract is admirable. In flavour it is perfect, and it is so pure, well prepared, and rich in alkaloid," &c., &c. See also *The Lancet*, etc.

Sold in round Tins at 3s. 6d., 2s., and 1s. Sample Tins, sufficient for a family, free of charge, through your Grocer or Chemist.

Sole Consignee, H. ESCHWEGE, 6 & 7, Coleman Street, London, E.C.

CLINICAL LECTURES ON OPHTHALMOLOGY.

Delivered at St. Thomas's Hospital, London.

By R. LIEBREICH,
Ophthalmic Surgeon and Lecturer to the Hospital.

LECTURE V.

ON A NEW METHOD OF EXTRACTION OF CATARACT.

GENTLEMEN,—Until now we could perform but small operations at our Thursday meetings. The Ophthalmic Ward having been opened last week, we shall be able to receive patients for operations of greater importance. We shall begin with cases of iridectomy and cataract; and, as for this latter, I shall have to explain to you my new method of extraction, the more detailed description of which will appear in our next *Hospital Reports*.

The frequent occurrence of total suppuration after flap-extraction induced the celebrated operators of Moorfields Hospital to return to, and to improve, the linear extraction, which at that time had been almost abandoned. Graefe, struck with the results which Messrs. Bowman and Critchett had obtained, submitted the question to further studies, and so formed the method which is now generally adopted in England as well as on the Continent.

There are numerous statistics which prove that in Graefe's method there is a much smaller percentage of total suppuration than in flap-extraction; also that, even in cases of very bad general constitution, weak and marastic individuals with thin and flabby cornea, the prognosis is not so unfavourable as in flap-extraction; and that the precautions we have to take after the operation, and the restrictions we have to impose upon the patient, are not so great.

On account of these advantages of Graefe's method, it was natural that the flap-extraction was soon abandoned. To me, however, it appeared that the mechanism of Graefe's operation was still too complicated and too violent; that prolapse of the vitreous body and hæmorrhage into the anterior chamber were too frequent during the operation, iritis and strangulation of the iris in the corners of the wound too frequent after it; and that the most favourable results, compared with the most favourable results in flap-extraction, were not perfect enough.

If these inconveniences be carefully inquired into, it is found that they can all be brought back to one and the same principal cause—namely, the peripheric position of the incision. This peripheric position explains why—

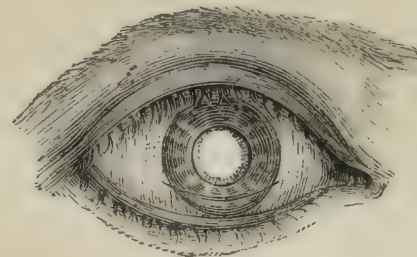
1. It is impossible to remove the lens without iridectomy.
2. The excision of the iris is to be large and extensive, else it causes too great an inclination to prolapse of the iris.
3. It is necessary to perform the operation above, so as to cover a part of this large pupil by the upper eyelid. The removal of the lens upwards is by far more difficult, on account of the tendency of the eye to escape upwards; and, consequently,
4. During the whole operation, the eye has to be kept open by the speculum, and to be drawn downwards by the forceps. This is not only painful and injurious to the eye itself, but causes—
5. Not unfrequently, prolapse of the vitreous body, to which a peripheral incision itself already tends. Prolapse of the vitreous body and hæmorrhage into the anterior chamber are the chief impediments to a careful removal of all the *débris* of the cortex, and cause—
6. Those grave forms of iritis which are sustained by the permanent irritation caused by the tumefied remainders of the lens behind the iris.

Of those disadvantages I was perfectly aware after I had followed for a short time Graefe's original plan; and I proposed, therefore, in 1867, in an article on Cataract which I wrote for the *Nouveau Dictionnaire de Médecine et de Chirurgie* (Paris, Baillière), some modifications. They are, however, but the first step I made; and in the last four years

I have come, by a large series of systematic experiments, to a method which I now, after more than three hundred operations performed in this manner, consider definitely settled.

The incision of the cornea is to be made with the smallest possible Graefe's knife, in the following manner.

Puncture and contrapuncture are made in the sclerotic about one millimetre beyond the cornea, the whole remaining incision passing with a very slight curve through the cornea, so that the centre of it is about one millimetre and a half distant from the margin of the cornea. This



incision can be made upwards or downwards, with or without iridectomy, and the lens can be removed through it with or without the capsule.

If, as I now practise, the extraction is made downwards without iridectomy, the whole operation is reduced to the greatest simplicity, and does not require narcosis, assistance, elevator, or fixation; and only two instruments—namely, Graefe's knife, and one cystotome, with Daviel's spoon.

What are the advantages of this method of operating?

1. It is undoubtedly of all methods the simplest and the least painful.

2. It is unconditionally the easiest to perform, and requires the least practice. It may, therefore, be performed by those operators who from time to time only have an opportunity of doing so; and those patients benefit by it who are unable to reach a central point in order to place themselves in more practised hands. On account of the greater facility of operating, the last pretext for reclination of cataract is removed, which, though almost universally and justly condemned, is still here and there performed.

3. It is preferable to the flap-extraction, on account of the safer and constantly regular incision. The flap-incision scarcely ever acquires the regularity which may theoretically be demanded—even if made by the most practised operator, with the best assistance, the most enduring patient, or under chloroform—by the use of elevator and fixation instruments. Now its height or breadth is not what it is intended to be; now its position is incorrect, or the wound is irregular—indeed, part of it is due to the difficult form of the incision; but by far the greater part, according to my conviction, is due to the mechanism by which the cuneiform cataract-knife is to make the incision. A small Graefe's knife would make a flap safer and more regular than the various other cataract-knives. The incision which I designed can easily be made, in giving it in every case exactly the desired form and position—even if the patient is very restless—without assistance, without elevator or fixation. It mainly depends on the facility with which the place of the contrapuncture can be chosen, the knife drawn back and made to pierce at another point if a mistake is made in the selection of the place for contrapuncture, and in the freedom with which, in terminating the incision, the inclination of the knife can be changed if necessary.

A little practice will enable every operator to avoid these corrections, and to make the contrapuncture, as well as the whole incision, correctly to his original plan, without subsequent alterations.

4. Against Graefe's method it has the advantage of a more favourable position of the field for the operation, and avoids through it all the inconveniences to which I have referred, as arising out of the peripheral position of the wound.

5. In regard to the mode of healing, it favourably contrasts, like Graefe's method, with the flap-extraction, on account of the diminished influences which age, constitution, general state of health, season, and other causes exert; also on account of the less demand made upon the patient to remain quiet after the operation; and, above all, on account of the lesser tendency to suppuration of the cornea.

6. The advantages of my method over that of Graefe are shown by the ultimate results obtained; by not showing a greater percentage of total suppuration than in Graefe's method, my best results are in regard to optical and (if I may use the term) anatomical perfection, identical with the best results obtained in flap-extraction.

RETROSPECTIVE ADDRESS

OF THE
PATHOLOGICAL SOCIETY OF READING.

Read September 27th, 1871.*

By WILLIAM ROYDS, L.R.C.P.Lond.

III. OBSTETRIC CASES.—With the usual candour for which the Society is so deeply indebted to Mr. Walford, he brought forward some of his unsuccessful cases.

Intrauterine Cancer: Hæmorrhage.—The first was a patient, in her thirty-fourth year, whom he had attended in several confinements, and for whom he had more than once to remove the placenta by the hand.

In August, 1870, he again saw her, with threatening of miscarriage at the fourth month. On account of a shivering fit and quickened pulse, he thought it right to empty the uterus, which he did on the 1st of September. On the 7th, hæmorrhage took place, requiring the introduction of a plug. This was removed on the 8th, and she seemed on the road to recovery; but the same night the sponge, which he used as a plug, had to be replaced. Hæmorrhage, nevertheless, continued to some extent, and the patient sank and died on the 9th. The condition, as revealed by a *post mortem* examination, seemed to Mr. Walford to justify his returning the cause of death as "cancer of the mucous membrane of the uterus and hæmorrhage."

Abortion.—Another case of Mr. Walford's was an abortion at six weeks in a woman aged 41, the mother of eight children, who had been accustomed to nurse her children two years. The ovum, with its membranes entire, escaped unexpectedly. An examination of the specimen showed small masses of effused blood in the placenta, constituting apoplexy of that organ, which Mr. Walford concluded to have been the cause of the death of the ovum.

Mr. Walford makes the following remarks in connection with this case. "From the nature of the case I regard it as the effect of weakness; and the history of the patient confirms this inference. She had been accustomed to nurse her children two years—for an obvious purpose—and some may think she did so successfully; certain it is that she did so more successfully than many. From some amount of observation, I am of opinion that weakness is the cause of over-fecundability. Professional observation testifies to the fertility of certain constitutions. A writer in the *Edinburgh Medical Journal* establishes the proposition that twins are a consequence of debility, and that among the imbecile they are of frequent occurrence." From this Mr. Walford was led into an eloquent lamentation over the numbers of increasing families physically below par, the offspring of weakly mothers, which he considered materially diminished the average duration of life in the nation at large, and contributed considerably to the high rate of mortality, especially amongst the children of the lower classes. As a hopeful remedy, he suggested the observance of what he had seen stated as a law of nature—that conception does not take place more than fourteen days after the commencement of menstruation; and with this law of being he thought it became us as patriots to indoctrinate our countrymen.

Rupture of Uterus.—Mr. Walford showed a specimen of ruptured uterus. Mrs. —, aged 37, was in labour with her ninth child. Labour had commenced about 7 A.M. He found her at 1 P.M. on the bed moaning more than usual. The os was of the size of a florin, hard and unyielding. The placenta was not within reach. He left her, and soon after he did so, she began to soil the napkins with blood. At 7 P.M. he found the os much in the same state, the patient moaning constantly, the pulse feeble, and the discharge of blood going on constantly. He ruptured the membranes, and saw her again at 8.45 P.M. Her general condition was unchanged. The drain of blood went on, the os had dilated, and it was a question with him whether it was not his duty to turn and deliver. He never once perceived her to have a good uterine pain. On passing his fingers around and within the os, a gush of blood came past them. His conviction was, that the hæmorrhage was "accidental" in its origin, and that in the failure of the rupture of the membranes to arrest it, and in the absence of uterine pains in connection with the feeble state of the circulation and the distress of system as manifested by the moaning, it was his duty to turn and deliver. Accordingly, he did so without difficulty. The child was dead, and had been so some time. Some stimulant with ergot was given, and he proceeded to remove the placenta, which was accomplished na-

turally. He then thought it right to make sure that there were not any clots in the uterus to hinder its effectual contraction, and, on removing one large one and some smaller ones, he found his hand in the middle of a laceration, through which he could reach the intestines and omentum. A few minutes after ten, the patient expired. The uterus was found to be fatty, and presented a rupture some inches in length, with the appearance of several smaller lacerations of its tissue. Mr. Walford advanced the theory that the rupture of the diseased uterus had resulted from its own contractions, and that the hæmorrhage which had occurred was an evidence of that catastrophe. The opinion, however, which found most favour with the Society, and was ultimately accepted by Mr. Walford, was, that the rupture had occurred during the operation of turning, which had been rightly resorted to for the purpose of emptying the uterus of what proved to be a dead child; the hæmorrhage being looked upon as an indication of the presence of a dead foetus.

Membranous Obstruction of the Vagina.—Dr. Reid read notes of a case of a woman in her first labour in whom he found the vagina obstructed just within the vulva by a tough fibrous membrane, which he believed to be the unruptured hymen. It had a central aperture through which he was able to pass a female catheter. He incised the membrane, and it proved no obstacle to a natural delivery. After two days its outline was scarcely observable.

Treatment of Puerperal Convulsions.—The vexed question of the treatment of puerperal convulsions, with or without bleeding, was raised by Mr. Davis, who communicated a case which had occurred in his practice. Some weeks previously to her confinement, his patient, a woman aged 28, had suffered from œdema of the legs, and the urine had been observed to be thicker and less copious than usual. She was, however, relieved by aperients and mild diuretics. On March 1st, Mr. Davis was summoned to attend immediately, as the patient was said to be in fits. He found her comatose. The pupils were dilated; the pulse small, weak and frequent; the face puffy; the upper and lower extremities anasarctous. The os uteri was just commencing to dilate, and appeared dilatable. The urine was highly albuminous. She had a very severe recurrence of convulsions whilst Mr. Davis was in attendance. He at once proceeded to administer chloroform, and, his assistant keeping the patient completely under its influence, he gradually dilated the os, turned and delivered of a dead child. She had but one slight return of convulsions after delivery, although she remained comatose for many hours. The coma gradually disappeared, however, and she recovered; the urine, highly albuminous at first, returning by degrees to its natural state.

Much discussion followed the reading of this case. Chloroform and bleeding were looked upon as the two remedies, generally speaking, between which a choice was to be made. Bleeding was especially advised by one member in cases in which, from the evidence of the breath, free ammonia was judged to be present in the blood. In that case it was supposed that, by thus diminishing the amount of the poison in the system, the patient's chance of recovery was improved. Other advantages of bleeding were believed to be, its action in diminishing congestion, and so relieving the kidneys, and averting the tendency to apoplexy which sometimes occurred in the fit; and its power of facilitating and hastening labour, which was an important indication. Chloroform was believed, although otherwise a most useful palliative, to be contraindicated in those cases in which there were much ammonia in the blood; but, inasmuch as the means of discovering this fact, simple as it is said to be, may not always be in readiness, it seems desirable that some other indication should be looked for to discriminate between the cases in which chloroform may, and those in which it may not, properly be used.

Removal of the Uterus.—Mr. Maurice presented an uterus, considerably enlarged, which he had removed entire from a woman aged 43. She was the mother of six children, and stated that, from the time of her first confinement, which was a tedious one, twelve years ago, the womb had occasionally come down. About a month or so after she had recovered from her last labour, she began to feel uneasy. She had no pain at first, but a burning sensation across the lower part of the abdomen. This was followed by a pain in the back. The womb was at times prolapsed, but was readily returned, and gave so little inconvenience that she never sought any advice. She continued to menstruate regularly up to January last, when she had excessive hæmorrhage, which never entirely left her. In March, she was taken with complete retention of urine for three days, and excessive loss of blood. At this time, she found that the womb was becoming gradually more prolapsed, and did not go back at all. In April it was protruding considerably beyond the vulva; and in the middle of June, while she was straining at stool, the whole uterus suddenly protruded, and she lost a considerable quantity of dark blood. The patient was admitted into the hospital on June

* Concluded from page 604 of last number.

27th. She was in a miserable condition, extremely emaciated and blanched. The uterus had apparently been first retroverted, and then had become completely prolapsed. The fundus was lowermost, and the os was reached by passing the finger between the vulva, which could not have been had the case been one of inversion, as was at one time supposed. Any effort to return the mass being evidently useless, and the utility of the proceeding, if successful, more than doubtful, a ligature was passed round it and gradually tightened. Two days afterwards, the ligature having broken on being tightened, the chain-*écraseur* was applied in the same groove, and the organ entirely separated, without loss of blood or much apparent suffering to the patient. Her recovery was uninterrupted, and she was discharged from the hospital *minus* her womb, but otherwise in much better plight than when she entered it. An examination of the specimen did not show any sign of the presence of the ovaries; and it was a matter of some surmise what had become of them.

IV. MISCELLANEOUS CASES.—*Recovery after Swallowing a Large Dose of Chloroform.*—This case, related by Mr. George May, is interesting on account of its comparative rarity and the improvement which followed the treatment. The patient was an adult male, and the quantity of chloroform swallowed about two drachms. Almost immediately he made himself vomit by passing his finger into his throat; nevertheless, within about ten minutes, he became unconscious. Mr. May saw him in about half an hour. He was then perfectly insensible, breathing stertorously; the face was livid; the pupils widely dilated, and not contracting on exposure to light; the pulse was full and slowly rising until it reached 120 per minute. The stomach-pump was at once used. An hour after he had swallowed the chloroform, the pulse rapidly fell to 70, and became almost imperceptible; the pupils at the same time contracting. The respirations were 20 in the minute, and at times almost ceased. The countenance was pallid. Half an ounce of sal volatile, with two ounces of water, was injected into the rectum. Decided improvement followed; the pulse at once improved; sensation returned; in two hours after swallowing the chloroform, the patient gave signs of reflex sensibility; and in three hours he had recovered consciousness.

Vaccination.—Towards the end of the session, the subject of vaccination was brought before the Society by Dr. Phillips. He laid stress upon the operation being simply the substitution of a mild disease, modified by its transmission through the system of the cow, for a more virulent form of the same affection, and to that attributed its power as a prophylactic. At the same time, he duly cautioned us against any further modification of the disease, such as might result from its transmission through any but the most perfectly healthy human system. He made some reference to revaccination, which he thought need be but once performed after the age of puberty, and that if a person be found insusceptible, we may safely assume that he is so to the influence of small-pox. He quoted the evidence afforded by observations at the Small-pox Hospital, the failure of which, to have weight with any intelligent mind, seems almost incredible. In the operation itself Dr. Phillips strongly recommended, where practicable, the use of liquid lymph, preferring tubes to points, and thought that the best method of performing the operation was by first moistening the part with the vaccine matter and then making punctures or scratches through it. He referred to the subject of vaccino-syphilis, which cases recently investigated had shown to be no myth; and, whilst contending that it was no argument against vaccination, he held that it was a strong argument in favour of extreme care in the method of performing the operation, and especially in procuring lymph unmixed with any other matter from the vaccinifer that might by possibility communicate the syphilitic virus.

In continuation of the subject, Mr. Crisp read an elaborate paper, embodying the results of very careful and complete observations on upwards of three hundred cases of revaccination. Two had been inoculated; and of these one, a lady, aged 40, took perfectly on being vaccinated, and in the other three fair vesicles were found. In three who had had small-pox, no good results followed vaccination. With regard to the method of vaccination and its effect upon results, he stated that arm-to-arm vaccination was done in 195 cases; capillary tubes were used in 85; and points in 25. The results of arm-to-arm vaccination were hardly appreciably better than those done with tubes. Points did not produce quite so good results; but the difference was very trivial. This he attributed mainly to using four or more well and recently charged points in each case. Fifty-one of his cases were revaccinated from the arms of children who had been, or who were stated to have been, vaccinated previously; although, in none of them was there evidence of the first operation having been perfectly successful, and the vesicles of the second operation were perfect. The resulting

effects from using this lymph was in every way as satisfactory as those arising from the use of any other lymph. Mr. Crisp did not, however, give us any evidence of the protecting power of vaccination thus performed; and although the observations on this point are necessarily few, as far as they do go, they have not been such as to encourage vaccination with matter taken from revaccinated persons. Mr. Crisp's cases afford interesting evidence of the relative value of vaccination, well and ill performed, in conferring protection against a second attack of the vaccine disease, and presumably of small-pox. Dividing his cases into four classes, ranging from those in which three or more perfect marks existed to those in which there were no detectible marks, he found a steady decrease in the good results from Class 1 to Class 4. He further noticed that, although the females were found to have on an average half a good cicatrix more than the males, the resulting good effects of revaccination were as nearly as possible exactly the same in both sexes, from which he drew the deduction that the softer sex is of the two the more amenable to vaccine influence.

By a recent change in our arrangements (a change which I regret that the attendance at this meeting does not more fully justify) my retrospective address becomes one of inauguration of the coming session. I trust it may be not less successful than the one on whose work it has been my lot to dwell.

It is usual on these occasions to say something of the advantages of societies like ours. Small need, however, that I should enlarge upon such a topic to my seniors, who have many of them long had personal experience of its benefits, and who still show by their constant attendance at its meetings that their interest in the Society and its work does not flag.

As a means for the spread and cultivation of medical knowledge amongst us, the Society is valuable, and scarcely less valuable is it in its capacity of bringing us together to enjoy friendly intercourse and to cultivate that kindly feeling for which the profession in Reading has the fortune to enjoy a good name, and specially to give scope for the display of friendliness by the senior to the younger members, for which, as one of the latter, I owe a debt of gratitude that I am glad of the opportunity of acknowledging.

Here we may all of us bring our professional joys, and double or more than double them by sharing; and here we may divide and minimise the sorrows of our unsuccessful cases, by sharing them too with those well used to sympathise.

Let us still continue to seek, here and elsewhere, that strength which union may give to fight the battle of our lives against disease and death, and each endeavour to add the result of his experience, be it much or little, to the common armoury from which all may draw as need requires, remembering, as our observations and opinions are here sifted and shaken, that "Truth's like a torch, the more it's shaken it shines."

THERAPEUTIC MEMORANDA.

TREATMENT OF CANCRUM ORIS.

I OBSERVE an abstract of a lecture on a fatal case of cancrum oris in a child two years and seven months old, by Dr. W. O. Priestley, at page 577 of the JOURNAL for November 18th. I do not pretend to say that any kind of treatment or application whatever could have saved the child's life, she being in so very weak and emaciated a state as she was when Dr. Priestley first saw her; but it is with regard to the local treatment and remedies used in this case that I beg leave, with all due respect, to object—viz., that the solution of chlorate of potash and borax was not sufficient to check or stay the severe nature of the gangrenous ulcer in the child, although no doubt a very useful application in more simple cases. Of all the local remedies or applications that I have ever resorted to in such cases, I have never found any application so useful or so effectual as hydrochloric acid. Neither nitric acid, nitrate of silver, nor chlorate of potash, nor any other remedy that I ever tried or used, except hydrochloric acid, did I ever find to be of the least use to check cancrum oris. I have almost never found hydrochloric acid to fail to check the progress of this dreadful disease at once, and bring on a most rapid and healthy action in the part. Nor does it cause so much pain or suffering to the little patient as one would suppose, seeing that the gangrenous spot is almost entirely without feeling at this time. This acid is easily applied to the ulcer by means of a feather or a small camel-hair brush. I have cured many cases of cancrum oris by this means.

NEIL MCGREEVY, L.R.C.P. Edin.

Union Hospital, Drogheda, Ireland, November 23rd, 1871.

ON THE TREATMENT OF FIBROID TUMOURS OF THE UTERUS.*

By ALFRED MEADOWS, M.D.,

Physician-Accoucheur to and Lecturer on Midwifery and the Diseases of Women and Children at St. Mary's Hospital; Physician to the Hospital for Women; Vice-President of the Midwifery Section; etc.

FIBROID tumours of the uterus are so extremely common, the symptoms to which they give rise are often so distressing—not to say dangerous—and their treatment is, as a general rule, so very unsuccessful and unsatisfactory, that I feel no apology is needed for again directing attention to this subject, although I fear I have but little that is new to add to our stock of knowledge. But as the lives of most of us are spent in endeavouring to improve our therapeutics, and as each year, owing to the frequency of this disease, we have probably all of us many opportunities of testing the various methods of treatment which are from time to time recommended, it may serve some useful purpose to elicit the opinions of the members of this section, so that in the succeeding year we may be stimulated to renewed exertions in this department of practice. I am, moreover, induced to bring this subject forward here, because in our own JOURNAL some few months ago, there appeared a series of short articles giving the experiences of the leading gynaecologists of this country in regard to the *medical* treatment of these growths; and no one who read those articles could fail to be struck with the great differences of opinion which existed in the minds of the several writers. These opinions are the more to be noted, because it is quite certain that the differences therein expressed cannot be reconciled; there must, then, be some mistake, some error of observation; and it behoves us all, therefore, to be more guarded in our statements, more careful in our investigations, more absolutely precise, if possible, in our diagnosis, and more exact in our therapeutical observations. I allude to the necessity for greater precision in diagnosis, because those who hold—and I, for one, must candidly admit that I am of that number—that, in regard to the absorption or removal of these growths by the administration of drugs in any form, we are utterly and entirely helpless, without a remedy of any kind; those, I say, who hold this view, can only believe that the contrary opinion is based upon an error in diagnosis, or else that the disappearance of the tumour, when that really occurs, is due less to the influence of the drug or drugs which are credited with the cure, than to some natural process which is taking place in the tumour independent altogether of the supposed remedy.

One word as to the nature of these growths, as that is thought by some to have an important bearing on the question of their absorption. It is generally admitted, I believe, that morbid growths partake more or less of the character of the tissues in which they are developed. Hence bones develop bony tumours; fat, fatty tumours; nerve, neuromata; cartilage, enchondromata; and so forth. Those which we are considering are no exceptions. Examined microscopically, fibroid tumours of the uterus present almost the same histological characters as the uterus itself. There may be slight variations in the relative proportions of the several elements, as compared with the proper tissue of the uterus, and different tumours will present different proportions of these; but in the main, there are the same structures, viz., smooth or unstriated muscular fibres, bound together with varying quantities of connective tissue; sometimes one, and sometimes another, of these elements will predominate.

Now, it is thought by some writers that, such being the composition of these tumours, there is nothing remarkable in their gradual absorption and disappearance, any more than there is in the diminution of the uterus after delivery, as in the ordinary process of involution. It is implied, in fact, that the molecular changes are the same in both cases, and surprise is expressed that any one should entertain a doubt on the subject. The fact remains, however, that the great majority of observers do entertain very serious doubts on this question; or perhaps I ought rather to say that they have no doubt at all about it, but are decidedly of opinion that such changes, if they ever happen, are of extremely rare occurrence. I have myself seen many scores of these cases, but I have never yet met with one in which I was able to satisfy myself that any appreciable diminution of the tumour was effected either naturally or as a result of medical treatment. It seems to me, moreover, that the reputed explanation, if it have any foundation in fact, should be capable of almost constant demonstration; that, in short, the cure of fibroid tumours of the uterus ought, if this hypothesis be correct, to be the rule rather than the exception; for we all know that we have

almost complete control over the process of involution; and that, if it be delayed after delivery, we can easily stimulate it into action. Why, then, can we not secure this result in the case of these morbid growths? I think that the reason is, because the explanation itself is faulty, and that we cannot apply known physiological laws to pathological actions. My friend Mr. Spencer Wells, arguing in favour of the disappearance of these tumours on the hypothesis above referred to, speaks of the cellular spaces between the fibres becoming filled with serum, and its subsequent rapid absorption under treatment. I very much question, however, whether this be a true statement of fact. Certainly I have never seen such an infiltration, and though it is conceivable that such a state may exist as the result of certain morbid actions going on in the tumour itself, yet I am satisfied that it is of rare occurrence; and even granting its existence, the utmost, I believe, that can be argued from it is, that, though this morbid action may be checked and its serous product be absorbed, yet we should still be no nearer the removal of the tumour, for the solid constituents would remain, and no treatment would be of any avail in effecting their removal. The writer of whom I am speaking expresses great surprise that any one should doubt the fact of the disappearance of these growths, and he can only explain it by referring it to the juvenility or limited experience of the observer. Now, there are many much older men than I who entertain such doubts, men of large experience, too; and I can only say, speaking for myself alone, that many years ago when I was much more juvenile, and my experience far more limited, I had an honest belief in the efficacy of drugs in promoting the absorption of these tumours, which age and experience have entirely dispelled. I now do not believe that there is any known drug which is of the smallest value for the purpose in question, nor any method of treatment by which we can hope to diminish one single atom of the solid constituents of these growths.

But while I express thus decidedly my opinion on this head, I am none the less convinced that there is a very wide field for the employment of remedies, and ample scope for the exercise of the greatest skill, both medical and surgical. The relief of pain, the arrest of hæmorrhage, the control of the various discharges which often accompany these growths, the combating of symptoms, due chiefly to mechanical causes, and often giving rise to great local distress, all these and many other conditions which commonly afflict the sufferer from a uterine fibroid, will tax the ingenuity, patience, and skill of the most accomplished and expert.

In regard to pain, these tumours are not, as a general rule, what would be called painful, unless their size be such as to cause pressure on neighbouring parts, or unless they be so placed as to project prominently from the peritoneal surface. A patient may have a very large tumour growing into the uterine cavity with little or no pain, but a tumour even of small size growing from the peritoneal surface will often occasion very great suffering. I have generally noticed that pain and hæmorrhage are in inverse proportion the one to the other; and just as, if there be much pain, the tumour will most likely prove to be subperitoneal, so, if hæmorrhage be the prominent feature, the tumour will in all probability be either interstitial—that is, in the wall of the uterus, or, as more often happens, it is submucous, that is, growing chiefly into the uterine cavity. Now, we have not yet arrived at such perfection in therapeutics as to be able to soothe the pain of particular nerves or sets of nerves by the administration of a particular drug; we can only act upon any given set of nerves through the general nervous system, spinal or sympathetic, or by topical application. In the absence of this special knowledge, it seems desirable, and in my experience it has been fairly successful, to apply the anodyne as nearly as we can to the seat of pain. Hence the employment of medicated vaginal pessaries; but, inasmuch as it is no part of the function of the vaginal mucous membrane to digest fats, and as fats without digestion cannot be absorbed, and are apt, moreover, to hinder the absorption of other substances, it is desirable, I think, that we should not use greasy substances of any kind. For this reason, I long ago gave up the employment of the cocoa butter, and I now invariably use, as the basis of the pessary, gelatine and glycerine in the proportion of one part of the former to four of the latter; into this we can put any ingredient we wish, and I know no better anodynes than atropine, morphine, or conia. Other agents of this class may of course be used; and if it be preferred, they may be given either subcutaneously, or by the mouth, or by the rectum. It has seemed to me that, when given *per vaginam*, they are more effective, and certainly do not produce so much constitutional disturbance as when given in the other ways. For the treatment of what I may call mechanical pain, of course mechanical remedies will also be required. I allude chiefly or entirely to external support, for I cannot imagine that any one would advocate the use of instruments internally in the treatment of these cases.

Next, as regards the hæmorrhage, the symptom which, of all others,

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

we shall probably be called upon most frequently to treat. Here there is certainly no one remedy which is applicable to all cases; perhaps I might almost say that there is no remedy which is applicable to any case, for in truth the treatment of this symptom is, as a general rule, most unsatisfactory and disappointing. There is, however, a very general consensus of opinion in favour of ergot, and I certainly know no drug which excels its hæmostatic properties in these cases. I believe that it is of most value in cases where the tumour is more interstitial than submucous; it fails, therefore, not unfrequently in the very cases where it is most needed, for it is in the submucous varieties that we get the greatest amount of hæmorrhage. The cause of this failure, or rather of this partial success, is apparent when we consider that the vessels are larger and more numerous in the substance of the uterus than in its mucous surface; and further, the special action of the drug is greater in the substance of the uterus than in its mucous lining; in the one case, it can control blood-supply by diminishing the calibre of large vessels; in the other, the tissue to be acted upon, viz., the capillaries in the mucous membrane, lie, as it were, outside the range of its action.

In the great majority of cases, however, hæmorrhage, especially when it occurs to any extent, is not merely of mucous origin; still less is it solely interstitial, but it comes from both sources, and hence it is that a combination of ergot with any purely astringent hæmostatic answers better than either singly. Moreover, in consequence of the great losses sustained, and the necessary impoverishment of the blood which remains, anæmia more or less marked is sure to follow: chalybeates, therefore, in some form or other seem plainly indicated. Hence the rule with me, in the great majority of cases, is to administer ergot with the peracetate of iron. I find this combination the most generally successful; but iron alum, or any other astringent preparation of iron, will probably answer as well. I need not particularise other forms of hæmostatics, for their name is legion; but I very much question if their value be at all proportionate to their number or variety. In many cases, none of them will suffice; all are equally ineffectual. Then it may be necessary to resort to topical applications, and I know none which is so effective as the small solid stick of anhydrous sulphate of zinc (No. 5 size), first introduced into practice by Dr. Braxton Hicks. I greatly prefer this to the use of fluid injections into the uterus, as I believe it to be fully as useful, and far less dangerous. Through the speculum it may, without any difficulty, be passed quite up into the uterine cavity. The plan recommended by Mr. Baker Brown of freely incising the cervix for the purpose of curing the hæmorrhage, I have on several occasions tried, but I cannot say that I have ever seen any good result from it.

It is not, however, of the merely palliative, still less of the supposed curative drug-treatment of these tumours, that I wish more especially to speak; for I have not over much confidence in the one, and literally none at all in the other; but I am anxious to advocate more frequent and more decided resort to operative interference in these cases under a definite plan and system. I believe that we have it in our power, more than is commonly supposed, to rid our patients of these growths. I have not time now to consider the question of the subperitoneal class. I would merely say, in passing, that in my opinion many of these might be attacked which are now left alone to the great distress of the patient; and I cannot help thinking that, with our rapidly diminishing mortality after ovariectomy, due in great measure to the knowledge we are gaining from daily accumulating experience, the time will come, and is fast approaching, when we shall be fully justified in attempting the removal of many of these growths by abdominal section. But, in regard to the two other varieties, I am convinced that much more ought to be done than has been the rule hitherto. I am not going to advocate the process of gouging, or of enucleation, or of destruction by the actual cautery. I have never attempted either operation, and I do not think I ever shall; but I have so frequently seen attempts made by Nature to extrude these growths, even when they were hardly within the uterine cavity at all, and so often has she failed through the want of some artificial assistance, that I am satisfied that we shall derive far more satisfactory results than we have hitherto done, if we direct our thoughts to the question, How can we best aid Nature in the attempt to expel the tumour? We need not try at once to remove the tumour by one operation, unless there be a reasonable prospect of success; but we ought, I contend, to recognise it as a rule always so to prepare the parts that no obstruction which we can remove shall stand in the way of the extrusion of the mass. Let me relate a case in point, which will serve to illustrate my meaning, and, at the same time, will convey a fair idea of the method which I am advocating.

Mrs. C., aged 34, married eleven years, without issue, was admitted under my care into the Hospital for Women, January 13th, 1871. She had for years been suffering from excessive menorrhagia, which amounted

at times to a regular flooding. On examination, a hard globular tumour could be felt about a hand's breadth above the pelvic brim. *Per vaginam*, the infravaginal portion of the cervix was small; the os was circular and so small as only to admit the sound with difficulty, but that instrument entered the uterus for about four inches. At the level of the internal os the uterus could be felt greatly enlarged; and, by pressing on the tumour externally, the enlargement of the uterus was found to be due to it. The cervix was dilated with tangle-tents, and it was then found that the tumour was of the interstitial kind; that is to say, it was embedded in the whole anterior and right sides of the uterus, and extended from cervix to fundus; it, however, projected a good deal into the cavity of the uterus. Subsequently I divided the anterior lip of the cervix, cutting a little into the tumour itself, but the bleeding was so great that I could not do much in this direction. Three weeks afterwards, I divided the cervix on each side; there was less hæmorrhage, and I made the incision as free as I could. The patient then left the hospital, and returned in three months. I then found that the object which I had in view—viz., the favouring of the descent of the tumour by removing the obstruction presented by the small contracted os—was being surely accomplished; for, whereas at first the os only admitted the sound with difficulty, it now admitted one finger easily, and the tumour itself could be felt presenting. I accordingly attempted the next stage; viz., the separating the tumour from its attachment as far as the finger could reach. My object in this was gradually to get the tumour pedunculated and forced down by the uterus towards the orifice. The latter action I assisted by the continuous administration of ergot from the time of the first operation. In three weeks' time, the os became dilated to the size of a crown-piece, and the tumour was protruding into the vagina. I therefore again passed two fingers into the uterus, and detached a still larger portion of the tumour, leaving, in fact, a comparatively small attachment at the upper part of the body and fundus uteri. At the present time the os is perfectly open, the vagina is nearly filled with the protruding tumour, which has come down so low that not more than half of that which was above the pelvic brim can now be felt there, and in the course of a few weeks I shall make the final operation by still further separating the attachment of the tumour, and removing it with the wire *écraseur*.*

Now, when I first saw this patient, it would be difficult to imagine a case more unlikely to be attended with success in regard to any operative interference. Here was a tumour completely embedded in the uterine wall, the cervix unaffected by it, and therefore small, and the os quite as contracted as in a healthy virgin uterus. Yet now the tumour has been brought, partly, perhaps, by nature, but chiefly by art, completely within reach, and though it is not yet actually removed, it shortly will be, and I believe with little or no difficulty. I think, then, I am justified in saying that patience, perseverance, discretion, and a good use of our fingers, will enable us to accomplish a great deal more in the cure of cases of this kind than has been hitherto generally admitted. But in order to do this, we must bear in mind the following propositions, upon the truth of which the whole practice is based.

1. These uterine tumours are to be regarded as essentially foreign bodies.
2. Nature's method of dealing with such foreign bodies, when fair play is allowed her, is to expel them.
3. In order to do this, a dilated os and uterine contraction are essential.
4. Where these are wanting, it is the duty of the physician to remedy it.
5. In order to do this, the circular fibres of the cervix uteri should be freely divided in several directions, and subsequent contraction of the uterus should be promoted by every means in our power.
6. Both these measures will be greatly aided by subsequent detachment of the tumour, making it more and more like a foreign body.

Now, it may be said, perhaps, that there is nothing new in all this: that division of the cervix, separation of the tumour from its attachments, and the attempt to secure its expulsion by exciting uterine contraction, have each been tried and recommended in turn. It is not, however, any one of these that I now advocate, but a combination of all three, and I am not aware that any such combination has been recommended hitherto. Each step in the process has its proper function, and the operation is not complete unless all are included in it. Our first thought should be to prepare the passages for the expulsion and removal of the growth; when this is accomplished, we should try to make the tumour as "foreign" as we can, by separating its attachments as far as can be reached; and throughout the treatment we should aim

* This tumour has, since the paper was read, been successfully removed, and the patient discharged cured.

continuously at securing its expulsion by the slow but sure process of uterine contraction. Either of these methods singly is almost certain to fail, as I have found again and again; but I believe that a large number of cases, hitherto regarded as incurable, may be made amenable to the plan now recommended, if only it be judiciously and perseveringly carried out.

ON A REGULATED TEMPERATURE IN THE TREATMENT OF DISEASE, ETC.

By ALEXANDER ROBERTSON, M.D.,

Physician to the Town's Hospital and City Parochial Asylum, Glasgow.

BEFORE entering on the latter and main part of my subject, it is requisite that I should describe the general plan on which the apparatus is constructed by means of which an equable and regulated temperature can be applied without difficulty to different parts of the body. When the probable advantage of the application of heat so regulated first occurred to me, I saw at once that no suitable instrument existed by means of which it could be carried out. After considering whether heated air or steam could be controlled so as to accomplish the end in view, and having found this quite impracticable, I turned my attention to water as a medium through which the object might possibly be attained. The remarkable properties of vulcanite or vulcanised India-rubber—its lightness, its softness, its moderate elasticity, and particularly its power, on the one hand, of resisting heat higher than the boiling point, and, on the other, cold greater than that of ice—at once pointed it out as a substance out of which appropriate apparatus might be constructed. Accordingly, the various articles which I have designed are made of this material. They are all formed on the same plan. They consist of bags divided into two or more compartments, and have two tubes of convenient length attached to them, the one of which serves for admitting, the other for discharging the water. They may be worked either in connection with an ordinary tin or other vessel with a tap at the bottom, or, when no such vessel is at hand, they may be used on the principle of the syphon. In the former case, the end of the inlet-pipe is attached to the tap, and the stopcock opened. The water passes through the compartments, in its course raising or lowering the temperature of the bag, as required; and is then discharged by the outlet-pipe. When an exact heat is wanted, a bath-thermometer is placed in the vessel containing water; and by means of it any person who can read figures can maintain the temperature of the water to be circulated to within two or three degrees of a required point, as long as is necessary. Five different instruments have been

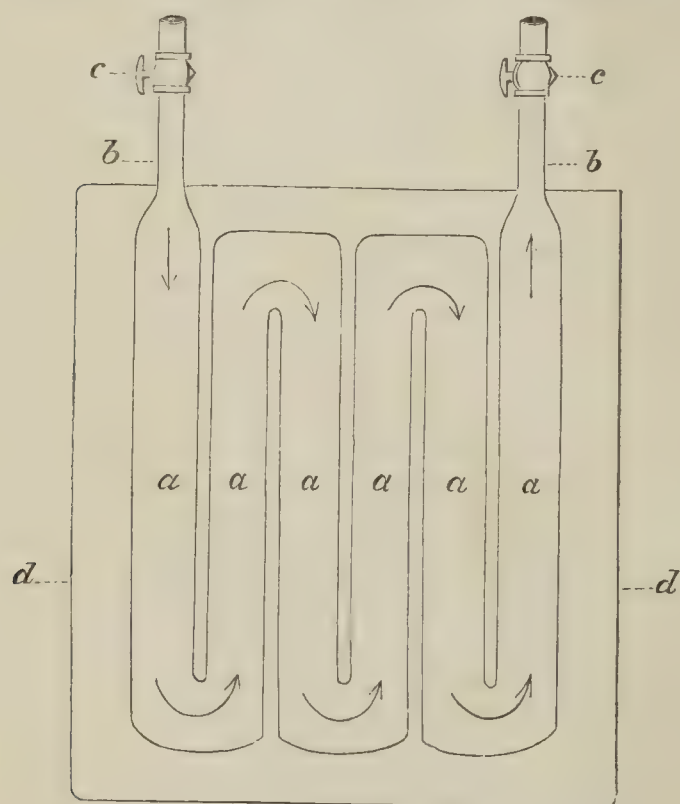


Fig. 1.—Section of Chest or Abdominal Bag (about a fourth size).

a a. Compartments: arrows show course of water. *b b.* Inlet and outlet pipes, each three feet long. *c c.* Small taps, two feet from bag. *d d.* Vulcanised cloth, to which compartments are cemented; these being covered with flannel.

designed, respectively for the chest or abdomen, the spine, the head, the uterus, and the neck; but the one for the neck or throat has not yet been constructed. I need scarcely say that their shape might be varied still further to suit other parts of the body.*

As yet, I have had leisure to test the action only of the chest and uterine bags. Two series of observations have been made with the chest one. They were instituted to determine the effects of an uniform high temperature, and to ascertain the results of renewing the temperature so soon as the heat of the instrument should have fallen to nearly that of the body in a healthy condition. The one series was carried out by myself, and the other by my assistant, Dr. Morrison. My own will be the first described.

It consists of three groups. The first includes cases in which the bag was applied to the skin, nothing intervening, and therefore brings out the effect of dry heat. The second and third comprehend cases in which it was applied in the one instance outside a fomentation, in the other outside a poultice, and illustrate the action of uniform heat associated with moisture.

It is perhaps necessary to observe, that in no case were there more than two pairs of blankets on the bed, these being, as a rule, well worn; so that it may be clear that the action on the skin, afterwards to be described, was in nowise assisted by the amount of clothing.

GROUP I. Cases treated by the Bag alone.—Twelve patients, ten males and two females; the ages ranged from 18 to 51, the majority being from 30 to 50. Seven suffered from bronchitis, mostly complicated with emphysema; one laboured under phthisis pulmonalis; one had acute general tuberculosis; one pleurisy with bronchitis; two cardiac disease; and one lumbago. In one of the bronchitic cases, the attack was acute and recent; the others were chronic, with exacerbations. The case of phthisis pulmonalis was in the third stage; those of lumbago and tuberculosis were severe. The bag was applied half an hour in two cases; an hour in eight; an hour and a half in one; two hours in one case. The temperature of the water circulated was 130 to 135 deg. in one case; 135 to 140 deg. in one case; 140 deg. in six cases; 145 to 150 deg. in one case; 150 deg. in three cases.

Effects.—*a. Skin.*—In six cases a very free general perspiration occurred, both on the trunk and on the extremities. It appeared usually about a quarter of an hour or twenty minutes after the circulation of the water had been commenced, and continued as long as the bag was applied, persisting in two cases during the entire night afterwards. In four patients the sweating was moderate. In two of them it was more decided on the trunk than on other parts; in the other two it was most marked on the extremities. In two patients—the cases of constitutional syphilis and tuberculosis—no sweating occurred at all. The surface to which the bag had been applied was red, but not so much so as after the mustard, or mustard-and-linseed poultice. In two cases in which the water had been circulated at 150 deg., several vesicles, about the size of a penny, appeared on the skin shortly after the removal of the bag.

b. Pulse.—In five cases there was a reduction, viz., of 10, 8, 6, 4, 4, beats per minute; in five there was no change; in two there was an increase—one, the case of phthisis pulmonalis, was 14 higher; the other one, the case of constitutional syphilis, was 8 higher. When the pulse became lower, it was usually fuller, and the decrease was generally associated with free perspiration.

c. Temperature.—In seven cases the observations were made in the rectum; in three (females) in the axilla. In the former, the thermometer was retained for at least five minutes; in the latter, for a quarter of an hour, *in situ*. In two of the rectal cases there was no change; in two there was a decrease respectively of 1 deg. and 0.2 deg.; in three there was an increase of 1.04, 0.4, and 0.2 deg. Two of the axillary cases continued the same; in the other one there was an increase of 0.4 deg. In two of the patients, owing to omission, the observations had not been registered. It was observed that free perspiration was associated either with a reduction or with no increase of temperature; on the other hand, an elevation concurred with little or no moisture on the skin.

d. Respiration.—The condition of this function has been recorded only in seven cases. In five of them there was a reduction of from two to four per minute; viz., from 34 to 30, 22 to 18, 18 to 16, 34 to 32, 23 to 21; in two there was an increase—in the one from 26 to 27; in the other from 21 to 22. Here, again, a reduction in the number of respirations was associated with free perspiration. One of the patients in whom there was increase in the rate, was the syphilitic girl, who did not perspire; the other patient suffered from cardiac disease in a severe form, and in her perspiration was moderate.

* These apparatus have been made by Messrs. Mackintosh and Co., India-rubber merchants, Manchester.

e. Patients' Statements.—First, I would remark that, of course, I do not place so much reliance on these statements as on the exact observations which I have just detailed, even though I cautioned the patients against giving me an exaggerated account of their sensations or conditions. They all thought themselves benefited by the application of the bag. A number spoke very strongly in favour of it, especially when contrasted with the mustard poultice. In most cases, I was satisfied that they had really experienced relief from the feeling of oppression and pain they had been previously suffering. Three patients, however, did not seem to have improved. They were the cases of syphilis, tuberculosis, and cardiac disease already specially noticed. As a rule, it was in those cases where the skin acted most freely that the benefit obtained was the clearest.

GROUP II. Cases treated by Bag outside a light Linseed-meal Poultice.—Eight applications were made to seven patients, two males and five females; their ages were between 31 and 46, except in one, who was 67. Four suffered from chronic, and one from acute bronchitis; one from phthisis pulmonalis, and one from renal disease with dropsy. The water was circulated in six for an hour; in one for an hour and a half; in one for eighteen minutes. In all cases the applications were made to the front of the chest. The temperature of the water circulated was 155 deg. in three cases, 160 deg. in two, 165 deg. in one, 170 deg. in one. The temperature of the poultice on application and on removal was noted in five cases. In all there was a reduction, usually of about ten degrees—for example, from 130 to 120 deg.

Effects.—*a. Skin.*—In seven cases very free perspiration occurred; in one it was moderate; and in three it continued, though in a less degree, all the following night. As has been stated, one application was only for eighteen minutes. This was in a case of phthisis pulmonalis, in which it did not seem desirable that the perspiration should be further promoted.

b. Pulse.—In two it continued the same; in two there was an increase, respectively of 14 and 2; in three there was a decrease—viz., 14, 10, and 5; in one no rate was taken. In three instances the pulse was fuller, besides being slower; in one case of phthisis pulmonalis it was weaker. In the case where an increase of 14 occurred, it was 60 and weak at the commencement, 74 and fuller at the close of the observations.

c. Temperature.—In two the axillary temperature was the same; in one, it decreased 0.4 deg. Of three rectum observations, in one there was no change, in one there was a decrease, and in one an increase, respectively of 0.4 deg. Where the increase occurred, the temperature was 99.6 deg. before the poultice was applied.

d. Respiration.—In five there was a decrease, viz., 26 to 24, 26 to 22, 31 to 27, 31 to 29, 42 to 38; in two there was an increase, respectively from 17 to 18, and from 18 to 23; in one there was no difference. The increase of 5 was in the case of phthisis pulmonalis.

e. Patients' Statements.—All expressed themselves as more or less relieved, some very decidedly so, except the phthisical woman, who thought she felt weaker.

GROUP III. Cases treated by Bag outside Fomentation.—The fomentation consisted of two folds of flannel wrung out of hot water. Nine applications were made to eight patients, four of whom were males and four females. Their ages were from 21 to 68. Three laboured under bronchitis, four suffered from Bright's disease of the kidney, and one from diuresis associated with general dropsy. The disease in each case was severe. In eight cases the water was circulated for an hour; in one for an hour and eighteen minutes. In two cases of renal disease, the fomentation was applied to the loins; in all the others, to the front of the chest. In four cases the water was circulated at 165 deg., in three at 170 deg., in one at 160 deg., in one at 150 deg. The temperature of the fomentation-cloth varied on application from 120 to 125 deg.; at the close, from 115 to 121 deg.

Effects.—*a. Skin.*—Three patients, two suffering from renal disease, and one from bronchitis, perspired very freely; one with renal disease perspired moderately; no perspiration occurred in three cases—the one renal, the two others bronchitic. The patient with diuresis, to whom two applications were made, with an interval of forty-eight hours, perspired freely on both occasions; not, however, during the application of the fomentation, but two or three hours afterwards. The renal case where there was no sweating, was in an advanced form, and the patient was suffering from obstinate diarrhoea.

b. Pulse.—In five cases there was a reduction, viz., 4, 8, 8, 12, and 14; in two there was an increase, 4 and 8; one continued the same.

c. Temperature.—In three cases (males) the observations were made in the rectum. In one of these there was no change; in the other two there was an increase from 99.6 to 100 deg., and from 98.2 to 99.4 deg. Five were axillary observations, and in all these there was an increase, viz., 99.4 to 99.8 deg., 99.2 to 99.6 deg., 99.4 to 100.6 deg., 98.6 to

99.8 deg., 97.6 to 98.8 deg. The increase of more than 0.2 or 0.4 deg. was in those cases where perspiration did not occur during the application of the bag.

d. Respiration.—In six there was a decrease—viz., 1, 2, 3, 4, 8, 8; in two an increase, respectively of 2 and 3; one remained the same.

e. Patients' Statements.—With three exceptions, all said that they had been relieved, and were free from the feeling of pain and oppression which they had previously suffered. Two of the exceptions were patients with renal disease, in whom no perspiration was produced, and both of them felt weak after the circulation of the water; one—a bronchitic patient—did not observe any change.

In a previous part of this paper I recorded the effects of a mustard-and-linseed poultice applied to the chest of a healthy boy. For the purpose of contrasting them with those which might be produced by an equable heat, two days after the poultice, when the boy was in equally good health, I had the water-bag applied, and noted the results of its action. In all respects the general conditions were the same, save that the temperature of the room was three degrees lower than in the case of the poultice. The state of his system before its application was as follows: pulse 83; skin soft; soles of feet slightly moist; respiration 23; temperature of rectum, 99.4 deg. Water was then circulated at 135 deg. for thirty-three minutes—the same length of time that the poultice was continued—nothing intervening between the bag and the chest. The following was his condition at the close; pulse 81; perspiration standing in large drops on the face; the whole trunk of the body, palms of the hands, and soles of the feet, very moist; the arms and back of the legs moist, the front of the legs less so than any other part. The perspiration was distinct on the face fifteen minutes after the circulation of water had been commenced. The respirations were 23. The temperature of the rectum was 0.1 deg. higher. The surface of the chest on which the bag rested was red; not so much so, however, as after mustard. The poultice, he said, was much sorer than the bag. He was very restive under the former, but lay quite quiet while the water was being circulated; the difference in this respect was very striking.

I also instituted another series of observations in order, as far as possible, to determine the value of renewing the temperature of the medium—whether that were the bag alone, or either the poultice or the fomentation with the bag—so soon as its heat should have sunk to nearly that of the body. These observations were carried out with much care by my assistant, Dr. Morrison, in accordance with my instructions.

The mode of procedure throughout the entire series was to warm the bag thoroughly before use by allowing hot water to stand in it for a few minutes, and then displace that water by a fresh supply at a definite temperature for each group of cases. It was then applied, and its contents renewed without removing it from the body, at the same degree of heat three times in the course of two hours—viz., at the end of half an hour, an hour, and an hour and a half. The following is a summary of the results obtained by Dr. Morrison.

GROUP I. Observations with the Bag alone.—Temperature of water, 140 deg. Seven patients, five males and two females; the ages were from 37 to 54. Five suffered from bronchitis, one from phthisis pulmonalis, and one from pleurisy with bronchitis. The diseases were all of considerable severity. The application in each case was made to the front of the chest.

Effects.—*a. Skin.*—After half an hour, in four cases there was no apparent change, and in three cases there was slight moisture. After an hour, in five cases there was distinct moisture, and in two the perspiration was free. After an hour and a half, in one case it was slight, in three cases very free, and in three cases moderate.

b. Pulse.—In two it continued the same; in two it increased in frequency—respectively 14 and 2 per minute; in three it decreased; in one being 8; and two, each 2 fewer per minute. The pulse was fuller at the close in five cases.

c. Respirations.—In three there was a decrease—2, 6, 6; in two an increase—10 and 3; one continued the same; and one had been omitted.

d. Patients' Statements.—All had experienced relief, especially from the more distressing symptoms; but one, the man with phthisis pulmonalis, added that he felt weak. I quote Dr. Morrison's remarks on this head in regard to two cases; and the entries regarding the others are in similar terms. "1. The statement of the patient was that, during the first half hour, he felt more comfortable, and the defluxion came away more easily. At every application he expressed a feeling of comfort, and, at the end, stated that he could breathe more freely, and had got relief from a sensation of oppression about the chest." "2. Statement of patient was that the pain of the chest was entirely removed, and she felt very comfortable."

GROUP II. Observations with light Linseed-meal Poultice underneath Bag.—The temperature of water in the bag on application and at each renewal was 180 deg. It was applied to seven patients: three males and four females, from 38 to 54 years of age. All suffered from bronchitis; and the disease, except in one case, was in a severe form. In all cases the application was made to the front of the chest.

Effects.—*a. Skin.*—At the end of the first half hour, slight moisture was noted in six cases; one was perspiring freely; and in one there was no perspiration. After an hour, five were sweating moderately, one freely, and one gently. After an hour and a half, five perspired very freely, one freely, and one moderately.

b. Pulse.—In all cases there was a decrease: in two of 10, in three of 8, in two of 6. In five patients it was fuller at the close; and in one of these, where it was weak and intermittent at the application of the bag, it is recorded as being full and regular on its removal.

c. Respiration.—In all these there was a reduction; in four of 2, in one of 3, in one of 4, and in one of 6 per minute.

d. Patients' Statements.—All said that they had derived benefit from the application. I quote two in illustration. 1. "Statement of patient was, that she had now no pain, felt easier and more comfortable, and her cough was very much relieved." 2. "Statement of patient was, that his breathing was very much freer, and his chest was 'lighter.'"

In order to ascertain if the heat of the poultice was really raised sufficiently by simply changing the water, I had also desired Dr. Morrison to note its temperature five minutes after the first, second, and third renewals in two cases for each time. He found, on all occasions, that it was never lower than 121 deg., and was sometimes 125 deg., except in the first case which he examined, where it was only 110 deg. after the first renewal; but this was probably due to some mistake, as the others were so much higher. The poultices were applied at an average temperature of 128 deg.

GROUP III. Observations with Fomentation and Bag.—The fomentation consisted of a double fold of flannel wrung out of hot water. The temperature of the water at each renewal was 180 deg. It was applied to seven patients—three males and four females, aged from 41 to 70. Six suffered from bronchitis—two in a moderate, and three in a severe form; one laboured under lumbago. In the case of lumbago, the fomentation was applied to the lumbar region of the spine, and in the others to the front of the chest.

Effects.—*a. Skin.*—At the end of half an hour, there was slight moisture on the surface generally in all cases. At the end of an hour, in four it amounted to moderate perspiration. After an hour and a half, there was free, or very free, sweating in five patients, while in two it was present only in a slight degree.

b. Pulse.—In all cases there was a decrease: in one of 12, in one of 10, in one of 8, in one of 6, in two of 2, and in one of 1 per minute. In five patients the pulse was of better volume; in two there was no change.

c. Respiration.—In all there was a reduction: in one of 4; in each of the other two cases, 9.

d. Patients' Statements.—Greater or less relief had been experienced by every one. I again quote two entries in illustration. 1. The "statement of the patient was, that she had got relief from the difficulty of breathing, and that the pain was gone." 2 (Case of lumbago). "Statement of patient was, that the pain was entirely gone."

In this group the average temperature of the fomentation on application was 130 deg. As with the poultices, I thought it desirable to test whether the heat of the fomentation-cloth was raised sufficiently by merely changing the water. Accordingly, observations were made five minutes after each renewal, by inserting the thermometer between the folds of the flannel, which showed that the temperature was restored to as about as high a point as the first—the range being from 126 to 130 degrees.

[To be continued.]

EXTRACTS FROM MY NOTE-BOOK.

By T. R. JESSOP, F.R.C.S.,
Surgeon to the Leeds General Infirmary.

I.—Traumatic Neuroma, causing Paralysis: Rapid and Complete Restoration of the Function of the Nerve after Removal of the Tumour.

THE following case affords an interesting example of the rapidity with which, under favourable circumstances, a divided nerve will reunite, even when there has been considerable loss of substance. The ready manner in which the nerve resumed its functions, after these had been in complete abeyance during nine years, gives to the case additional physiological value.

Emma Ross, aged 19, residing at Bramley, was admitted into the Leeds General Infirmary on February 9th, 1871. When ten years old, she cut the inner side of her wrist with a glass bottle. This was followed immediately by loss of sensation on the inner side of the hand, and by diminished power in the entire hand. When, after many weeks, the wound had at length healed, the resulting scar remained painful and tender. At times, the pain was so great as entirely to prevent sleep, and was not always confined to the seat of injury, but occasionally extended up the forearm and arm, and frequently downwards through the hand and two inner fingers. During the few months immediately preceding her application to me, the pain had increased in intensity.

The cicatrix was situated about two inches above the right wrist, and extended across the half of the anterior surface of the forearm; it was hard and very painful on pressure. The hand, as compared with the left, was thin and wasted. The muscles which should have formed the balls of the little finger and thumb had disappeared; and between the metacarpal bones, both back and front, were deep hollows. Over the inner third of the hand, the whole of the little and the inner half of the ring fingers, the skin had completely lost its sensibility, and sensation was imperfect over the radial half of the ring finger. The movements of the hand were so feeble that the limb was of little use.

On the day of admission, February 9th, the ulnar nerve in the neighbourhood of the cicatrix was laid bare to the extent of about an inch, by an incision along the inner border of the forearm. Just where it traversed the cicatrix, the nerve presented a globular enlargement of the size of a pea. This, together with about half an inch of the involved nerve in its entire thickness, was removed, when the divided ends immediately retracted. In order to approximate the cut ends of the nerve, it was found necessary to flex the hand upon the forearm. Whilst the hand was so held, the ends of the nerve were brought accurately together by means of a fine carbolised silk suture, and so retained. The operation was performed, and the wound dressed, in accordance with the strictest antiseptic principles.

For three days after the operation, there was considerable pain along the course of the ulnar nerve, as high as the middle of the upper arm, which was relieved by repeated subcutaneous injections of morphia. The wound healed by first intention.

On February 17th, there was the first indication of returning sensation on the ulnar side of the little finger; and the patient now complained of severe pains shooting from the tips of the little and ring fingers to the wound. From this time the pain gradually diminished, whilst sensation extended and increased.

On February 24th, sensation seemed to have fully returned everywhere except at the extreme tips of the two fingers, and the pain had all but ceased. The hand was now released from its flexed position, and gentle passive motion of the wrist commenced.

On March 11th, as there was inability fully to extend the wrist, the limb was bound down upon a straight splint. On March 20th, she was made an out-patient, and ordered to attend twice a week for galvanism of the muscles of the hand. On April 20th, she could use the hand well; had no pain; could feel perfectly everywhere, except at the tip of the little finger, which, on examination, was found to be covered with a thick layer of cuticle; and the muscles of the hand showed signs of returning development. She can now (November) use the hand for all purposes; the muscles have to a great extent re-formed, but the right hand is still somewhat thinner than the left, and sensation is still wanting at the tip of the little finger, though it is everywhere else perfect.

CLINICAL MEMORANDA.

RECOVERY AFTER SWALLOWING A LARGE QUANTITY OF CHLORAL.

A SHORT time since, an anæmic middle-aged married female, whilst suffering from facial neuralgia, swallowed at one draught a recently prepared syrupy solution of chloral hydrate, which contained over 100 grains of that drug. She immediately complained of "intense burning pain in the throat, gullet, and stomach"; and when I saw her (about three-quarters of an hour subsequently), she was screaming and almost convulsed with agony—so much so, that it was with the greatest difficulty she could be restrained from throwing herself out of her bedroom window into the road. Her pulse was small and very rapid; the countenance was livid and bathed in sweat; an odour of chloroform was plainly perceptible in the breath; and no trace of narcotism had been observed, even for a moment. After an ineffectual attempt to bring on vomiting, I injected hypodermically half a grain of morphia over the epigastrium, and directed milk to be freely given. On visiting

her in three hours' time, I found her somewhat relieved, and accordingly injected another half grain of morphia, and suggested the cautious use of stimulants with the milk. On the following morning she was free from all pain of any description, though very weak, and has since done well; a slight return of neuralgia being at once checked by another employment of the hypodermic syringe, and ferruginous tonics.

The usual hypnotic effects of the chloral were here "conspicuous by their absence" from first to last; no drowsiness even, much less sleep, having set in during the period of its elimination from the system: yet in a previous neuralgic attack, twenty grains only had procured a good night's rest for this person. I can vouch for the amount, as well as the goodness, of the chloral taken by her; and think that, as deaths have been reported after the administration of 60, 45, and even 25, grains of this remedy, she may be deemed fortunate in escaping so readily.

BENJAMIN BROWNING, L.R.C.P.L., etc.

Littlebourne, Kent, November 15th. 1871.

MODE OF DEATH IN CHLOROFORM POISONING.

I ADMINISTERED chloroform to two guinea-pigs on November 12th, 1871, and as soon as anæsthesia was complete, I opened the thorax. Respiration had completely ceased, and the lungs were collapsed; the hearts were beating regularly and forcibly. I sprinkled the pericardium of one heart with chloroform without detecting any effect upon the cardiac pulsations; the other heart I did not meddle with. In three minutes the cardiac contractions became feeble, more frequent, then intermittent, then fluttering and imperfect, and finally ceased. In the guinea-pig on whose heart I dropped the chloroform, pulsations entirely ceased three minutes and twenty seconds after I had opened the thorax; in the second case they were perceptible for exactly four minutes.

S. MESSENGER BRADLEY, Manchester.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

DEATH DURING THE ADMINISTRATION OF CHLOROFORM.

AN apparently healthy man, aged 53, was admitted about 3 P.M., having had his foot crushed by a piece of iron falling on it. It was found necessary to amputate the first toe, and the patient was given the choice of taking chloroform or not. He hesitated for some little time, but at length, without being pressed, he said he should prefer to have it administered.

The chloroform was given by the house-surgeon on a double fold of lint, and for about five minutes seemed to produce no effect. The patient then suddenly became much excited, and the administration of the chloroform had to be desisted from, as the gentleman giving it was obliged to lend assistance to restrain the patient. He continued excited for about two minutes, and then became quiet. He screwed up his eyes when the conjunctivæ were touched. The operation was now commenced, and he winced at the first prick of the knife. The gentleman who from the commencement of the proceedings had kept his hand on the pulse, now said that it was beating very feebly, and almost immediately after that it had stopped. The man breathed more than once after the heart and pulse had ceased to be felt. Artificial respiration, on the Silvester plan, was immediately had recourse to; the tongue was dragged forward; the patient was well splashed with cold water, and flipped with a wetted towel. The interrupted current was almost immediately applied from the nape of the neck to the diaphragm. All these efforts were most strenuously made for about twenty minutes, without producing any evidence of life. No chloroform had been administered from the time of the patient becoming excited.

It was subsequently elicited that the patient had been an intemperate man, and that some years previously he had taken chloroform for the reduction of a fracture.

The *necropsy* was made on the following day by Dr. Sutton. The body was very well nourished; the skeleton large and well developed. There was a moderately thick layer of subcutaneous fat beneath the skin of the abdomen. The pleuræ were healthy; the lungs normal, but very much congested. The mucous surfaces of the larynx and trachea were somewhat congested, but they contained no foreign body. The

pericardium was healthy. The heart weighed 14½ ounces. The left ventricle was flaccid; its cavity seemed slightly dilated, and the muscle was soft and very friable. The left auricle and the mitral orifice were healthy, as were also the aortic valves and aorta. The right ventricle was distended with blood, but was otherwise healthy. The liver weighed 6 lbs. 2 oz. On section, it was homogeneous-looking and soft—evidently fatty. The spleen was natural. The kidneys showed evidence of great venous congestion. The stomach contained a little partially digested food. The mucous surface was very much ecchymosed in parts, but was otherwise healthy. The brain was healthy. The muscle of the heart was examined microscopically, and it was found that the transverse striæ were very indistinct. The fibres were granular, and contained some fat-globules.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

NOTES ON CASES OF DISEASE OF THE NERVOUS SYSTEM.

(Under the care of Dr. HUGHLINGS JACKSON.)

Voluntary and Automatic Movements.—In the last note (October 29th, 1870), remarks were made on the fact that the utterances to which speechless patients are usually limited are "yes" or "no", or both. They lose all speech except the most *automatic* propositions; or, in physiological language, the most automatic movements of the speech series. Sir Thomas Watson has observed that the speechless patient may be able to use the word no very readily in reply to a question, when he cannot utter it, when told to say "no". This was marked in the case of a man 51 years of age, who had been for more than nine years paralysed on the right side, and speechless, with the exception that he could utter the word "no"; and not only could he utter it, but he could "propositionise" with it—he could reply "no" correctly; but he could not say "no" when told to do so. The class (this was at the London Hospital) were informed that the patient could utter this word; but when he was told to do so he only brought out a mumbling noise. The utterance of the word was easily obtained from him by asking the preposterous question, "Are you a hundred years old?" In the case of a young woman recently in the Hospital for the Epileptic and Paralysed, for loss of speech and hemiplegia of the right side (the supposed result of embolism; there was a mitral obstructive murmur), this peculiarity was very striking. Thus at one visit she was told to say "no", and could not. Directly afterwards, Dr. Hughlings Jackson observing that she had a book on her lap, asked if the patient could really read. Hearing this, the patient herself looked up, and said "No, no, no." She was again told to say "no"; she could not. The nurse having observed this peculiarity in another patient, said, "Are you a hundred years old?" The response was, "No", with a smile. Once more the patient was asked to say "no", but again she failed. This patient had, it would seem, the power to utter the word automatically, but not voluntarily. It must be added, that many times in her ordinary "conversation" she said "no" when she meant "yes".

In some cases the patient has no difficulty in saying "no". Thus there is in the London Hospital an old woman who can utter only the words "yes" and "no", and "titty", "titty"; and another old woman who has both these words and the utterance, "I'm very well", or "Very well". Each of these patients can say "no" when asked. There are three degrees in which this word is uttered by speechless patients: (1), and lowest, in an interjectional manner; (2) in this way, and also as a reply; (3) in both the former ways, and when they wish to utter the word for the sake of uttering it.

Such facts seem, at first glance, to be mere curiosities; but they are very significant. The experiments which disease makes gives us hints as to what is fundamental in the method of nervous action. There are other facts of the same order. The most striking is, that intellectual language may be lost when emotional language is conserved. The former are the more voluntary, the latter the more automatic, movements of language. In defects of intellectual language itself, speech suffers more than pantomime—which mode of voluntary expression almost runs into the automatic exhibition of states of feeling by gesticulation: nay, in the most "voluntary" part of intellectual language—in word processes themselves—we see the same thing: we find that a patient ejaculates when he cannot "speak" these ejaculations; cannot repeat them.

Dr. Hughlings Jackson thinks these utterances are the result of action of the right side of the brain, which side is not damaged in cases of loss of speech. He supposes, indeed, that the patient has remaining on this side all the words he ever had in an automatic form—that, although speechless, he is not wordless; for, although he cannot "propositionise", he can, since he understands what we say to him, receive propositions.

From the facts of cases of speechlessness, and from observations on cases of hemiplegia, he draws the conclusion that, in "destroying lesions" of the nervous system, movements suffer the more as they are voluntary, and the less as they are automatic. In future notes it will be pointed out that in degrees of hemiplegia, from lesions of different gravity, there is a twofold manner of increase of the paralysis—(1) greater palsy of the voluntary parts, and (2) a further spreading in range to parts more automatic. Dr. Hughlings Jackson infers that, both in physical and mental processes, healthy nervous action spreads from the automatic to the voluntary; that the spreading is in a compound manner; that, with increasing power of the voluntary movement, there is greater range in automatic movement. The words "voluntary" and "automatic" are used without prejudice; and, to a more or less extent, the terms "special", "independent", etc., may replace the word "voluntary". The word "voluntary" would not be used were it possible to find one with less misleading implications. The word has a double meaning. It is used psychologically in discussions on the nature of the Will with which physiological inquiries have no direct concern. It is used also physiologically as a name for those movements which have at once great speciality and also great independence of other movements. A voluntary *part* differs from an automatic part in two ways; (1) in having a greater number of different movements (more complex space coordinations); (2) in having a greater number of different intervals (more complex time coordinations). It is implied that there is no abrupt demarcation between the two kinds of movements.

GENERAL HOSPITAL, NOTTINGHAM.

CASES OF HYDROPHOBIA: WITH REMARKS.*

By GEORGE ELDER, M.B., Junior House-Surgeon to the Hospital.

CASE I.—On the evening of February 18th, 1870, W. Wadsworth, aged 27, was admitted under the care of Dr. Robertson and Mr. White. Eight weeks before admission, a strange dog had bitten the patient in four places; viz., one on the left thumb, and three on the face. Nothing was applied to the wounds. From the period of infliction of the bites until February 16th, the patient went about his work as usual; but on the evening of the latter mentioned day, he felt "out of sorts." Although the feeling of *malaise* experienced on the evening of the 16th was somewhat increased when the patient got out of bed next morning, yet, referring his sensations to a "simple cold," he went to work. During the day, sharp paroxysmal pains were felt in the cicatrix upon the left thumb. On the morning of the 18th, whilst he was eating his breakfast, occasional spasms were excited, combined with a difficulty in swallowing.

On admission, the patient, a powerfully built man, had an anxious, hopeless expression. The eyes were staring; the conjunctivæ were slightly injected. On offering him a cup of water he shuddered, and on attempting to drink, his body was thrown into severe spasms, almost tetanic in character. Between the spasms, the act of respiration was of a peculiar sighing nature, inspiration being greatly prolonged. Great thirst was complained of, yet the tongue was moist. The mental faculties were unclouded, and the patient talked freely of his malady, seemingly fully alive to the awfulness of his position. The scars on the face and thumb betrayed no abnormality. After placing the patient in a ward detached from the main building, so as to avoid as much as possible disturbance from noise, etc., a drachm of tincture of opium was administered *per rectum*, but not retained. On the morning of the 19th, it was noted that the patient had not slept during the previous night; otherwise, his condition was much the same as on admission. By the direction of Dr. Robertson, two quarter-grain doses of acetate of morphia were hypodermically injected at an hour's interval, certainly with the effect of quieting the mind of the patient, but not of alleviating the spasms. Three hours after the second injection of morphia, it was decided at a consultation of the honorary staff to give chloral hydrate a trial. Accordingly, between 4.30 and 11 P.M., two doses of a drachm each were injected into the rectum and retained. After the second dose, the actions and conversation of the patient were those of a man intoxicated, and so much was the hyperæsthesia of the body diminished, that liquids, without much discomfort, were several times drank. Shortly after eleven o'clock, the staff again met and consulted, when it was decided with one dissenting voice—that of Dr. Robertson—to excise the cicatrices. With the view of inducing anæsthesia, an attempt was made to administer chloroform; but the first inhalation threw the patient into so violent a spasm, that its use was desisted from, and Mr. White excised three out of the four cicatrices

without its aid. On account of the struggles of the patient, the fourth was not removed. On the 20th, the patient, who previously had been quiet, became excited and occasionally delirious. With the exception of short periods of sleep, he was incessantly talking. During the day, he expectorated a large quantity of mucus—at first clear and frothy, becoming tinged with blood as the night approached. For the first time, he complained of extreme thirst. His mouth and throat were parched and painful; yet he could not quench his thirst, as not only the attempt to drink, but even the sight of water, brought on severe convulsions. As night drew on, he became so furious that, assistance having been obtained from a neighbouring asylum, a strait-waistcoat was placed upon him. From twelve midnight, until 10 A.M., doses of one-third of a grain of extract of Calabar bean were hypodermically injected every two hours without in any way affecting the progress of the case, although the physiological effect of the drug upon the pupils was obtained. Between 12.35 and 2.35 P.M., three doses of half a grain each were subcutaneously administered with only negative results. At 2.55 P.M., two drachms of chloral, and again at 4.50 P.M., one drachm, were injected into the rectum with the primary effect of decidedly quieting the patient, and alleviating the spasmodic movements; but latterly, as above stated, his manner became so wild, that the imposition of restraint was rendered a necessity. Just before midnight of the 20th, we left the patient struggling, and displaying immense muscular power. At 1 A.M., on the 21st, his body began to relax in its efforts. His delirium was now not that of a maniac, but more like the low mutterings of the imbecile or the general paralytic patient. The respiration became short and gasping. At the wrist, the pulse was so feeble and so quick that it could not be counted. Feebly, now and then, the patient asked for air, saying he was being stifled with smoke. Gushes of "coffee-ground" matter were constantly being ejected from his mouth. Several times during the day, the face became perfectly livid from muscular spasm. From being plump and well nourished, the body in a few hours became shrunken and emaciated. To the hand it felt clammy and moist. At 5.55 P.M., the patient had an epileptiform fit of a few minutes' duration. From this time until his death, at 7 P.M., consciousness, which previously had at intervals been present, never returned. The therapeutics of the 21st, in so far as they had no appreciable effect upon the progress of the case, do not require much comment; yet, as illustrative of the extreme tolerance of poisonous drugs in this malady, I may mention that, during the last twenty hours of his life, the patient received subcutaneously seven grains of the extract of Calabar bean and ninety-two minims of dilute hydrocyanic acid; half a drachm of liquor ammoniæ fortior, much diluted, was also injected into one of the superficial veins of the leg.

At the *post mortem* examination, made a few hours after death, nothing beyond the usual appearances of death from asphyxia were observed. The cerebellum, part of the cerebrum, and the medulla oblongata were transmitted to Dr. Lockhart Clarke for inspection, by whom the duty, on account of illness, was delegated to Mr. Kesteven. That gentleman reports that, beyond intense congestion, nothing was discoverably wrong in the specimens.

CASE II.—A farmer's boy, aged 14, was admitted into hospital on the evening of May 4th, 1870, under the care of Dr. Ransom and Mr. Thompson. About three months previously, a dog belonging to his father had bitten him on the upper lip and bridge of the nose. Immediately after the receipt of the injury, lunar caustic was applied to the wounds. Until the evening of April 30th, the ordinary occupation of the patient was followed without discomfort; but on the evening specified he felt chilly, and on the morrow had an attack of nasal catarrh. During May 1st, when eating or drinking, slight muscular tremors were experienced. From this date until admission—three days afterwards—the progress of the case was slow, but unmistakable. On reception into hospital, the patient had a peculiarly frightened, anxious expression. The respiration was quick and gasping. Not only were spasms excited by attempting to eat and drink, but also by cold air impinging upon the surface of the body. To the hand, the skin felt cool. The pulse varied from 80 to 90 beats in the minute. Now and then the patient spat small quantities of clear and rather tenacious saliva. In the recital of his symptoms, the volubility of the patient was extreme; yet his answers to questions proved beyond dispute the possession of perfect mental power. At 10 P.M., one drachm of hydrate of chloral was injected into the rectum, and retained with the effect of warding off the spasms for four hours, unless when, at his own request, the patient drank thrice of milk. About midnight, in accordance with the suggestion of Mr. Thompson, mercurial ointment was freely rubbed into the inner surfaces of the thighs. From two o'clock in the morning of May 5th until midnight, the disease was modified by the timely administration of chloral hydrate. During the day, 200 grains of the drug were administered by the rectum in four doses, with the most satisfactory results.

* Extracts from a paper read at the Midland Branch of the British Medical Association.

So much was the hyperæsthesia diminished, as to allow the patient to eat and drink small quantities of solids and liquors without suffering much inconvenience. For at least a third part of the day, the patient slept, whilst in the intervals there was entire freedom from pain. The pulse and respiration, however, increased in rapidity; but towards evening the patient, who previously had been quiet and tractable, became excited, and at times almost unmanageable. A considerable amount of difficulty seemed to be experienced by him in getting rid of the viscid mucus which filled his mouth and mechanically impeded his breathing. From 9.30 on the evening of May 5th, until 1.30 on the morning of May 6th, he slept. On awaking, at his own request he received and drank several spoonfuls of milk; but at five o'clock, without appreciable cause, most severe spasms rapidly followed each other, with the result of very soon exhausting the patient. His face, from being that of a well-conditioned lad of fourteen, became almost instantly transformed to the sunken, shrivelled visage of an old man. As death approached, the surface of the body became cold and moist; the respiration jerking, short, and slow; whilst at the wrist the pulse could not be counted. Until within a short period of his death, the patient was in full possession of his mental powers. Quietly, and without a struggle, he died at 11.15 A.M.

Five *post mortem* thermometrical observations were made *per rectum*, which proved, beyond a doubt, the intensity of the chemical change taking place in the body, at least during the latter stages of the malady. The temperatures were as follows:—11.30 A.M., 106.2; 12.45 P.M., 103.4; 1.45 P.M., 101.2; 2.45, 98.4; 3.45, 91.2.

At a necropsy made shortly after death, appearances similar to those noted in the case of Wadsworth were observed. Dr. Ransom examined the blood of the patient, but microscopically could detect no deviation from health.

CASE III.—A boy, aged 6, was admitted into hospital on the evening of September 20th, 1870, under the care of Dr. Robertson. Two months previously, he had been bitten by a neighbour's dog in several places. Directly after the receipt of the injury, tincture of opium, and afterwards lunar caustic, were applied to the wounds. The patient's health continued good until two days prior to admission, when he had a feverish attack. On the morrow he was sick, and complained of headache. During that day, his mother observed the sighing character of the respiration, which was intensified by any one approaching the bed on which he lay, or the mere handling of his bedclothes; but more especially by attempts to eat or drink. On admission, he was noted to be a healthy-looking and well-nourished boy, with an anxious, yet intelligent expression of face. Questions relative to his complaint were answered with a volubility beyond his years, yet sensibly. No pain was felt in the cicatrices of the bites, and no redness was observable. When a cup of water was offered him, with a peculiar grin upon his face, he convulsively seized it; but as soon as the cold vessel touched his lips, a spasm was induced. At first, the spasmodic action seemed confined to the muscles of respiration. Not only were they excited by attempts at drinking and eating, but also by the slightest motion in the room. The temperature in the axilla was 100.4. The pulse was regular and full—102 beats in the minute. Although pain in the throat and epigastrium was complained of, still there was but little thirst, and the tongue, though furred, was moist. At 7.35 P.M., and again at 9.30, extract of Calabar bean, to the extent of one-sixteenth and one-eighth of a grain, was injected into the rectum, with beef-tea and eggs, without alleviating the symptoms; on the contrary, the spasms became longer in duration and more severe, and the pulse from 102 rose to 150 in the minute at midnight. On the morning of the 21st, the patient, from being quiet and docile, became excited and irritable. He chattered constantly to his attendants of his complaint, or of whatever occurred at the moment. Respiration became jerking and hurried, and the pulse rapidly increased in frequency and fullness. Towards midday, for the first time, the patient spat a quantity of viscid saliva tinged with blood, and several times during the remainder of the day, he vomited large quantities of bilious fluid. At this stage, the urine was examined, but, beyond a deposit of lithates in cooling, nothing abnormal was chemically or microscopically detected. In the afternoon, delirium supervened, and he was seen by his father and mother, who received from him no sign of recognition. By the evening, the third or exhaustive stage had commenced. The patient lay comparatively quiet. The spasms, though frequent, were moderate in force. Respiration was embarrassed and quick, the effort producing a gurgling noise in the throat. From the corners of his mouth the saliva kept trickling. The conjunctivæ were deeply injected. At 3.15 P.M., an hour before death, the temperature in the axilla was 104, and the pulse 168. At 4.15, he died quietly. During the 21st, three grains and three-fourths of extract of Calabar bean, and one-eighth of a grain of acetate of morphia were administered without producing physiological or therapeutical effects.

It is but fair, however, to add, that part of the bean (which was injected into the rectum) was not retained; yet still, considering the age of the patient, the remainder should have been sufficient to at least cause contraction of the pupils.

A *post mortem* inspection revealed nothing beyond what was seen in the other cases.

THERAPEUTIC RECORD.

VERATRUM VIRIDE AN ANTIDOTE TO OPIUM.—Dr. E. H. Sholl, of Alabama, communicates to the *Philadelphia Medical and Surgical Reporter* a case of poisoning by morphia, which was cured by veratrum. The patient, a negro boy, aged 15, had typhoid fever, and took an overdose of morphia, which had been prescribed for hiccough. It was followed by stertorous breathing, contracted pupils, etc. His mouth was held open, and eighteen drops of Norwood's tincture were poured in with two ounces of brandy. In one hour, every symptom of poison had vanished.

EXCISION OF CANCER OF THE ŒSOPHAGUS.—The last number of the *Archiv für Klinische Chirurgie* contains a paper by Dr. Billroth, in which he proposes, in cases of carcinomatous stricture of the œsophagus occurring in an accessible situation, to cut out, through its whole circumference, that portion of the tube which contains the disease. He has not yet performed this operation on the human subject; but he is led to believe in its practicability, first from the occasional restoration of the urethral canal after its division, and secondly by the result of an experiment which he performed on a dog. He cut out about an inch and a quarter of the animal's œsophagus, fastened the lower end to the edge of the wound by two sutures, and fed the dog with milk through an œsophageal tube passed through the mouth into the stomach. The sutures were removed about a week after the operation: there was considerable mucous discharge from the wound. The external wound gradually contracted, and the discharge diminished. About ten weeks after the operation, the external opening was completely closed. Bougies were frequently introduced so as to dilate the cicatrix; and the dog gradually gained the power of eating flesh, potatoes, etc., and swallowing them with ease. Three months after the operation, the animal was killed. The œsophagus presented a simple annular cicatrix, scarcely half a line wide: the tube was completely pervious.

CHLORAL.—Dr. J. B. Andrews of the New York State Lunatic Asylum states in the *American Journal of Insanity* for July that, since February 1870, chloral to the amount of 90 pounds had been used in treating 370 cases in the Asylum: 188, or about one half, being cases of mania. The average length of time of administration was 39 days in men, and 43 in women. In one case of melancholia, 20-grain doses were given for 257 nights, the medicine not losing its effect. In a case of mania, 60 grains were given for 195 nights in succession. He sums up its advantages as follows. It is a hypnotic which seldom fails to produce sleep, which usually lasts from four to eight hours. The sleep is natural, and one from which the patient can be easily aroused. It is more generally tolerated by the stomach than other sedatives. It does not constipate the bowels or disturb the secretions. It does not injuriously affect the appetite. It rarely produces headache, or leaves unpleasant effects. It does not lose its power by repetition, but the dose may often be reduced after the patient has become accustomed to its use, and seldom demands to be increased. When the necessity for its use has ceased, it often, for the first time, becomes disagreeable to the patient. Thus far we have met with no case where its administration has induced the habit of its use, which is one of the dangers of opium, cannabis Indica, etc. It allays muscular spasm and rigidity. No ill effects have been experienced from its use in cases of disease of the brain. We have observed no ill effects from its use in the reduction of the pulse or of the temperature. In cases of the opium habit, it has proved a valuable remedy to secure quiet and sleep, and allay nervous irritation until the system has rallied from the depressing influence of the former drug. In insanity, it is particularly useful to quiet restlessness and muscular activity. The strength of the patient is thus preserved, and time is gained for building up the general health by tonics and nutritious diets. Its ill effects we have observed are:—In some instances, it has induced nausea and vomiting. Unless largely diluted, it produces a burning sensation in the fauces and stomach. In many cases its influence is very rapid, the person falling asleep at once, which sometimes gives alarm to those unused to it. |

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 2ND, 1871.

THE ILLNESS OF H.R.H. THE PRINCE OF WALES.

SINCE the publication of our statement last week that His Royal Highness the Prince of Wales was suffering from a sharp attack of enteric or typhoid fever, the daily bulletins of his physicians have indicated very clearly and succinctly the progress of the malady, which has been in all respects regular in its manifestations; and, although deserving of the appellation which it received from the first as a sharp attack, the progress of the malady has been thus far favourable and free from complications. As all medical men are aware, the ordinary period of incubation of typhoid fever is from twelve to fourteen days. This is subject to variations and irregularities; but that is the accepted standard of the best authorities. Hence, when it was announced that, on the evening of the 14th ult., His Royal Highness first presented the signs which indicate the onset of the fever, the minds of medical men naturally reverted to the antecedent history of the patient at that interval of time. Enteric fever, it is known, is the result of the introduction of the miasm of decomposing animal matter, either in the form of aerial emanations such as sewer-gas, or of local pollution of the drinking-water by infiltration of such matters; and, whenever we meet with a case of enteric fever, we always look to the local circumstances under which the patient was placed at a date corresponding to that of the ordinary commencement of the period of incubation.

Thus, then, it was at once remarked that the date corresponded with that of the Prince's visit to Lord Londesborough at his seat at Scarborough. In connexion with this visit, certain medical circumstances were also reported on good authority. Thus, the party at Lord Londesborough's included their Royal Highnesses the Prince and Princess of Wales, with Colonel Ellis, the Countess of Macclesfield, Duke of Beaufort, Duchess of Manchester, Lady Cecilia Bingham, Lord Carington, the Earl of Chesterfield, and Mr. Baldwin. Nearly all, including especially Her Royal Highness the Princess, the Duke of Beaufort, Lady Cecilia Bingham, the Duchess of Manchester, Lady Londesborough, and Colonel Ellis, are known to have been suffering during the visit with symptoms of constitutional disturbance. These symptoms passed off rapidly, except in the instance of the Countess of Londesborough, who, it is stated, was much indisposed for ten days afterwards.

Four days after the date on which His Royal Highness the Prince of Wales sickened with enteric fever, Lord Chesterfield, who had been one of the party at Scarborough, was also attacked. Lord Chesterfield had been on a visit after leaving Scarborough, and was seized after reaching home at Bretby Park, Burton-on-Trent. These series of events aken together afforded, and still afford, a strong presumption in favour of the correctness of the local etiology which the best informed persons were disposed to assign as the probable explanation of the attack. But still further investigation develops some important facts which will weigh against this strong presumption. In the first place, Lord Londesborough states that the water-supply of his house is that of the town of Scarborough, and that it is pure and excellent. The sewers had been purposely examined and thoroughly flushed, and a turncock was kept on the premises during the visit for this purpose. Moreover—and this is the strongest fact in this group of considerations—four children have been staying in the house for some months, and have been, and still are, in excellent health. It has also been stated that there is no typhoid fever at Scarborough, and that Lord Chesterfield was not staying in the same house. There were, however a few deaths from enteric

(typhoid) fever registered at Scarborough during the last quarter—nine deaths from fever in all, of which seven were from enteric fever; and two young children died of the same fever in the middle of this month. From want of space for the whole party, Lord Chesterfield slept in an adjoining house, but of course passed his time with the party, and joined them at meals. Little importance, therefore, attaches to either of these statements. But a very important circumstance, belonging to another order of events, is the fact that, since the Prince fell ill, one of the grooms at the Sandringham stables, who did not attend His Royal Highness to Scarborough, has sickened with the same disease. Moreover, at this moment it is known that typhoid fever is prevailing in many parts of England. We give in another column some details of its prevalence at this moment in London. Of course there will be no delay in instituting the fullest inquiry into every possible source of origin and contagion of fever both at Scarborough and at Sandringham.

The actual history of the two cases of typhoid—viz., of that of His Royal Highness and Lord Chesterfield—during the period which is usually that of incubation, appears to be as follows.

His Royal Highness the Prince returned to London on Saturday, November 4th, in good health, or at least without any appreciable disturbance. He went down to Sandringham on Monday morning. From this period till the following Monday, the 13th instant, there was nothing to remark until late in the afternoon of that day, when, on returning from shooting in the neighbourhood, he complained of chilliness, shivering, headache, and depression. On the following day, a whitlow appeared on the forefinger of his right hand. This was seen and attended to by Dr. John Lowe, of King's Lynn, the medical attendant of the household at Sandringham; it did not prevent His Royal Highness from carrying out his intention of going on a visit to Lord Carington at Gayhurst that afternoon. On Wednesday, the whitlow was more painful; and Mr. Oscar Clayton, Extra-Surgeon in Ordinary to His Royal Highness, was summoned from town, and remained in attendance on the Prince at Gayhurst until Friday, when the Prince returned to town. The whitlow, and one which had threatened on the other hand, were promptly cured. The Prince, on Friday, attended the French play. Meantime, however, with a view to the strengthening of his general health, and to meet the indications afforded by the local inflammation of the finger, a careful dietary and a suitable tonic treatment had been enjoined, and observed by His Royal Highness. He returned on Saturday to Sandringham, and was seen on Sunday by Dr. Lowe. On Monday, Dr. Lowe found that febrile symptoms were palpable; and, in the evening, Mr. Oscar Clayton was telegraphed for. Arriving on Tuesday morning, he found that the symptoms were now characteristic of typhoid fever, and announced this as the diagnosis. Sir William Jenner being at the moment in Scotland in attendance on Her Majesty, Mr. Clayton telegraphed to London for Dr. Gull. Her Majesty was at the same time informed of the nature of the Prince's illness. The symptoms developed according to the usual course of the disease at this stage; and on the afternoon of the next day, Wednesday, the 22nd November, Dr. Gull arrived from London, and coincided in the diagnosis and treatment. Sir William Jenner arrived on Thursday, and from this stage they jointly took charge of the case.

The course of the disease since that time has been portrayed in the bulletins. It has now reached its nineteenth day. Of course, in a fever such as typhoid, there is no question of critical days. It must run its course, which, as we intimated, is never, in a regularly marked case, less than twenty-one days; and, in a rather severe attack, such as this, it may extend for a term of twenty-eight days. Happy the patient in whom these symptoms take a favourable course, and whom his medical attendants are enabled to pronounce at this stage to be progressing favourably, and to be suffering from no collateral complications. Lord Chesterfield's attack was also

a severe one, apparently more so than that of His Royal Highness. It commenced four days after it. He has been attended by Dr. Evans of Birmingham, and at a time, when the symptoms had a serious aspect, Dr. Murchison was called in consultation from London. The preliminary symptoms resembled those of the Prince, and included the formation of a slight abscess. The patient is now progressing in all respects favourably. Of course, it will not be left out of consideration that the characteristic disturbance of health of the various members of the party at Scarborough, their subsequent dispersion, and the onset of enteric fever in two of its members, at different parts of England, within four days of each other, may belong to the chapter of surprising accidents. Typhoid fever is essentially local: it is a fever of the country as much as of the town; it is even the fever of the country; and it is especially an autumnal fever—the fall-fever of American writers. Here, then, are all the scattered elements for a remarkable coincidence.

It is usually, however, possible to trace out and to remove the causes of typhoid, and hence the importance of a complete investigation such as will now be set on foot. In view of this, we omit to refer to circumstances connected with the Scarborough house, having a bearing on this question, which have been communicated to us from local and other sources, and of which only such investigation can determine the relative importance.

We have every reason to hope to be able to speak in our next issue of the convalescence of the Prince, as having already satisfactorily set in.

OUR CONVICT SYSTEM.

THE blue-books issued by the several departments of the State are published annually, for the purpose of giving information on all subjects that have occurred in each department during the previous year. These volumes are justly considered to be public property, for they bring to light, officially, state matters and doings which otherwise would remain in comparative obscurity. The Directors of Convict Prisons of England have just issued their yearly volume on the discipline and management of these prisons for the year 1870.

The convict department under State control has, in consequence of the cessation of transportation, grown into an important service. The statistics of the prisons, published in the last volume of the *BRITISH MEDICAL JOURNAL*, gave proof of this; and the contents of the volume now before us give similar testimony. The medical department of this service has also, of necessity, increased in extent and importance. The following figures are quoted in support of these statements. The daily average number under sentence of penal servitude in the government prisons during the year 1870, was 9,131—men, 7,941; women, 1,190. The mean daily average for the ten years ending 1870, was—men, 6,337; women, 1,174.

We are forcibly convinced at the very outset of our examination of the convict health-returns given in this recent volume, of the necessity for keeping in mind that the sentence of penal servitude is never carried out in entirety in any one of the government prisons. Length of sentence undergone, health, physical condition, age, and even conduct, may, during any period of sentence, be the cause of transfer from any one of these prisons to another. This rule of the service is apparently invariable, and, without question, it is both beneficial and humane; but, in consequence of this rule, we unhesitatingly state that the yearly death-rate of any of the prisons is of no value at all as a test of the death-rate of penal servitude convicts. The individual prisons are, in fact, but sections of one system under the immediate control of the directors in Parliament Street; and reliable statistics of sickness and mortality during sentence, can only be obtained by embracing the total number under sentence without reference to location. Taking this view

of the question, we find 123 deaths from all causes during 1870, out of the daily average undergoing sentence—13.4 deaths per 1,000. The male death-rate was 12.5, or of natural deaths only (excluding six accidents on public works and two suicides) 11.5 per 1,000. The female death-rate was 19.3. The mean mortality for the ten years 1861-70, was per 1,000—men, 13.8; women, 13.7.

Phthisis was the cause of death in 41 men and 10 women. The deaths from this disease per 1,000 of the daily average were—men, 5.1; women, 8.4; and the percentage of deaths on the total number of deaths—men, 41; women, 43.4. Other diseases of the respiratory organs were fatal at the rate of 2.2 per 1,000, and 18 per cent. of the total male deaths. Diseases of the brain and nervous system ended fatally in 9 men and 4 women; and diseases of the heart and great vessels, in 5 men and 1 woman. No death occurred from fever. One man, aged 21, died at Chatham of pyæmia, eight days after a severe accident. Two men who met with accidents on the public works, died at Portland of “mortification” after amputation. In one of these cases, “mortification of the left arm” followed amputation of the thumb; and in the other, mortification of the leg after amputation of the foot. The medical reports are anything but clear on the nature and termination of accidents at the public works’ prisons; and the recorded results of operations performed at those prisons are also confusing and obscure.

The total daily average number for the year of sick under treatment in the various prison hospitals was—men, 493.9, or 62.1 per 1,000; women, 61.9, or 52.01 per 1,000.

The number of insane cases in the year is doubtful. The returns on this head are confused and puzzling. Several prisoners were evidently insane when first received; others, about 27, became insane during the year; 13 were removed to lunatic asylums; and 29 or 30 were remaining on the last day of the year. The cases that occurred during sentence were at the rate of 3.2 per 1,000. Millbank prison receives nearly all the insane prisoners from the other government prisons. The remarks of the medical officer of this prison on the insanity of these convicts are of importance. They give undoubted testimony that the cases of insanity which come under treatment every year in the convict prisons are mostly consequent on previous criminal life, and not on prison discipline.

The limits of this article will not admit further detail of the health returns of these prisoners. We cannot, however, close without mentioning some evident defects in the mode of rendering the medical reports of these prisons. We are fully aware that the occupants or these establishments are under punishment, and that scientific medicine must, therefore, give place to the demands of the law; the health of the prisoner is to be cared for, but the sentence must also be carried out in its integrity and rigour. Granting all this, we nevertheless state that the eleven detached and disconnected medical reports cannot fully represent the sanitary condition of the prisons; nor can they render that favourable testimony to the system of management which they could and ought to do. A medical report is wanted which would embrace the whole of the prisons—which would tell of the sickness and mortality of prisoners who began their sentence in good health, and of the effect of imprisonment on convicts who were in bad health when sentenced. We look in vain through this yearly volume for this information. The tables of deaths which accompany the medical reports show that very many of the deaths were from diseases which began before the commencement of the sentence. This was the case in the majority of the women who died: and other parts of these reports give abundant testimony of the previous unhealthy condition of many of the convicts. The death-rates, even in their present undistinguishing form, speak well for the general management of these prisons; but we are confident that a larger amount of credit would accrue to the responsible officers of this service by making these medical returns more comprehensive and

general, and by showing how far the death-rates are influenced by diseases which began previously to imprisonment. We therefore commend these remarks to their consideration.

It is proposed to establish an asylum for idiots in Derbyshire.

SIR RODERICK I. MURCHISON, Bart., has bequeathed £1000 to Dr. H. Bence Jones, his physician.

DR. CHADWICK AND DR. HEATON of Leeds have been appointed Justices of the Peace for the West Riding of Yorkshire.

NEARLY £2,000 has been received for the building fund, and about £3,000 towards the endowment of the proposed Infirmary at Louth.

DR. THOROWGOOD has been elected Lecturer on Materia Medica at the Middlesex Hospital Medical College; and Mr. Henry Morris joint Lecturer, with Dr. Liveing, on Anatomy.

THE foundation-stone of the extension works of the Queen's Hospital, Birmingham, is to be laid on Monday, the 4th of December, by Lord Leigh, Lord Lieutenant of Warwickshire, and Provincial Grand Master, with Masonic honours and great ceremony.

SMALL-POX is epidemic in Buda-Pesth. At the meeting of the Medical Society of the place on November 18th, a committee was appointed to watch the progress of the disease and make weekly returns thereon.

A MEETING of the Medico-Psychological Association will be held at the rooms of the Medical Society of London, 32A, George Street, Hanover Square, on Wednesday, December 6, at 8 P.M. The President, Dr. Maudsley, will read a paper on the question, "Is Insanity on the increase?"

DR. GILBERT CHILD, of Oxford, strongly recommends for English villages and small country towns the Milanese system of the drainage of houses into water-tight cesspools, emptied frequently, efficiently, and quite inoffensively, by means of a hose and a barrel-cart previously exhausted of air.

THE MEDICAL PROFESSION IN ROUMANIA.

IN 1864, of 206 doctors of medicine in Roumania, 135 had German diplomas. A school of medicine was then formed at Bukarest; and since then, of 133 doctors of medicine, 37 only have taken their degrees in foreign universities. The majority have studied at home, visiting the French schools for a limited time only. The number of German practitioners settling in Roumania is likely to be further limited by a new regulation, which compels foreigners to undergo an examination carried on in the Roumanian language.

THE CHARITY ORGANISATION SOCIETY.

THE Medical Committee of the Charity Organisation Society will assemble at the office of the Society, 15, Burlington Street, Adelphi, on Saturday (to-day), December 2nd, at 4 P.M.; and they will be glad to meet any gentlemen, being medical officers or working governors of free dispensaries, who are willing to consider the desirability of converting their institutions into provident dispensaries. The Charity Organisation Society has issued invitations for a conference to be held at the house of the Society of Arts, John Street, Adelphi, on Tuesday, December 12th, at 3 P.M., to consider the best methods of checking the abuses now incidental to out-patient hospital relief, with special reference to the expediency of extending the provident principle. The chair will be taken by W. H. Smith, Esq., M.P.; and we understand that Mr. Stansfeld and many other influential gentlemen, both medical and lay, have promised to attend. The object of the conference is to discuss the province of the Poor-law, the Dispensary, and the Hospital, with reference to the sick poor; and to promote concerted and harmonious action among these agencies.

THE STRASBURG MEDICAL SCHOOL.

IT is reported that the French government intends to establish two schools, one at Lyons and the other at Nancy, in place of the Strasburg medical school. The Strasburg professors are to go to Lyons; and it is expected that the school will assume an important position in consequence of the large amount of hospital accommodation in that city. At Nancy, physics, chemistry, and physiology will be more especially taught.

HOSPITAL SUNDAY IN RICHMOND.

HOSPITAL Sunday was kept for the third time in Richmond and the neighbouring parishes on Sunday, November 19th, when, we are glad to report, the sum of £222:12:7 was added to the annual funds of the Richmond Infirmary, as the result of the earnest appeals made in its behalf in the parishes of Richmond, Twickenham, Ham, Kew, Petersham, and Mortlake. At the last meeting of the Committee, the sum of £2000 was handed over to the Treasurer, being an immediate legacy from the late Mr. George Wall of Richmond. A further sum of between £4000 and £5000 will be payable at a future period. At the beginning of the new year, six additional beds will be provided, of which four will be children's cots, making a total in all of twenty-one beds.

THE MURPHY ANNUITY FUND.

THE funds subscribed and promised by the profession towards the purchase of this annuity have already amounted to a sum sufficient to secure for Dr. Murphy a life-annuity of fifty pounds. Some inevitable delay in obtaining the necessary age certificates, etc., has prevented the treasurer (Dr. Arthur Farre) from purchasing the annuity. The papers, however, will be ready, and the amount purchased, on January 5th, 1872. In the meantime, the amount subscribed being in excess of that which is necessary to purchase an annuity on the sole life of Dr. Murphy, and many of the friends of Dr. Murphy being desirous to include in the provision his wife, who would otherwise be left destitute at his death, it is intended that an effort shall be made to increase the existing surplus to a sum sufficient to extend the proposal over the two lives. For this purpose £130 will be wanted, and it must be collected before the close of the year. Mr. Campbell de Morgan, 51, Upper Seymour Street, will act as treasurer of the supplementary fund, and Dr. Wiltshire, 57, Wimpole Street, W., as honorary secretary. When the full amount is collected it will be handed over to Dr. Farre, the treasurer of the original fund, who will invest the whole sum in the names of the trustees originally announced.

JENNER MEMORIAL.

THE following circular has been issued, dated November 25th, 1871, 96, Eaton Place, London, S.W., and signed by Colonel Kingscote, M.P.

"May I request your kind consideration of the following statements? The late Dr. Edward Jenner was born, lived, and died at Berkeley in Gloucestershire. The church has lately been restored, and it is desired to fill the east window with stained glass to his memory. The church is a noble edifice, and the window is well adapted for a most beautiful design, which has been furnished, representing our Lord in His various acts of healing, taken from the Gospel of St. Luke—the Beloved Physician.' The estimated cost of this design is £500. It may be well to state that vaccination was discovered by Jenner in 1798, and became general in England in 1799, and throughout all Europe before 1816. The important 'Vaccination Act' passed in 1840, and was made compulsory in 1853. Honours and rewards were conferred on Jenner as a public benefactor. The Emperor Napoleon valued his services to mankind so highly that he liberated Dr. Wickham, when a prisoner of war, at Jenner's request, and, subsequently, whole families of English, making it a point to refuse nothing that he asked. When the allied potentates visited England in 1814, the Emperor of Russia sought an interview with Jenner, and offered to bestow on him a Russian order of nobility. France has erected a statue in honour of him; and, in 1858, a statue was erected to his memory, in the presence of the late Prince Consort, in Trafalgar Square; which, however, has been since removed, and placed in Kensington Gardens, in a spot but little known, and can only be visited by pedestrians. May we not then, hope, that

this further testimonial of a memorial window may be deemed worthy to commemorate his services in the place where this wonderful discovery of vaccination dawned upon him, which occupied eighteen years of his life before he was able to give the benefit of it to the world? In London, in 1723, one out of fourteen deaths was caused by small-pox. In France, in 1734, the ratio was one in ten. This dire disease has been, and still is, raging amongst us; but a gracious Providence has provided, through the instrumentality of this great man, a remedy; and it seems fitting that some further work of art should be erected to commemorate so world-wide a blessing at the place of his birth and death. All contributions, however small, may be paid to the Bankers or Secretary."

Every such movement must receive our cordial support. But we cannot but think that the compliment should be paid to, and not by, the medical profession of this country, and that the funds should be supplied by the general public, on whom Jenner has conferred such inestimable benefits.

THE LONDON COLLEGE OF PHYSICIANS.

WE are happy to learn that the College has now extended to its Licentiates a privilege which we have before craved on their behalf, but was until very lately limited to its Fellows and Members—namely, the use of the Library and Reading Rooms. This will now be as much open to their use as that of the College of Surgeons is to its members. With a view to the general comfort of all who may avail themselves of this privilege, the Reading Room has been redecorated, and, for the most part, newly furnished; the daily papers are provided, as also the quarterly, monthly, and other periodicals; besides which, a large number of carefully selected recent works on medicine, surgery, midwifery, and the collateral sciences, will be found on the tables for perusal, and the volumes will be replaced by others every three months, or oftener, as the Library Committee consider desirable. The Reading Room is open under the following regulations.

"The Reading Room at the College, for the convenience of Fellows, Members, and Licentiates, using the Library, shall be open daily—Sundays, and such other times as the Library Committee shall direct, excepted—from one o'clock until four o'clock from the 1st of October to the 1st of March, and from one o'clock until six o'clock from the 1st of March to the 1st of September."

This step is in every way creditable to the authorities of the College, and will, we feel sure, be highly satisfactory to all who have the honour of belonging to it, whether as Fellows, Members, or Licentiates. It is one further step towards the practical recognition of unity of medicine, and the equal rights of all who belong to the corporate bodies.

SCURVY IN BRITISH SHIPS.

A VESSEL arrived at Queenstown on November 13th with a large number of cases of scurvy on board. Dr. Scott, Medical Officer at Queenstown to the Emigration Commissioners, was requested to visit them; and he states that all hands except the captain were suffering from scurvy in a greater or less degree. He records, as a remarkable fact, that the chief and second officers, as well as the carpenter and steward, all of whom lived "aft", were very severely affected. The vessel had brought home a cargo of silver ore and logwood from Altata in California; and the passage from that port to Queenstown occupied but a hundred and twenty-seven days. Dr. Scott remarks that, having had considerable experience of scurvy, he has observed that all cases of the disease have occurred with guano, corn, or sugar cargoes; and hence he infers that some glaring errors in quantity or quality of diet, or some positive neglect with reference to antiscorbutics, must have been the direct cause of this severe outbreak of scurvy. We are informed, however, that Mr. Harry Leach has been directed by the Marine Department of the Board of Trade to institute an official investigation into the matter. It is proper, in the interests of science as well as of commerce, that the results of these official inquiries should be made known to the public. The Board of Trade causes to be published, with almost painful accuracy, the details of all inquiries ordered by them that relate to railway accidents and marine collisions; but regular reports having reference to health of crews seldom or never

find their way into general or medical journals; and, as a consequence, no positive opinion can be formed as to the benefit that has resulted from the operation of the Duke of Richmond's Act or of any measures adopted to improve the sanitary condition of our sailors at sea.

PREVALENCE OF TYPHOID FEVER IN LONDON.

ENTERIC fever, always more or less present in London, and especially prevalent at this season of the year, is just now abundant and of a severe type. During the last five weeks, the weekly deaths registered have ranged as follows: 27, 27, 32, 36, and 23, against 28, 22, 19, 20, and 24, for the corresponding weeks of last year. The number of admissions at the London Fever Hospital, Liverpool Road, has been reduced during the last few weeks by the opening of the Metropolitan Asylum at Homerton for fever-cases. Dr. Collie, the Resident Medical Superintendent at this Asylum, informs us that the present endemic condition may be considered severe. He writes: "Of enteric cases we have admitted fifty cases of true enteric fever; of these, twenty-nine were of a mild character, and twenty-six were severe, having been complicated with more or less of bronchitis, pleurisy, or pneumonia. Of the total admissions, we have had nine deaths. The causes of death were as follows: 1. Enteric fever: hæmorrhage. 2. Enteric fever: bronchitis. 3. Enteric fever: pleuro-pneumonia. 4. Enteric fever: bronchitis; hæmorrhage. 5. Enteric fever: bronchitis. 6. Enteric fever: hæmorrhage. 7. Enteric fever: bronchitis. 8. Enteric fever: pleuro-pneumonia; hæmorrhage. 9. Enteric fever: bronchitis; perforation; peritonitis. There remain at present forty-five enteric patients."

NEW POSTAL REGULATION.

THE Postmaster-General has, we are rejoiced to hear, resolved to free the public from that last avenue of offence by which the worst class of quacks have been wont to attack them. The handbills and museums which once discredited our streets have been pretty effectually cleared away by the action of the police under Lord Campbell's Act (with one exception, to which we propose shortly to call attention); but the broadcast circulation of the same class of circulars and books by post has continued on a larger scale than ever, and has been a frequent cause of offence and complaint. We are glad to learn that the Postmaster-General has issued an instruction stating that they are henceforth to be considered as coming under the ban of No. 14 of the General Regulations, and that their transmission will henceforth be arrested. The more respectable class of newspapers have of late years closed their columns to obscene advertisements of this class. We regret to say that there still remain some important provincial exceptions.

TRAFFIC IN HOSPITAL LETTERS.

AN extensive and systematic traffic in lying-in hospital letters, information about which should be made as public as possible, seems to be going on in the metropolis. It appears that Mr. J. W. Langmore, Resident Obstetric Assistant at the Middlesex Hospital—an institution which undertakes one of the largest lying-in practices in London—has discovered that a number of persons are in the habit of soliciting letters from subscribers of the Middlesex and the other hospitals of London. These are given freely by some of the governors, and without due inquiry as to the name, the address, or the fitness, of the applicants. The letter, thus obtained, is presented at the hospital supplying it; and the name, address, and other particulars of the patient, are entered, the patient at the same time receiving an order for attendance in confinement by a student of the hospital or by one of the nurses employed by the institution. The market value of one of these orders appears at present to be about two shillings; the price, like that of other commodities, fluctuating somewhat according to the supply and demand. If a bargain have been struck previously to the presentation of the letter at the hospital and the procuring of the order, the name and address of the buyer are of course given; but, should this not have been completed, the matter is easily arranged by the intimation of a change of address to the student or nurse. Not only is an extensive fraud of this

character now going on, we believe, throughout London, but it appears that a custom obtains amongst a certain number of the poor to procure a letter for as many charities as possible, to insure certainty of attendance when the confinement comes off. But, as it happens that several of the nurses are frequently employed by different charities, it also occasionally occurs that the patient is referred by these to one and the same nurse. Two cases have been brought under our notice, in one of which six letters from different charities were sent in by a nurse for attending one patient. In the other case, four letters were sent in; and in both instances the nurse succeeded in procuring payment from each institution. It has been always understood that the sale of other than lying-in letters has been carried on to a certain extent for many years; but, considering the facility with which ordinary out-patient relief is now obtained, the trade is not so flourishing as in former years. Although arrangements may be made by the authorities of the various charities to check to a certain extent this fraudulent traffic, the abuse will, we fear, always exist to a certain extent. The subject is one which deserves the attention of all hospitals and lying-in charities.

THE CHIEF EPIDEMICS OF THE LAST THREE YEARS.

INSPECTOR-GENERAL ROBERT LAWSON, President of the Epidemiological Society of London, delivered an address on this subject at the opening meeting of the Society. He indicated the necessity of a close observation, not of one but of every epidemic, over the greatest possible surface, and for a series of years, to afford trustworthy data for the determination of the general laws which govern the progress of this class of diseases in their diffusion over the earth; and illustrated the value of such inquiries by the ascertained facts with regard to small-pox, scarlatina, diphtheria, fever, and cholera, not only in this country but on the continent and in America. An example from the last two diseases may be given. In 1868 there was much fever in Asia Minor and along the shores of the Mediterranean as far as Spain; and in 1869 the disease, in various forms, was very prevalent through Europe from Madrid to St. Petersburg, while it remained very active at several points along the north coast of the Mediterranean. Fever increased in Berlin in 1870, and in Vienna a rather severe epidemic of typhus commenced at the end of that year and continued during the first half of 1871. It will be remembered that in 1869 malignant cholera made its appearance at Kiew, in Russia, in the summer of 1869, and towards the end of the year spread to some extent through the basin of the Dnieper; it, however, acquired no great force until 1870, when it involved the whole country from the Black Sea to St. Petersburg, but was not met with in Europe as an epidemic west of Russia. In 1871, cholera continued at St. Petersburg and extended to Archangel, to Helsingfors north of the gulf of Finland, and along the country to the south of that and the Baltic as far as Hamburg and Altona. There had been a severe outbreak in Persia, to the south and east of the Caspian, in the autumn of 1868, which continued into 1869; and in the course of that year this was to have been expected in Southern Russia or the corresponding latitude in Asia: it actually appeared at Kiew, 300 miles from the nearest sea, and 1500 from the nearest point where the disease was known to exist at the time, while every attempt to trace its origin to importation failed. It has been found, from an extensive examination of facts, that cholera as an epidemic will not penetrate a district occupied by an epidemic of fever (enteric excepted) until that subside, when its place may be taken by the other. The fever in Asia Minor in 1868, and in Europe in 1869, 1870, and 1871, seems to have limited the progress of cholera westward in these years, until it crept along the south shore of the Baltic a few months ago. It is worthy of observation that the relative distribution of cholera and fever during the first approach of the former to Western Europe in 1828, 1829, 1830, and 1831, presents year by year an almost exact parallel to that in the corresponding period, 1868, 1869, 1870, and 1871. In 1831 a fresh wave came from the south, which affected Smyrna and Constantinople, and extended into Hungary, and was experienced in this country in 1832. In 1871

a similar wave appeared in Southern Russia, and has been felt at Smyrna and Constantinople, and has given slight indications at Vienna; it remains to be seen whether the parallel will be completed by its becoming epidemic in this country in 1872.

TYPHOID FEVER IN LINCOLN.

AN example of official obstinacy or procrastination, we cannot say which, is reported from Lincoln, which has resulted, it is alleged, in disastrous consequences to a household in that town. It appears that the water of a pump close to the minster was examined by the Local Board, and reported to be unfit for drinking purposes. But, for some inexplicable reason, or rather stupidity, no means were taken to prevent its being used. As a consequence, it is said, typhoid fever seized a family who had just taken up their residence in a neighbouring house: one of the servants has since died of the attack. There seems to be good reason to believe that the water-supply was the origin of the mischief, as the members of the family were in excellent health previously to their drinking the pump-water. The papers do not state whether other families used the obnoxious water, or whether typhoid fever had been limited to the one household in question. The matter, in any case, demands the immediate attention of the authorities.

AUSTRALIAN MEAT.

WE observe several strikes on the part of inmates of workhouses against Australian canned meat. We have taken so active a part in favouring the introduction of meat from this source of supply, that we shall not be supposed to incline towards an unreasonable prejudice if we recall to mind that Dr. Gordon, the British Medical Commissioner during the siege of Paris, observed and explicitly stated, in a communication which he published in our columns, that while preserved meats afforded an excellent and nutritious variety of diet, they were not found to be fitted to preserve health if used as the sole substitute for fresh meat.

THE TREATMENT OF DISEASE WITHOUT ALCOHOL.

DR. COLLENETTE (Guernsey), speaking at a recent meeting of the National Temperance League, stated that, at a small hospital to which he is attached, from 1839 to 1853, both years included, the sum of £2,026 was spent for intoxicating drinks, or an average of £135 a year; with an average of thirty-one deaths. In the fifteen years commencing with the year 1854, there was spent only £212, instead of £2,026, or an average of £14 a year instead of £135, and with an average of only twenty-three deaths instead of thirty-one. His colleagues and himself had a perfect right, if they thought fit, to order any stimulant they pleased, and to any amount. His colleagues were not teetotalers; but to do them justice, he must say that the £14 of which he had spoken likewise included the cost of the drink consumed at the tables of the governor and matron's houses, and also in the porter's lodge; so that it would be seen that the patients had very little indeed. Speaking of the treatment of delirium tremens, he added:—With the facilities for drinking and getting drunk cheaply in Guernsey, you will not be surprised to hear that we have large numbers of delirium tremens cases. I do not know that the treatment of delirium tremens at the present day is so bad as it was when I was a pupil and first commenced, but I know that the general prescription is brandy, brandy, brandy—brandy and eggs, brandy and beef-tea, brandy and milk, brandy and ammonia, opium and brandy. I have treated delirium tremens for more than thirty years—and I have had some hundreds of cases—and I have treated everyone of them without a single drop of intoxicating drinks, and with the best results. I have scarcely lost a case of delirium tremens; but for thirty years not one has had a thimbleful of intoxicating drink. As to operations, he said:—In thirty years I have had to perform many operations, because in Guernsey we act the surgeon as well as the physician; and during those thirty years I have never, except in two cases, prescribed or let my patients have one single drop of intoxicating drinks; and these two cases to which I allude were

exceptionally treated in consequence of consultations, against my wish, against my own convictions, and against my own conscience. Both these cases terminated fatally, and are the only two cases that I ever lost after operation. Dr. Eastwood, of Darlington, recently brought forward in the JOURNAL facts to support the statement that the intemperate are particularly susceptible to the cholera-poison. We may observe, however, that the evidence of Indian observers does not always confirm this statement. Dr. Collenette states that, in the visitation of cholera in 1849, a very large proportion of the then drunkards of Guernsey were swept away. Many respectable and moderate drinkers likewise became its victims; but the teetotalers to a man were spared. Not one teetotaler in Guernsey, he says, died of cholera, and only two were attacked by the disease in a mild form. He treats all forms of diseases without the administration of alcohol, and believes himself to have been very successful during thirty years' practice.

MR. DURHAM'S PAPER ON THYROTOMY.

WE have received, from Dr. Morell Mackenzie, a reply to the observations by Mr. Durham on laryngotomy at a recent meeting of the Royal Medical and Chirurgical Society. It is of so great length that we can only state its purport; which is, briefly, as follows. I. He does not object to thyrotomy *in toto*, and has so stated in his writings; but he considers that an extralaryngeal method of extracting growths ought never to be adopted, unless there be danger to life from suffocation or dyspnoea.—II. In respect to the danger to life in thyrotomy, he had been careful to point out which cases were cancerous in published text. Making all allowance for disputed cases, there is a mortality of nine per cent.; and, taking into account Mr. Durham's five new cases, a mortality of seven per cent. In extraction of growths *per vias naturales*, there has not been any mortality.—III. The voice was recovered in 19 out of 37 cases of thyrotomy, or in 50 per cent., but in 75 per cent. of 93 published glottal extractions.—IV. It is not clear that more complete extirpation can be effected by the former than by the latter proceeding. Of 27 non-malignant cases, one was totally, and two were partially, failures: death occurred quickly in four. Of the remaining 20 cases, recurrence occurred in three, or in 15 per cent. In the 93 cases of laryngoscopic operation, recurrence took place only in six cases of complete extirpation; it also occurred in three other cases where there was partial failure.—V. Extraction by the fauces with the aid of the laryngoscope no doubt requires a certain practice and expertness; if it be more successful and less dangerous to life, such a consideration is by no means an argument for rejecting it.—VI. The operation for removal of laryngeal growths through the glottis is almost painless and bloodless, and does not oblige the patient to abstain from his pursuits for a single day. The same cannot be said of the incision of the throat and larynx; besides pain, risk, etc., it confines the patient for three to four weeks at least. Dr. Mackenzie explains and regrets the omission to tabulate a case of Mr. Durham's in *Guy's Hospital Reports*, series 3, vol. xii.

CROTON-CHLORAL-HYDRATE.

AT the recent meeting of German Naturalists and Physicians, Dr. O. Liebreich, to whom medicine is indebted for the introduction of chloral, called attention to the properties of a narcotic agent termed "croton-chloral-hydrate." It is made by passing chlorine into allyl; and is decomposed by alkalis into dichloride of allyl and formic acid, hydrochloric acid being also formed. The first effect of its administration to animals is marked anæsthesia of the head, while sensation is preserved over the rest of the body. Next, there is a general loss of reflex irritability; the pulse and respiration remaining unchanged. If a large dose be given, death is produced by paralysis of the medulla oblongata. The animal may be preserved alive by artificial respiration, the action of the heart remaining unaltered; whereas the final effect of chloral is to produce paralysis of the heart. That death arises from paralysis of the medulla oblongata in animals poisoned by croton-chloral-hydrate, is

shown by the fact that contraction of the diaphragm is not produced by galvanism of the central end of the vagus, whereas it follows irritation of the phrenic nerve. When the animal has so far recovered that the breathing has become natural, then irritation of the central end of the vagus produces contraction of the diaphragm. The effects of this agent had also been tried on the human subject in the Berlin Hospital. In a child to which it was given, complete anæsthesia of the parts supplied by the trigeminus nerve was produced, while the reflex irritability of the rest of the body was retained. The pulse and respiration were unchanged in number throughout. Further researches on insane patients gave the same result; and Dr. Liebreich concluded therefrom that croton-chloral-hydrate has the property of inducing profound narcosis of the brain without interfering with the other organs; while a correspondingly deep narcosis produced by chloral is accompanied by general anæsthesia and by dangerous lowering of the heart's action.

PROFESSOR HUXLEY AND MRS. GARRETT-ANDERSON ON VENTILATION.

MRS. GARRETT-ANDERSON, M.D., in moving at the School Board for a Select Committee on the Sanitary Arrangements of the School, said that she wanted from 800 to 1000 cubic feet of air-space to each child. Her object is excellent, but her requirements are exaggerated. Professor Huxley said that with such requirements the school-rooms must be ninety feet high, which shows that, great authority that he is in most physiological questions, he has not studied this one very carefully. Height above twelve to sixteen feet cannot be taken into consideration in estimating cubic air-space for ventilating a room.

BONE-SETTING IN ALGERIA.

IRREGULAR bone-setting has received more than usual attention in this country since the publication by Dr. Wharton Hood of the practice of Hutton, the famous London bone-setter; and on the Continent since Regina Dal Cin, an account of whose doings we gave in last week's JOURNAL, presented herself as a professional bone-setter in Italy and Austria. In connexion with the subject, the following extract from Cateron's *Travels in Algeria* will be of interest.

"On our return, I called upon the Schiek, Lisaid-Mansor. I found him stretched on a couch built of stonework cemented with clay, covered only with a few rags, and with a stone for a pillow. His leg, surrounded with bandages and herbs, was firmly tied up in, and kept straight by, a thick slip of bark. His foot was immovably fixed to a stake stuck in the ground. He is obliged to remain in this condition until the bones are united. This severe treatment is not unfrequently fatal; but, if the Arab has a good condition, and gangrene does not set in, he recovers with a limb more or less straight. The poor Schiek was busy flipping off, with a handkerchief tied to a stick, the swarms of flies which were attracted to his wound. At the foot of the couch was the Tebib or surgeon, himself reciting incantations and prayers over the broken limb. He appeared much put out by my entrance, for the Arabs think that all Europeans understand medicine; but he was reassured when he saw that I merely looked on without interfering. I offered the patient a few expressions of sympathy, and hastened away, for the room smelt horribly close and offensive."

A SUGGESTION TO THE LOCAL GOVERNMENT BOARD.

FROM the character of the observations made by the stipendiary and other magistrates when administering the provisions of the vaccination law, they would seem to be so imperfectly acquainted with the important facts demonstrating the prophylactic value and constitutional innocence of the proceeding, that we venture to suggest to the chief of the Medical Department of the Local Government Board that it will be highly advisable to furnish them with a memorandum, which might convey the facts upon which that law is based, and which might occasionally afford a text when they desire to reply to the sophisms of the antivaccinators prosecuted before them. It is much better that these persons should be convinced than convicted. The police-reports, now often published, are so worded as to create an impression of injustice and oppression, and rather to kindle than to repress further agitation.

BILLROTH ON OVARIOTOMY.

IN an interesting series of "Surgical Reminiscences" which he is publishing in the *Wiener Medizin. Wochenschrift*, Professor Billroth describes nine cases of ovariectomy which he has performed, and of which seven have been successful. He notices the greater frequency of the operation in England than on the Continent, and remarks that, with such results before them as have been gained by Spencer Wells, surgeons must give up the idea that ovariectomy is one of the most fatal of operations; for, in a judiciously planned and skillfully performed operation of the kind, recovery is the rule, and death the rare exception. To arrive at this result, however, the rules laid down by the English surgeons must be carried out to the letter. He had, he says, the good fortune of witnessing two of Spencer Wells's operations, and of receiving much valuable instruction from him; and he remarks that he will be quite content if in the course of his life he shall be able to save by ovariectomy only half as many human lives as the English surgeon, whose disciple he will always consider himself, has done.

INFLUENCE OF MARRIAGE ON THE DURATION OF LIFE.

M. BERTILLON lately read before the Academy of Medicine a paper on the relative influence of marriage and celibacy, based on statistical returns derived from France, Belgium, and Holland. In France, taking the ten years 1857-66, he found that, in 1000 persons aged from 25 to 30, 4 deaths occurred in the married, 10.4 in the unmarried, and 22 in widowers; in females at the same age, the mortality among the married and unmarried was the same—9 per 1000, while in widows it was 17. In persons aged from 30 to 35, the mortality among men was, for the married, 11 per 1000, for the unmarried, 5, and for widowers, 19 per 1000; among women, for the married, 5, for the unmarried, 10, and for widows, 15 per 1000. There appears to be a general agreement of these results of marriage in Belgium and Holland, as well as in France and Paris.

SCOTLAND.

THE following gentlemen have been elected presidents of the Royal Medical Society of Edinburgh for the current year:—E. Willis Way, M.B.; Lewis Shapter, B.A.; Henry C. Martin, M.B.; and Arthur J. M. Bentley, M.B.

THE following office-bearers of the Edinburgh Obstetrical Society were elected on November 22nd:—*President*: L. R. Thomson, M.D. *Vice-Presidents*: A. R. Simpson, M.D.; J. Matthews Duncan, M.D. *Treasurer*: James Young, M.D. *Secretaries*: R. P. Ritchie, M.D.; J. Andrew, M.D. *Council*: A. Keiller, M.D.; G. S. Smith, Esq., and T. H. Pattison, M.D.

ST. ANDREW'S UNIVERSITY.

MR. RUSKIN has been elected Lord Rector of the University of St. Andrews. Mr. Ruskin holds a professorship in the University of Oxford, which, by the Universities Act, prevents his accepting the honour, unless, as it is said, he be only a "Professor Extraordinary" in that University.

IRELAND.

SMALL-POX IN DUBLIN.

SMALL-POX is still on the increase in Dublin, though the deaths are not numerous. The number of persons attacked, and the spread of the disease, is very universal. It is the invariable rule that those who had been previously vaccinated have the disease in a very modified form. Revaccination is also on the increase. The present outbreak of small-pox in Ireland will go a long way towards stamping out the absurd prejudice against both vaccination and revaccination. The Poor-law Commissioners have issued a form for the return of small-pox cases in the Dublin unions, which, no doubt, will afford very useful information in

the next Annual Report. It is a pity, however, that it contains no column for the statement as to the previous vaccination of patients: it would be of the utmost importance that such information should be given in all cases, as well as the relation between the existence of well-marked vaccination-cicatrices and the modification of the disease.

CHARGE AGAINST A DISPENSARY MEDICAL OFFICER.

MR. MAURICE SPOTSWOOD, Medical Officer of the Cahirciveen Dispensary District and Workhouse, retains his appointments, the Poor-law Commissioners having, at the request of the Guardians (as mentioned in our last), withdrawn their order that he should resign. The news was celebrated by blazing tar-barrels and other marks of popular rejoicing.

THE NECROPSY OF TALBOT.

WE understand that Talbot before his death gave specific directions that, at the *post mortem* examination of his body, only his head and neck were to be examined. This, and the fact that the sole object of the necropsy by the surgeons was to discover the immediate cause of death, explain the circumstance that the bullet was not at the time searched for. We understand that the unanimous opinion of competent experts employed by the Crown was, that the metal of the fragments that were found in the immediate vicinity of the fracture of the first spinal vertebra was in every respect similar to that of the conical balls found in the undischarged chambers of the revolver.

QUEEN'S UNIVERSITY IN IRELAND.

AT a meeting held on November 22nd, the Senate elected the following as Examiners during the academical year 1872-73. *Medicine*, Nicholas Colahan, M.D.; *Surgery*, John K. Barton, M.D.; *Midwifery*, T. More Madden, M.D.; *Materia Medica*, Thomas W. Grimshaw, M.D.; *Medical Jurisprudence*, Edmund W. Davy, M.D.

PATHOLOGICAL SOCIETY OF DUBLIN.

AT the opening meeting of this, the thirty-fourth annual session, which was held on November 25th, the President, Dr. James Stannus Hughes, announced that the Council had selected as the subject for the prize essay "The Diagnosis and Pathology of Injuries of the Thorax and its Contents." An amendment having been moved by Dr. Atthill and seconded by Dr. Bennett, the election of officers was postponed until Saturday, December 9th.

AUSTRALIAN MEAT.

THE use of Australian meat is rapidly extending in Ireland. Last week it was brought before the notice of the Belfast Board of Guardians. Meat is not a staple article of diet in Irish workhouses; but no doubt if it could be supplied at a cheap rate and of good quality, it would be generally adopted. At the present time, every endeavour to supply good and wholesome meat at a moderate price should be encouraged in the interests of the lower and middle classes.

THE SANITARY STATE OF DUBLIN.

THE paper read by Dr. Grimshaw before the Medical Association of the College of Physicians, which we published last week, appears to have directed the attention of the Dublin press towards the sanitary condition of that city. *Saunders's News Letter* informs us that "the sewage, main drainage, and other sanitary reforms must ultimately and shortly take place in Dublin;" whilst the *Irish Times* asserts that "the representations which have been made to us (*Irish Times*) leave no doubt that this scandalous state of things will not be much longer tolerated by the citizens of Dublin, who are taxed heavier than the citizens of almost any city in the empire, only to find their legitimate interests neglected." Now that the press has really taken up the subject, there may be some hope that sanitary reform may take place in Dublin. The citizens of that city must be a long suffering generation indeed, that they have not taken the matter before now into their own hands, and brought it before the notice of the Lord-Lieutenant, who is a well known sanitarian, and is empowered to investigate all such matters, in the event of the nuisance authorities neglecting to abate nuisances.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Appointment of a Public Analyst.—Relapsing Fever.—Contagious Diseases Acts.

THE Health Committee, by a majority of eleven to two, have resolved to recommend the Town Council to appoint a public analyst. The opposition was on the score of economy, the estimated cost of the measure being about £200 a year. Dr. Trench had asked for the appointment in consequence of the suspected importation of poisonous cheese from America. Dr. J. C. Brown, D.Sc.Lond., Lecturer on Chemistry at the Royal Infirmary School of Medicine, has been spoken of as a candidate.

Relapsing fever is slightly on the increase, but can scarcely be said, so far, to have assumed the proportions of a formidable epidemic, although the prospect of continued hard weather, with its invariable sequence, in this town, of want of employment and severe distress amongst the operatives, will inevitably aggravate the severity and extend the ravages of the disease.

A public meeting has been held in this town in furtherance of the objects of the National Association for the Repeal of the Contagious Diseases Acts. Dr. Burrows of Liverpool occupied the chair; and on the platform were several clergymen, Dr. Bell Taylor of Nottingham, a few medical men of this town, Mrs. Josephine Butler, and Mr. Applegarth. The speeches and arguments were of the usual character, except that one of the speakers, Professor Newman, said "he thought they might look forward to a not distant time, when the feeling of this nation would rise to such a point respecting the Contagious Diseases Acts, that it would be remembered against medical men which side they took in the present controversy." One of the speakers, a medical man, was understood to say that, at one of the largest meetings of the Medical Institution at which he had ever been present, and where a discussion took place on the Contagious Diseases Acts, not more than four of those present declared themselves in favour of the Acts—leaving the meeting to infer that a very large majority were opposed to them. Such an inference, however, is scarcely in accordance with the real state of the matter. The question has certainly been brought before the Institution, and a variety of conflicting opinions were expressed by those who took part in the discussion; but, of course, no division was made, such being at variance with all precedent in a scientific debate. So far as the predominant feeling of the members could be known, we are disposed to think that a decided majority would be in favour of a continuance of the Acts amongst the military, although much doubt was expressed as to the practicability of extending them to the civil population in their present form.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

Purification of the Irwell.—Lecture by Dr. Rumsey.—Amalgamation of the Infirmary and St. Mary's Hospital.—School of Medicine, etc.

THE new Mayor of Salford is likely to gain our golden opinions if he carry into action his professed intention of purifying the Irwell; but he is likely to meet with difficulties and obstacles in the fulfilment of the design not only from disbelieving ratepayers, but also from the men of science, half a dozen of whom advocate as many different methods of killing or curing the evil. But it is a great step for the chief magistrate to acknowledge his responsibility for the death-dealing character of the stream which flows through the midst of our city.

We have been engaged in other sanitary matters than this dismal river question of late. Last week, Dr. Rumsey read a paper at the invitation of the Manchester Statistical Society "On Certain Fallacies in Local Rates of Mortality." Both in the paper and in the discussion which followed, the Registrar-General was sharply criticised for his statistical deductions. One speaker described his annual report as a thrilling sensational romance, perhaps rather less interesting than one of

Miss Braddon's, but quite as fanciful. It was decided that a committee should be formed for the purpose of drawing up an amended form of death certificate, the adoption of which should be pressed upon Dr. Farr.

Dr. Rumsey's paper is particularly worthy of notice just now, as one of the most important conclusions at which he arrives, and one which is generally accepted as a sanitary axiom at the present day, is in danger of being practically ignored by those who should be the pioneers of sanitary progress, instead of obstinate perpetrators of acknowledged evil. I refer to the erection of intramural hospitals. Dr. Rumsey maintains that "hospitals, and slaughter-houses, and graveyards should, as a rule, be located *extra urbem*, and many of our old collections of sick should be swept away." In spite of this, there is a scheme afloat of amalgamating St. Mary's Hospital for Women and Children with the Infirmary, which means adding a maternity ward to the already sufficiently crowded space in which the Infirmary stands. It is true that there is opposition to this plan on the part of the merchants in the vicinity, many of whom have signed a protest against any more sick wards being built beneath their windows. They, however, are not likely to suffer, beyond having the sign of a favourite hotel interfered with, or the view of Piccadilly flags still further intercepted; but the real sufferers are likely to prove those for whom hospitals are ostensibly built—the sick who enter them. This particularly applies in the case of maternity wards, as Dr. Rumsey clearly enough pointed out in the following passage. "(1) The deaths in hospitals and other large institutions, especially the mortality following operations, and *universally that after childbirth*, are vastly increased by the mere aggregation of patients, and, *cæteris paribus*, in proportion to the density of that aggregation, apart from all other circumstances which might affect success or endanger life; (2) the death-rate, calculated as it should be, on the number of patients, and not on the number of beds, increases with the size of the establishment and the number of its inmates; and (3) wherever this assemblage of the sick and hurt occurs in the centre of a crowded population, the ratio of mortality attains its maximum." It is not probable that any one would be so hardy as to deny the truth of these propositions; at the same time, it is quite comprehensible that the Infirmary staff should desire to add facilities to the students for studying diseases of women and children. There is also another advantage which would indirectly flow from the union—the first blow would be struck at the monopoly of professional appointments which the Infirmary staff have long practically enjoyed.

The Manchester School is now much the largest in the provinces, and is, indeed, larger than many London schools. There are at present 106 registered students in the anatomy class alone, 65 of whom have taken out dissection cards. One of the great advantages of the Manchester School has always been the abundance of subjects; *e.g.*, in 1869-70 there were 43 distributions, and in 1870-71 there were 37. This abundance of the raw material is so constant, that the authorities took no thought for the morrow, by preserving bodies prior to the opening of the school, a proceeding which the recent Act allows. This neglect is somewhat to be regretted as, for the first time for many years, there is a dearth of subjects at the School. No pains, or indeed expense, have been spared by Mr. Smith to render his course of lectures on practical physiology a thorough and complete one. At present, he is demonstrating the histology of the tissues, and at each lecture employs a dozen or fifteen microscopes to assist his class in following his description.

There are many cases at the Infirmary at present of a highly instructive nature to gentlemen commencing the study of surgery; perhaps the most interesting of all is a case of Mr. Lund's of amputation at the ankle-joint (Syme's), which has healed without suppuration or the least loss of substance in three weeks, a result which is all the more remarkable as the operation was undertaken for caries of the tarsus, and several sinuses had for a long time kept up an exhausting discharge. The stump was dressed antiseptically, and covered with many layers of carbolised gauze, which filter but do not exclude the air.

VIENNA.

[FROM OUR OWN CORRESPONDENT.]

Politics and Professorships.—The Pathological Institute.—Renal Diseases.

THE political troubles of Austria do not involve its hospital further than that the successor of Oppolzer is not yet forthcoming. Though Hohenwart has passed away as one of the many ministers of Austria, his policy is far from defunct, but seems even very lively, in other matters as well as in appointing professors great in politics, as German

professors are. Bamberger, of whom much has been spoken in this matter, was once an assistant with Oppolzer, and is usually spoken of as the cleverest man in Germany of his years in medicine. Under such an impression, it is no wonder that the medical division of the University of Vienna wish to secure him for their school. But no discussion, comparatively, would have taken place on this matter, had not the German population of Austria felt it to be a deliberate insult on the part of the Czech or Bohemian ministry then in power. No one can reside in an empire like this, which is still essentially feudal, and which was built up by military supremacy in mediæval times, without feeling how surely with the voice of truth Knox spoke, in his *Races of Man*, of the importance of race unity in the people of a nationality. However, Imperialism is useful in some respects, and the absence of the pressure of public opinion establishes Vienna as the best field for studying the natural history of disease, and provides for her the most ample material for pathological observation in the world. The perfect obedience of the patient to the professors, itself a vestige of the feudal submission to a social superior, enables different measures to be tested from which something is learnt, even if it be only the knowledge of the inutility of many.

The Pathological Institute is a new structure, and is well contrived. On the upper floor are the rooms of Rokitansky, with lecture-room, Stricker, etc., and the Pathological Museum. On the ground-floor are the general *post mortem* room, in which ordinary cases are examined by the assistant professors, the room for the legal and police cases, immediately presided over by Rokitansky himself, and also rooms especial to each clinical professor, where cases peculiarly interesting, or where there may have been special difficulties in diagnosis, are examined, without the crowd of spectators interfering with the ordinary routine. The opportunities for observing the pathological changes of disease here are not neglected by the Anglo-Americans, who are frequently in excess of the Germans in the dead-house. The proportion of chronic kidney-mischief is very great, and tends to tell unmistakeably what a great effect this must have on the diseases of mature and advanced life. There can be no doubt that the origin of disease in advanced life must lie largely here, and must be regarded, in the language of Bence Jones, "as mechanical results of chemical changes." This theory may not be acceptable to those who attribute local disease to derangements of trophic nerves, but "the unpleasantness of a statement can hardly be regarded as a proof of its falsehood"; and unless we can be taught to regard the function of the kidney as of little importance, and, therefore, the incompleteness of its functional duty as of small moment, it is impossible to see so much of extensive chronic kidney-mischief without concluding that there must have occurred disturbances in consequence, or, in other words, manifestations of its existence. Nor can any great majority of these cases be regarded as cirrhosis; in fact, the kidneys muddle up their diseases in a very provoking manner here, and very disturbing to the divisions of Virchow accepted in England. The Americans, many of whom are very well up, regard the pathology of Roberts with more favour than the more marked divisions of some of our recent writers. Stone is, however, not common here, and one case recently was lithotripped by Billroth, who brought out the bulk of the stone in powder betwixt the blades of the lithotrite. The patient died with croupous inflammation of the bladder, and extensive disorganisation of the kidneys from pyelitis. In one case recently in the dead-house, a kidney had a number of cysts, in which were several black uric acid calculi, some of the size of lentil seeds. There is nothing, however, to identify disease, and especially lithiasis, with the use of the wines here, whether subacid or sweet.

ASSOCIATION INTELLIGENCE.

EAST YORK AND NORTH LINCOLN BRANCH.

THE next quarterly meeting of the above Branch will be held at the Hull Infirmary, on Tuesday, December 5th, 1871, at 4 P.M.; J. A. LOCKING, Esq., President, in the Chair.

ROBERT H. B. NICHOLSON, *Honorary Secretary*.
21, Albion Street, Hull, November 18th, 1871.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

A MEETING of this Branch will be held in the Theatre of the Midland Institute, Birmingham, on Thursday, December 14th, at 3 P.M.

A meeting of the Council of the Branch will be held in the same place at 2.30 P.M.

On the same day, and in the same place, the Committee appointed by the Branch for making arrangements for the annual meeting of the

British Medical Association, will meet immediately after the Branch meeting.

T. H. BARTLEET, *Honorary Secretary*.
Birmingham, November 26th, 1871.

SHROPSHIRE SCIENTIFIC BRANCH: ANNUAL MEETING.

THE annual general meeting of the above Branch was held in the Museum of the Natural History Society, Shrewsbury, on October 27th—J. D. HARRIES, Esq., President, in the Chair.

In opening the meeting, the Chairman regretted that the President-elect, Mr. Jones, was unable to take his place, in consequence of an accident which had befallen him. Dr. Moorhouse, however, had most kindly offered to fill his place.

Officers, etc.—The following were elected:—*Vice-President*: H. Nelson Edwards, Esq. *Member of the Parliamentary Committee*: J. D. Harries, Esq. *Representatives on the General Council*: H. Johnson, M.D., and S. Wood, Esq.

New Members.—Four new members were elected.

Papers and Cases.—1. Mr. J. D. HARRIES read a paper on Skin-Grafting, and exhibited some coloured Photographs; also a communication from Mr. Spencer Watson on Dry Dressing of Wounds.

2. Mr. WOOD read a paper from Dr. Newman of Stamford on the Antiseptic Treatment as applied to Operations and Wounds. (This paper has been received for publication.)

Dr. BURD exhibited a case of Tinea Favosa nearly covering the whole surface of the body, and made some observations on the treatment.

4. Mr. WOOD read a paper on Nerve-Force in Waste and Supply.

5. Mr. PHILLIPS exhibited a large and varied collection of Fresh Fungi, and gave a lucid, interesting, and amusing, account of their peculiarities, distinguishing the edible and poisonous kinds.

6. A good collection of Instruments, Medicines and Appliances, and Scientific Instruments, were shown.

Dinner.—At five o'clock forty-seven gentlemen assembled at dinner, under the presidency of Dr. Moorhouse; H. Nelson Edwards, Esq., occupying the vice-chair. A most agreeable evening was spent.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 21ST, 1871.

JOHN HILTON, Esq., F.R.S., President, in the Chair.

Epithelioma.—The PRESIDENT referred to the cases of epithelioma which had been brought before the last meeting of the Society by Mr. Hulke, and gave some particulars of an analogous case which had been treated by Sir Astley Cooper fifty years ago, and had since come under his own notice. The subject of the disease was a gentleman, who suffered from an active epithelial growth over the shin-bone. As he wore knee-breeches and silk stockings, and as the disease caused considerable disfigurement, he was anxious to have it removed. He was jocularly recommended to use a bone-raspe, advice which he actually put repeatedly into force; and although its use produced pain, he by this means kept the growth down for years. A few years ago this gentleman consulted Mr. Hilton for cancer affecting the bone, from which he ultimately died.

Intracranial Aneurism.—Dr. DICKINSON exhibited a small aneurism affecting the left middle cerebral artery. The patient was an elderly female, 72 years of age, who had always enjoyed good health. She expired suddenly while at dinner, her head falling on her plate. The effusion on the brain was not sufficient to cause death by cerebral pressure: Dr. Dickinson believed, therefore, that she had died of shock. The arteries of the brain were rather atheromatous, but elsewhere they were not very much affected. The heart and coronary arteries were healthy. The chief interest and rarity of the case was its proving fatal so suddenly.—Dr. GREEN related the case of a gentleman, aged 38, who had died suddenly from cerebral aneurism while drinking a glass of sherry.—Dr. HUGHLINGS JACKSON had seen a case prove fatal after a convulsive seizure in five minutes. There was rupture of an aneurism of the middle cerebral artery.—Dr. DICKINSON, in answer to Dr. Jackson, stated that there were neither vegetations on the valves, nor any history of convulsions.

Double Optic Neuritis.—Mr. BRUDENELL CARTER exhibited by means of the reflecting ophthalmoscope in the ante-room a case of double optic neuritis in a man. He said that Dr. Hughlings Jackson, who had examined the patient, believed that a cerebral tumour was

present, but that the cerebral symptoms were in abeyance.—Dr. JACKSON remarked that there were no cerebral symptoms of moment, hence the interest of the case. It was just one of those cases in which cerebral tumour was found after death without many symptoms during life.—Mr. HULKE pointed out that tumours growing inwards upon the brain gradually produced waste, and that there were often no symptoms until a few hours before death. We should be careful, therefore, in attacking tumours on the outside of the skull, as we frequently could not tell whether they penetrated or not.

Aneurism of the Innominate Artery.—Dr. BÄUMLER brought forward a specimen of aneurism of the innominate artery pressing on the common carotid artery. It chiefly affected the anterior circumference, so that the sac extended upwards to the right and left. The pneumogastric, sympathetic, and recurrent nerves were involved in the wall of the sac. The left recurrent nerve was intact. The specimen was taken from the body of a labourer aged 53. Three weeks previously to death he began to suffer from aphonia; he could not close his glottis, thus showing paralysis of the vocal chords. It was complete on the right and partial on the left. The diagnosis was verified after death, and the muscles of the larynx were found to be thin, pale, and flabby. Dr. Bäumlér wished to know if bilateral paralysis of the chords occurred from paralysis of one recurrent nerve.—Dr. WILKS had known several cases where the discovery by the laryngoscope of paralysis of the vocal chord led to the diagnosis of aneurism. At the Veterinary College he had been lately told that roaring in horses was produced by pressure on the recurrent laryngeal.—Dr. CRISP said that aneurism in the horse was very rare. The old notion was that roaring was produced by emphysema, but this idea was now given up.—Allusion being made to the treatment of roars by shot, Mr. HULKE referred to a gamekeeper who, he knew, was in the habit of taking shot for “rising of the lights”; and the PRESIDENT referred to a similar practice of taking vinegar in addition to shot.—Dr. RISDON BENNETT remarked that many horses roared after a certain amount of exertion, and that paralysis of the recurrent laryngeal nerve was only one explanation of the disease.

Horse-shoe Kidney.—Dr. DICKINSON exhibited a specimen, for Dr. Hawkes.

Excision of the Elbow-joint.—Mr. ARNOTT exhibited a specimen showing the results of excision of the elbow-joint. The subject of the disease was a boy, who had been admitted into the Middlesex Hospital two years ago, when two and-a-half-years old. He had strumous testicle and other symptoms of scrofula. The joint was diseased, and was excised. Considerable portions of the bones were taken away. In two or three months he had fair use of his arm. In September 1870 the testis was removed. In May 1871 the boy showed cerebral symptoms, convulsions, and paralysis, which ultimately carried him off. After death, the osseous tissue of the ulna, radius, and humerus was found to be restored, and the ends of the bone were united by means of strong fibrous bands with cartilage imbedded and apparently becoming bone. The limb was half an inch shorter than the other. In the brain were found three tumours in the right cerebral hemisphere, from the size of a walnut to that of a hen's egg, made up chiefly of cheesy substance and coated with grey transparent material, but there were no miliary tubercles in the brain. The skull was perforated. There was tubercle, however, in the lung. The microscopical examination of the tumour showed it to be similar to lymph-gland structure.—Mr. MAUNDER said that new bone was thrown out in quantity in these cases, because the limb was not allowed to rest.—Mr. DE MORGAN referred to a case, in which the radius had been removed and the ulna had thrown out a large quantity of new bone, which could not be explained by Mr. Maunder's theory.—Mr. WARRINGTON HAWARD asked Mr. Arnott whether he had taken any special care, in excising the joint, to preserve the periosteum, as he had seen, after the subperiosteal method of resection, an unusual generation of bone, in one case so much as to interfere with flexion of the joint. Though he did not think such precaution was necessary in ordinary cases, it seemed to him well adapted to such as, from the extent of the disease, required the removal of a large portion of the bones. Mr. Haward had recently practised that method in such a case with very good results. The mobility of the elbow-joint after resection was generally very good, in some cases even more than the natural movements being obtained. As, for instance, the power of placing the hand flat on the shoulder, which could not be done in the natural condition.—Mr. JOHN CROFT had followed out the plan of saving the insertion of the triceps.—In answer to Dr. DOUGLAS POWELL, who asked how the skull had become perforated, Mr. Arnott replied that he believed the inflammation had extended to the dura mater and skull from the tumours.—Mr. Arnott, in reply to Dr. Bäumlér, said he did not know whether the child had suffered from acquired or hereditary syphilis.

Œdema of the Glottis: Laryngotomy.—Dr. DICKINSON exhibited the larynx and trachea of a man aged fifty-two, on whom laryngotomy had been performed for acute œdema of the glottis. He died ten days after the operation, with pneumonia and symptoms of delirium tremens. There was minute injection of the air-passages below the opening, but above it the mucous membrane was of the ordinary pale colour. This inflamed state was, he believed, the result of the air passing, cold and unmoistened, immediately into the trachea and air-passages. At the Hospital for Sick Children, out of thirty-six fatal cases of tracheotomy, pneumonia was present in seventeen; bronchitis without pneumonia in five; and congestion of the lungs in two. To prevent these complications, he had invented a respirator to be applied to the wound. The plan generally adopted, of making a tent by means of the bed-curtains, and keeping it filled with steam, was not good, as the body was also kept under the influence of the steam, an objection.—Mr. SQUIRE said that he thought diffusing the steam in the room was better than the tent method. He believed that chloroform was not employed so frequently as it ought to be in performing the operation of tracheotomy. The pulmonary affection was, however, not always due to the cold air, as bronchitis naturally arose in many cases in consequence of the disease.—Dr. WILKS agreed entirely with Dr. Dickinson in his opinion about the effects of the operation. He believed tracheotomy to be a formidable operation.—Mr. THOMAS COOKE said he had operated on five cases in Paris, and four of these proved successful. He covered the cannula with a piece of thick gauze. Mr. Cooke also alluded to the case of a gentleman who had worn a cannula for years, and who had an India-rubber-tube attached to the cannula, the mouth of which he kept under the waistcoat, so that the air was thus rendered warm.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, NOVEMBER 18TH, 1871.

R. DRUITT, M.D., President, in the Chair.

The Position and Duties of Medical Officers of Health.—The PRESIDENT read a paper on this subject. He recommended a fusion of the preventive and curative functions—the *non bene junctarum discordia semina rerum*; and the organisation of sanitary districts in such a way as to save labour and time, and to hinder two people from going over the same ground. The Royal Sanitary Commissioners have recommended that there shall be one local health authority in every district, and not more than one; and that every local health authority shall have a medical officer of health—and it is suggested that the Poor-law medical officer shall be that medical officer of health in rural districts; and that every such officer should have the power of an inspector of nuisances. We might rejoice in the hope that preventive medicine will thus be put on a level, if the recommendations of the Commissioners should become law, with curative medicine, and that the powers necessary for abolishing the causes of disease would be conferred on the practitioners who attend the poor. He did not wish to impose new and unpaid duties upon the present holders of Poor-law offices. He denied that their status and emoluments should be raised, and that they should be regarded as “civil surgeons,” or have some other attractive title. As the Poor-law Board had been abolished, so should Poor-law surgeons. He hoped that there would be one law for the whole kingdom, and that the civil curative officer would everywhere work with and under the medical officer of health. Higher qualifications ought to be exacted from the medical officer of health—his duties ought to be more of an inspectorial order, and less compatible with general practice. Speaking of inspection he said that he had always regretted the want of inspectorial visitation by a superior authority, who should harmonise the work of various parishes, and combine the results of all in one metropolitan sanitary report. There would be immense benefit if the actual civil surgeons were subject to visitation and inspection by medical officers of health, and if medical officers of health were themselves subject to the same control from a central office, and if for this purpose every institution—be it hospital or dispensary—supported by voluntary contributions, which undertakes the treatment of the poor, were placed in the same category. The only defect he saw in the recommendations of the Royal Sanitary Commissioners was the want of some consulting and inspectorial referee nearer than the Local Government Board in London. The duty of reporting on local and scattered insanitary conditions, and the recommendation of remedies, ought to be the duty of the civil surgeon, whose duty it should be to act as sanitary or preventive or health officer in the first instance. But he must make it his duty, when he sends in his sickness report, to say whether any insanitary conditions exist, and whether proper notices have been served, and if not, why not. The medical officers of health,

or superior civil practitioners would relieve the ordinary civil surgeon of the trouble of initiating law proceedings, and of the embarrassment of offending his friends and patients. The possible duties and qualifications of the medical officer of health or civil inspecting practitioner were multifarious. It is to him that the public would look for statistical information as to sickness and death, and their causes, over the area of his jurisdiction; for initiating and carrying out legal proceedings against nuisances; for inquiring into cases of uncertified deaths. Moreover, he should conduct *post mortem* examinations, make analyses, test adulterated food, determine the purity of water, act as coadjutor or substitute for the coroner, and report on epidemics affecting animals. The sanitary officer, if he be not to fall behind the age, must have some kind of study which shall connect him with the progress of biological science in some branch. As to the holding of private practice it would be limiting the choice of officers unduly if all degrees of private practice were disqualifications. The ideal combined curative and sanitary medical organisation which Dr. Druitt advocated was foreshadowed by the arrangements in some rich London parishes thirty years ago. For instance, the parish of St. George, Hanover Square, used to employ a physician and surgeon with handsome salaries, besides the general practitioners. The last holders of those offices were Sir James Clark (then Dr. Clark), who resigned on being appointed Physician to the Queen; and Mr. Howship, who was Surgeon. Dr. Druitt concluded with some comments on the progress of cholera at Constantinople and elsewhere.

Dr. ILIFF moved a vote of thanks to the President for his paper.—Dr. LETHEBY, in seconding the vote, said the paper was a most opportune one. It was necessary, however, to be very careful with regard to the Poor-law medical officers. They possessed most valuable information, but it was doubtful whether they could properly perform so many duties, unless they had some superior officer over them. In some towns, owners of poor property were sometimes among the Poor-law officer's best patients, and he ought to have somebody to screen him. Information was needed as to the sickness of the people, and the Poor-law medical officers were the best able to furnish this, if it could be properly managed.—Dr. DUDFIELD believed that the Poor-law medical officers would be quite satisfied with the position of assistant medical officers of health. He quite agreed that owners of poor property were frequently members of boards of guardians. He had heard of money being given as relief with the one hand, and taken back as rent with the other. During the epidemic of 1866, he had witnessed highly beneficial results arise from the harmonious working together of the medical officer of health and the Poor-law medical officers. He believed that at present they had power to inspect the Poor-law officers' books, at least in those parishes in which the dispensary system had been established. Moreover, the imparting of such information would tend to diminish sickness, and consequently to lighten their own labours.—Dr. HARDWICKE said, with reference to the contagiousness of diarrhoea, that he had found by practical experience that the temperature had more to do with the spread of the disease than surrounding nuisances. He had also noticed that the diarrhoea of summer was replaced by bronchitis in winter in nearly the same proportion.—Dr. STEVENSON concurred in thinking the Poor-law medical officers could give valuable assistance, and he thought they would be entitled to extra pay for their services.—Dr. GIBBON had received great assistance from the reports of the Poor-law medical officers. He thought, however, that to be efficient they ought to be released from private practice.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, NOVEMBER 25TH, 1871.

JAMES STANNUS HUGHES, M.D., President, in the Chair.

Amyloid Degeneration.—Dr. WILLIAM MOORE presented a group of specimens of amyloid degeneration taken from the body of a soldier, aged 28. There was some doubtful history of two attacks of syphilis in the case. About eighteen months ago, the patient began to suffer from epigastric pain, cough, and expectoration. A year back, he vomited blood, but in no great quantity. On admission, he was extremely emaciated, with a dusky hue over the face and body. There was a considerable amount of ascites, the measurement round the body at the level of the umbilicus being more than forty inches. The urine was free from albumen. He shortly died of exhaustion. The liver was enlarged, and weighed eight pounds. Its transverse diameter was fourteen inches. It afforded a good example of the lardaceous liver, responding freely to the iodine test. The kidneys and spleen had also undergone amyloid degeneration. The heart was fatty, and the lungs were extensively diseased; the left viscus presenting an extreme degree of cirrhosis, and a cavity being found in the apex of the right lung.

Disease of Knee: Amputation.—Mr. JOHN HAMILTON brought before the meeting an example of chronic disease of the right knee-joint, necessitating amputation through the lower part of the femur. A man, 20 years of age, suffered from symptoms of knee-joint disease. Violent starting pains in the neighbourhood of the knee were followed by the formation of an oval swelling, in which fluctuation shortly became established. A group of unusually severe constitutional symptoms also made their appearance. The disease had commenced six years before, as an attack of synovitis. Owing to judicious treatment, the affection was kept in abeyance for a long time, but unfortunately the patient fell and fractured the lower end of the femur. This accident led to the development of symptoms of ulceration of the cartilages, and to the formation of an abscess below the popliteal space. After removal of the limb, the following morbid changes were noticed. On opening into the joint, a quantity of dark coloured pus escaped. Ulceration of the cartilage of the patella had made great progress, and the cartilage over the femoral condyles and over the outer condyle of the tibia was quite eroded; that over the inner condyle was in an ulcerated state. Pulpy thickening of the synovial membranes had occurred, and some evidence of the line of fracture of the femur was obtained.

Latent Aneurism: Fatty Disease of the Heart.—Dr. HAYDEN detailed an important case of latent aneurism and fatty disease of the heart, and exhibited the morbid specimens connected with it. A gentleman, aged 62, had suffered about three years ago from lumbar rheumatism. He subsequently remained pretty well, though he was occasionally a victim to neuralgia. On the afternoon of November 10th last, he consulted Dr. Hayden for this latter affection. The pulse was full and regular, at 84. The heart's sounds were almost normal, the first being perhaps slightly ill-pronounced, and the second rather unusually sharp in tone. There was, however, nothing especially to attract attention. Dr. Hayden turned to his desk to write a prescription, when a rustling sound was heard, and he observed the patient fall senseless to the ground. In a short time he was dead. At the necropsy, the anterior mediastinum was discovered laden with fat. The pericardium was filled with dark clotted blood, and the anterior surface of the heart had a yellow hue. A rent was found in the right side of the aorta just where this vessel leaves the pericardium. The highly atheromatous internal coat had evidently first given way, and the increasing pressure of blood had then caused the rupture into the pericardial sac. An aneurism, in shape like a pine-apple, ran up the ascending aorta, but did not engage the great vessels springing from its arch. The internal surface of the dilatation was very rugose. The muscular fibres of the heart were in a state of obsolescence, and in places had quite disappeared, nothing being visible under the microscope but large fat globules. The change, on the whole, seemed to be one of fatty substitution rather than of fatty conversion.

CORRESPONDENCE.

SEWAGE AND ENTOZOA.

SIR,—Dr. Alfred Carpenter is correct in surmising that I have not visited the sewage-works at Croydon; nevertheless, being guided by the statements of others who have visited the irrigated district, I do not see how I could arrive at any other conclusion than the one stated by me in the extemporised speech referred to. I respectfully submit that the following data imply that the irrigated grounds at Croydon and Beddington are flat, "low-lying", and "swampy."

I must premise that I based my statements chiefly upon the recollection of what took place at three separate meetings of the Association of Officers of Health, when Dr. Letheby, Mr. Hawksley, Mr. Smee, and Mr. Creasy, characterised the state of things at Croydon as little better than a "pestilential swamp."

On referring to Dr. Letheby's paper, and report of the discussion which took place on one of these occasions, I do not find that my memory has been particularly unfaithful. He says, speaking of all such districts (p. 9):—"The land irrigated with sewage is always a foetid, swampy morass, of the most offensive description." "At Norwood and Beddington it is a subject of serious complaint." "I have been surprised at the statements of Dr. Carpenter."

Again, Mr. Creasy's evidence before the Parliamentary Committee is quoted (p. 9):—"I know the sewage-farm belonging to the Croydon Board of Works, and have had experience of what condition of health is around those flats." In the discussion, Mr. Creasy added (p. 18):—"As to the outfall at Beddington Corner, every well was contaminated." "The grass was irrigated as long as it could stand up, and then it was sent away to market, with the sewage some inches up the stem."

Mr. Hawksley said (p. 18):—"In the month of February he was down there. The sewage was then *frozen over the whole surface of the land* for acres and acres, and was not in the state Dr. Carpenter described."

In reference to Dr. Letheby's assertion that sewage-farms are "pestilential swamps". Mr. Hope also says (BRITISH MEDICAL JOURNAL, p. 374):—"I believe that this is a very accurate description of many, and I even fear of most, sewage-farms." "The scythe, as a rule, does not descend as low as the height to which the sewage rises on the stems. *I except, of course, all improperly managed farms, such as Croydon.*"

In the face of the combined evidence here referred to, I think Dr. Alfred Carpenter is unduly angry with me for forming the very natural and legitimate deduction which I did.

As regards the dissemination of the germs of entozoa, I may say that, if all sewage-farms were laid out and conducted in the admirable manner in which Mr. Hope's Breton farm is well known to be, certain of these parasites would stand very little chance of propagating their species. In my humble judgment, the agriculturalists are deeply indebted to that gentleman.

What Dr. Carpenter means by the expressions "innuendos frequently cast out", and "promoters of a patent", I do not know. The tone of his letter is neither dignified nor gracious.

I am, etc., T. SPENCER COBOLD, M.D., F.R.S.
Wimpole Street, November 24th.

MEDICAL EXAMINATIONS.

SIR,—With a view to the publicity which you advocated in your leading article on "The Coming Race" in last week's JOURNAL, I would venture to suggest that all medical students should be permitted to attend and hear the *viva voce* examinations of the various licensing bodies. At Oxford, and I believe at Cambridge, all *viva voce* examinations whatsoever are public. Indeed, some years ago, to sit in the schools whilst these were going on was as much a part of an undergraduate's duty as attendance on lectures; and students avail themselves largely, and to their great advantage, of this privilege; and, since examinations are set up as standards of acquirements, should not every facility be given to students for obtaining clear ideas of the nature and height of these standards? The papers set, it is true, are easily obtainable; but these give no idea of the equally or perhaps more important practical and *viva voce* part of the examination. I have never heard, and should be at a loss to imagine, any valid reason for the inquisitorial secrecy with which the examinations are conducted at the College of Surgeons, and even at the University of London, from which one might have expected a more liberal treatment. If a student do not know his work, nothing he will hear on the days of his examination from the *viva voce* of others will get him through. And surely there can be no fear with the examiners of running dry of questions in subjects so wide, and of which they are such accomplished masters. It is perhaps a weakness with medical students, that they have not a sufficient control over their emotions; but the solemnity of the occasion and the august presence of the examiners would have a subduing effect, and any indecorous manifestation of feeling would have to be promptly put down. The fear of making a fool of himself before his fellows might have a salutary stimulant effect on some students.

I am, etc., M.A., M.B. OXON., M.R.C.S., L.S.A.
Tealby, November 28th.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

SIR,—Permit me to urge once more upon the members of the Poor-law Medical Officers' Association the necessity for paying their subscriptions, which are long over-due. The amount has never been large for the good done, and being done, and the bulk of the members have never been asked to contribute any labour. Dr. Rogers, Mr. Corrance, and a few others, who have not one single farthing to gain by their exertions, have been working unremittingly for months and years; and the great body of the Association, who have everything to gain, are only asked for five shillings each! Is it possible that they can hang back, now that the Bill embodying the objects they have had in view is already drawn up, and in the hands of Mr. Corrance, who is going to introduce it into Parliament next session? The total cost of the Bill will be less than the amount of subscriptions already due and

unpaid, and the workers in this movement have a right to expect that their hands shall not be tied by paltry considerations of *£ s. d.*

The members of the Association in Cardiff and neighbourhood have voluntarily increased their subscriptions to seven shillings and sixpence; not that the amount is a great deal, but if in a poor Welsh union this can be done, it surely ought to stimulate other members to go and do likewise. There would then be a sum in hand more than sufficient for all our needs.

Mr. Corrance, in addition to the time and trouble he has devoted to this cause, has nobly offered to bear a large share of the expense; but shame must surely operate on the members of the Poor-law medical staff throughout the land to prevent such a necessity. If they cannot bear the cost of carrying on their own work, when that cost, too, is so ridiculously small, they ought never to have become a Society, nor have encouraged other and more earnest men to depend upon such a broken reed as their support.

JAMES MILWARD.

Cardiff, November 28th, 1871.

POOR-LAW MEDICAL FEES.

MEDICUS writes:—I saw in the last number of your JOURNAL a copy of the consolidated order of the Poor-law Board, in which I feel interested, and should like to know whether a board of guardians is justified in refusing a fee for medical attendance in a midwifery case after the medical officer of the district had received an order from the overseer to attend the case?

The person who was attended did not actually receive parochial relief, but the overseer knew that the party referred to had not sufficient means to pay for a medical attendant, there being a family of six young children, and the husband only earning about fifteen shillings a week. I shall be glad to know whether the overseer or guardians are liable for the fee in such a case.

* * * The law empowers overseers to grant relief only in cases of "sudden and urgent necessity;" and, therefore, if an overseer should give an order for medical attendance, it is his duty to satisfy himself whether the case be such an one as he is legally entitled to relieve—that is, whether it be a case of "sudden and urgent necessity." If the medical officer receive from the overseer an order to attend a case, and the case be one for which the overseer is not empowered to issue an order, then the medical officer may act upon the order or not, as he may think fit; requiring, if he act upon it, that the overseer giving the order shall undertake personally to remunerate him for his services. When the medical officer, having attended in pursuance of an order issued by the overseer, makes his claim to the guardians for a fee under Art. 182, the guardians must ascertain whether the claim be well founded. If they come to the conclusion that the order was not lawful, they must then hold that the medical officer is not entitled to a fee from them, and they would be bound to withhold it. At the same time, certain discretionary power is allowed to the guardians; and they may deal with the case as one justifying such compensation as they may think proper to make, in accordance with the terms Vic. II and 12, cap. 110, sect. 2. On the other hand, the medical officer has a legal claim on the overseer if the latter directly, or by implication, undertook a personal responsibility in respect of the medical officer's attendance on a case for which he had issued an order.

OBITUARY.

JOHN DEMPSTER, M.D., INSPECTOR-GENERAL OF ARMY HOSPITALS.

DR. DEMPSTER died recently in Edinburgh at the age of 77. He was the son of a medical practitioner in Cupar-Fife, and was one of seven brothers, most of whom have served in the army as medical officers. He entered the army as hospital assistant-surgeon in October 1813, and served five years at the Cape of Good Hope. In 1821 he was attached to the 72nd Foot, and afterwards to the 38th, with which regiment he served during the Burmese war from 1824 to 1826. For his services here he received the silver medal and clasps. He was surgeon to the 62nd Regiment in India until 1848. In 1852, the rank of Deputy Inspector-General was conferred upon him, and he was sent to Jamaica to assume the control of the medical department in that colony. On leaving, he received the thanks of the Government for his care of the troops, and for his judicious hospital reforms. By the Royal Warrant of 1858, he was placed on half-pay. Shortly afterwards, he received the good service pension. His long service in warm climates had impaired his constitution, and after a short illness he succumbed to an attack of asthma and bronchitis.

HENRY GREENWOOD, M.D., BLACKHEATH.

DR. GREENWOOD was born in 1793, at Calne, of which place his father was vicar. He was apprenticed at the proper age to Mr. Corfe, a surgeon in Southampton; and afterwards became a student of the then united hospitals of Guy's and St. Thomas's. He became a Member of the Royal College of Surgeons in 1814, and soon afterwards entered into partnership with Dr. Brickenden, a general practitioner in Horselydown and the neighbourhood, on whose retirement he succeeded to the practice. In 1842 he took the degree of M.D. at the University of St. Andrew's; in 1852 he was made a Fellow of the Royal College of Surgeons of England, and in 1859 a Member of the Royal College of Physicians of London. After some years of weakness and suffering, he expired at Blackheath, on November 22nd. Dr. Greenwood was one of the original members of the Hunterian Society.

THOMAS ANNANDALE, M.R.C.S., L.R.C.S.E., L.S.A.,
Consulting Surgeon to the Newcastle-on-Tyne Infirmary.

MR. ANNANDALE died suddenly, aged 62, at Wetheral, near Carlisle, of apoplexy, on November 14th. He was for many years a surgeon to the Newcastle Infirmary, and had an extensive general practice in Newcastle and the surrounding districts. He was compelled to relinquish his practice about five years ago, owing to an attack of paralysis; and since then he lived a retired life at Wetheral. Mr. Annandale was distinguished as an operating surgeon, and enjoyed the esteem and respect of his patients, who thoroughly trusted him, for his treatment of them was always honest and upright. By the poor he was much beloved; and he often received grateful and kind expressions from hospital patients who had experienced his tenderness and had benefited by his skill. On retiring from the Infirmary, Mr. Annandale was appointed consulting-surgeon to the institution, a compliment which he sincerely valued.

MEDICAL NEWS.

ROYAL SOCIETY.

AT the Annual Meeting of the Fellows of this Institution on Thursday last (St. Andrew's-day), the Officers and Council for the ensuing year were elected. On this occasion, the medals were presented to Mr. George Busk, President of the Royal College of Surgeons, for his valuable researches in Comparative Anatomy, Physiology, and Zoology; to Dr. Stenhouse for his researches in Chemistry; and to Mr. Mayer for his researches on Heat. Professor Airey, the Astronomer Royal, was elected President of the Society in the vacancy occasioned by the retirement of General Sabine, who has filled the office for ten years, and who, it will be recollected, succeeded the late Sir Benjamin Collins Brodie, Bart. In the evening, the Fellows, upwards of a hundred in number, dined together, the Lord Chancellor and other distinguished visitors being present.

It is not generally known that the Royal Medals, of the value of twenty guineas each, annually presented by the Society, are a gift, and that their cost is paid from the privy purse of Her Majesty.

ASSOCIATION OF CERTIFYING MEDICAL OFFICERS.

THE fourth annual general meeting of the Association was held at the Adelphi Hotel, Liverpool, on October 20th last; Dr. ARLIDGE, the President, in the Chair.

In the report of the Committee, reference was made to the new regulations respecting the reporting of accidents, which were generally approved of. The Committee considered, however, that the fee of sixpence for examining each factory hand presented at the residence of the surgeon, fixed by the factory inspectors, with the sanction of the Home Office, was beyond the scope and meaning of the Acts now in force, and neither creditable for the Government to offer, nor for the surgeon to accept. By sanctioning the examination of children and young persons at the residence of the factory medical officer, the Memorandum had revived a proceeding that experience had proved to be both useless and a cause of irregularity, and which had been repealed in later Acts. The Committee recommended that a short memorial to the Home Secretary be prepared, and sent to every certifying medical officer for his signature, praying for a modification of this order, on the ground

that so small a fee was never before offered for any public service whatever. Even in the case of the registrars of births, etc., the minimum fee for a mere copy of a birth-register, when given on the formal requisition issued by the authority of the inspectors, under a special clause of the Factory Acts, is one shilling, whilst in ordinary cases it is three shillings and sixpence.

The following gentlemen were elected as officers and members of the Committee for the year 1871-72:—*President*: J. T. Arlidge, M.D., Newcastle-under-Lyne. *Vice-Presidents*: F. Jordan, Esq., Birmingham; W. Roden, M.D., Kidderminster. *Treasurer*: E. Waters, L.R.C.P.Ed., Coventry. *Secretary*: G. M. Stansfeld, Esq., Redland, Bristol. *Committee*: C. D. Purdon, M.B., Belfast; J. T. Mitchell, Esq., Stockwell, London; T. Bott, Esq., Bury; W. L. Underhill, Esq., Tipton Green; H. Collins, M.D., Wolverhampton; G. W. Hardy, Esq., Warrington; R. Beales, M.D., Congleton; C. R. Crossley, Esq., Leicester; W. J. Clapp, Esq., Nantyglo, Monmouthshire; A. H. Balfour, Esq., Portobello, Edinburgh; C. Johnson, Esq., Lancaster; and R. G. Horton, Esq., Leeds.

A very able and instructive address was delivered by the President, and ordered to be printed with the other proceedings of the Association.

The desirability of all factory surgeons joining the Association was strongly insisted upon at the meeting; and, in order that the general purposes of the Association should be more fully understood, as also the reasons for joining it, it was resolved that the report be sent to all the medical officers under the Factory Act whose names and addresses could be obtained. The next annual meeting of the Association was decided to be held at Bristol, not later than the second week of September 1872. The names of new members should be sent to the Honorary Secretary, to whom also all communications should be addressed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on November 16th.

Boon, Alfred Pearl, Delamere Crescent (St. Mary's)
Cable, George Hughes, Royal Hill, Greenwich (Guy's)
Cowley, John Selwyn, Upton-on-Severn (St. Bartholomew's)
De Méric, Henry Eugene, Brook Street, Grosvenor Square (King's College)
Ewart, William, Montpelier Square, S.W. (St. George's)
Gill, Stanley Augustine, Torquay, Devon (London)
Harrison, Thomas, Stafford (Liverpool School)
Head, William Cave, Lewes, Sussex (St. Bartholomew's)
Hendry, James Alexander, Liverpool (Liverpool School)
Jago, Thomas, Saltash, Cornwall (St. Bartholomew's)
James, David Philip, Narberth, South Wales (St. Bartholomew's)
Johnson, Frederick Philipps, Taunton, Somerset (University College)
Julius, Stanley Alexander, Mortlake (King's College)
Lee, Alfred Robert, Tollington Park (University College)
Sergeant, Edward, Preston, Lancashire (St. Thomas's)
Smith, Joseph Priestley, Edgbaston, Birmingham (Birmingham School)
Thomas, John Howell, Carmarthen (London)
Yate, Edward, Godalming (St. Bartholomew's)

The following candidates were admitted members on November 17th.

Harbinson, Alexander, Newry, co. Down (Belfast School)
Lees, Frederic Arnold, Meanwood, near Leeds (Leeds School)
Magill, James, Cork (Cork School)
Masterman, George Frederick, Croydon (Guy's)
Ramsay, Ebenezer John, Queen Anne Street (University College)
Rogers, William Richard, Berners Street (University College)
Scale, George John, Merthyr Tydfil (Middlesex)
Slater, John Samuel, Bath (St. Thomas's)
Sloane, Ebenezer Erskine, Lisburn, co. Antrim (Belfast School)
Walsham, William Johnson, Tyndale Place, Islington (St. Bartholomew's)
Wright, John Rowland, The Bank, Leicester (St. Mary's)

The following members of the College, having passed the primary or anatomical and physiological examination for the Fellowship at a meeting of the Court of Examiners on November 21st, will be admitted to the final when eligible.

Samuel Bowen Partridge, H. M. Indian Army, diploma of membership dated August 5, 1851; and John Soelberg Wells, Savile Row, December 21, 1860 (Students of King's College); William Harvey, Royal Navy, January 29, 1862 (Charing Cross); Thomas Alexander Roe, Royal Navy, April 22, 1862 (Cork School); Charles Higgins, Hambledon, April 21, 1868 (Guy's); George Harrison Evans, Hagley Road, Birmingham, April 22, 1868 (St. Bartholomew's, Birmingham, and Edinburgh Schools); Charles Henry Joubert, Newton Lodge, Hungerford, May 5, 1868 (St. Mary's); and Herbert William Page, Carlisle, November 16, 1869 (London).

The following gentlemen, not members of the College, passed the examination.

George Albert Dundas, Guy's Hospital; Horatio Bryan Donkin, St. Thomas's Hospital; Herbert Campbell Moss, King's College; and Benjamin Jones Massiah, Bristol School.

Nine candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 23rd, 1871.

Elkington, Ernest Alfred, Birmingham
Maybury, William Augustus, Frimley, Surrey

The following gentlemen also on the same day passed their first professional examination.

Donaldson, Henry, Charing Cross Hospital
Evans, Thomas, Guy's Hospital
Prothero, David George, Middlesex Hospital
Utting, James, Guy's Hospital

As an Assistant in compounding and dispensing medicines.
Hyne, Harry, South Bank, St. John's Wood

MEDICAL VACANCIES.

THE following vacancies are announced:—

ABERDEEN DISPENSARY—Medical Officer.
AMERSHAM UNION—Medical Officer.
BALLINASLOE UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kiltormer Dispensary District: £100 per annum, and Vaccination and Registration Fees.
BIRMINGHAM and MIDLAND EYE HOSPITAL—House-Surgeon: £80 per annum, apartments, board, and attendance.
BRADFORD (NEW) FEVER HOSPITAL—Resident Medical Superintendent.
CARNARVONSHIRE and ANGLESEY INFIRMARY and DISPENSARY, Bangor—House-Surgeon: £80 per annum, board and lodging.
CENTRAL LONDON OPHTHALMIC HOSPITAL—Assistant-Surgeon.
CHARING CROSS HOSPITAL—Assistant-Physician.
CLAREMORRIS UNION, co. Mayo—Medical Officer for the Ballyhaunis Dispensary District: £125 per annum, and Vaccination and Registration Fees.
CRIEFF, Perthshire—Certifying Factory Surgeon.
DENTAL HOSPITAL OF LONDON—Lecturer on Dental Surgery and Pathology.
DEVON and EXETER HOSPITAL—Surgeon.
EARLSWOOD ASYLUM FOR IDIOTS—Assistant Medical Officer: £150 per annum, board and apartments.
EXETER LYING-IN CHARITY—Physician.
FARRINGTON DISPENSARY, Bartlett's Buildings, Holborn—Resident Surgeon: £75 per annum, coal, gas, and apartments.
GREAT NORTHERN HOSPITAL—Surgeon.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Resident Clinical Assistant.
KILBURN, MAIDA HILL, AND ST. JOHN'S WOOD GENERAL DISPENSARY—Resident Medical Officer.
LEEDS HOSPITAL for WOMEN and CHILDREN—Assistant-Surgeon.
LIVERPOOL SOUTHERN HOSPITAL—Senior House-Surgeon.
LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE—Lecturer on Ophthalmology.
MADDERTY, Perthshire—Parochial Medical Officer.
NORTH BIERLEY UNION, Yorkshire—Medical Officer for the Idle or No. 6 District.
NORTH MAVINE and DELTING, Shetland—Parochial Medical Officer.
NUNEATON, Warwickshire—Certifying Factory Surgeon.
NUNEATON UNION—Medical Officer for the Nuneaton District.
ST. MARY'S HOSPITAL and DISPENSARY for WOMEN and CHILDREN, Manchester—Medical Officer: £60 per annum, board and residence.
ST. PANCRAS, Middlesex—Medical Officer for the Workhouse and Infirmary.
SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich—House-Physician.
UNIVERSITY COLLEGE HOSPITAL—Assistant Obstetric Physician.
WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £70 per annum, board and residence.
WEST OF ENGLAND EYE INFIRMARY, Exeter—Surgeon.
WOLVERHAMPTON UNION—Dispenser: £90 per annum.

MEDICAL APPOINTMENTS.

*Names marked with an asterisk are those of Members of the Association.**

***BARTLETT**, J. J. H., Esq., appointed Surgeon to the Kensington Dispensary, *vice* T. O. Dudfield, M.D., resigned.
BURR, James, L.R.C.P. Edin., elected a Medical Officer to the St. Nicholas Parochial Board, Aberdeen.
***DAVIES**, John, M.D., Surgeon to the Abersychan Iron and Coal Works, appointed Surgeon to the Ebbw Vale Steel, Iron, and Coal Works, *vice* Henry Laxton, Esq., resigned.
MULLIGAN, John W., M.D., appointed Surgeon to the Abersychan Iron and Coal Works, *vice* John Davies, M.D.
SMITH, James A., M.D., appointed Medical Officer and Public Vaccinator for the Parish of Cadder, Lanarkshire.
***THOROWGOOD**, John C., M.D., appointed Lecturer on *Mateira Medica* at the Middlesex Hospital, *vice* *T. L. Brunton, M.D., resigned.

DONATIONS, BEQUESTS, ETC.—Mr. Jasper Young, of Singapore, has sent £500 to the Kilmarnock Fever Hospital and Infirmary.—“A Lady” has given £200 to the Hospital for Incurables, Dublin.—The General Hospital and Queen's Hospital, Birmingham, have each received £100 (less duty) under the will of Mr. Wm. Hinkley.—Mr. Bernard Rice has bequeathed to the Charities of Birmingham as follows:—£50 each to the General Hospital, the Queen's Hospital, the Hospital for Sick Children, and the Asylum for the Blind; £25 each to the Eye Hospital and the Sanatorium; £20 to the Asylum for the Deaf and Dumb; and £10 to the Ear and Throat Infirmary.—The Mercers Company have given Fifty Guineas to the Hospital for Women.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
WEDNESDAY .. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.
SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Walter Coulson, “Two Cases of successful Transplantation of Skin on extensive Tertiary Ulceration”; Dr. Hughlings Jackson, “A Case of Tumour and Cyst of the Right Lobe of the Cerebellum.”
TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited:—Dr. C. T. Williams (for Dr. Quain), Disease of Aorta, etc.; Dr. C. T. Williams, Disease of Suprarenal Capsules in a Phthisical Subject; Mr. A. Norton, Cancer of Larynx; Mr. F. Churchill, Fatty Tumour simulating Ranula; Dr. Green, Interstitial Pneumonia; Dr. Crisp, Cirrhosis of Liver and Baggy Stomach; Dr. Crisp, Disease of Hip-joint and Kidneys.
WEDNESDAY.—Royal Microscopical Society, 8 P.M. Mr. J. Bell, “Fermentation and its Results”; Dr. L. Beale, F.R.S., “The Nerves of the Capillary Vessels and their probable Action in Health and Disease.”—Obstetrical Society of London, 8 P.M. Mr. Eugene Goddard, “On a successful Case of Ovariectomy during Pregnancy”; Dr. Brunton, “On Fibroid Enlargement of the Uterus”; Dr. Edis, “On the Systematic Examination of the Uterus, with the view of rectifying Malpositions of the Fœtus”; Dr. Meadows, “On a Case of Extrauterine Foetation, with remarks on Treatment.”—Hunterian Society, 8 P.M.: Open Meeting. Council, 9.30 P.M.—Medico-Psychological Association, 32a, George Street, Hanover Square, 8 P.M. 1. Clinical Reports, Morbid Specimens, etc.; 2. Dr. Maudsley, “Is Insanity on the increase?”
THURSDAY.—Harveian Society of London. 7.15 P.M.: Council Meeting (Special). 8 P.M.: Mr. G. G. Gascoven, “On Spermatorrhoea and its Treatment.”
FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Ogle, “On the Temperature in certain affections of the Nervous System, and especially in Tetanus”; Dr. Habershon, On Cases of Heart-disease; Dr. Broadbent, Tumour in Left Half of Floor of Fourth Ventricle, with small Tumour in Cerebellum.

NOTICES TO CORRESPONDENTS.

ALL *Letters and Communications for the JOURNAL*, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FOR replies to questions concerning Poor-law medical questions, see Poor law Medical Department, under charge of Mr. Benson Baker, London, and Dr. Maunsell, Dublin.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

MR. GILBERT's letter should be put into the form of an advertisement.

MEDICAL QUACKERY.

SIR,—Two paragraphs in your last impression demand a passing notice; the one, the letter of “An Associate” with reference to “The Institute of Anatomy, Birmingham”; and the other, the reference to the prosecution under the Medical Act in Aberdeen. Mr. Forbes is entitled both to professional and public thanks for his prosecution of Frederick Adair, designating himself an M.D.; and it is to be regretted that the Sheriff was obliged to rule that “there was no evidence that the respondent carried on a business as a medical practitioner”, when I am sure scores of such documents as the subjoined must be distributed over the length and breadth of the land. Some time ago, a patient of mine who, in more verdant years, had been entangled in the meshes of the charlatan, fell in with the pestilential book purporting to be written by Frederick Adair, Esq.; and, in order to satisfy himself as to the character of the author, sent him a communication, to which he received the following reply, at present in my possession.

“22, Marischal Street, Aberdeen, 10th August, 1870.

“Sir,—You sometime back applied to me for advice upon your case; not having

heard from you in answer to my communication, I consider it my duty to acquaint you that the nature of your case requires proper and skilful treatment, in order to prevent greater and far more serious evils coming upon you. Neglect or improper treatment will entail the worst results, and you will have yourself to blame for the painful and melancholy consequences that inevitably will ensue. If, however, you at once adopt this infallible remedy, 'The Restorative Mixture', which I, from long experience, have found so eminently successful in cases precisely similar to your own, I can faithfully guarantee a permanent and satisfactory cure. If you still desire my professional assistance, I shall be glad to send you a supply of 'The Restorative Mixture' of whatever size packet you may think requisite, upon receipt of the amount, sent by Post-office order or otherwise, as explained in the enclosed printed circular.—I am, Sir, yours faithfully, FREDERICK ADAIR, M.D."

The "enclosed circular" is of the usual abominable description; and, *inter alia*, gives the price, etc., of the different sizes of packages of "The Restorative Mixture."

Now, if the above had been produced in evidence for the prosecution, the Sheriff would, I think, have little difficulty in deciding that, if "Dr." Adair does not "carry on a business as a medical practitioner" (to which, indeed, technical objection might be taken), he assuredly carries on a business which should be designated by a less dignified name.

Now, I must say that I cannot absolve the medical profession from contributing to keep up the extensive ramifications of this cruel form of quackery. On the one hand, there is a mawkish taciturnity, and, on the other (I refer to legitimate practitioners in the legal meaning of the term), a dissemination by means of books of the grossest exaggerations in the aberrant states of the generative system. Dr. Beale observes that "Spermatorrhœa has been defined to be 'all losses of seminal fluid not occurring as the result of sexual intercourse'"; and with just indignation denies that there is any such disease according to this definition. I go further than Dr. Beale, perhaps, in maintaining that no *continent* young man between seventeen and thirty-five is healthy unless there be an occasional emission of seminal fluid. I perfectly coincide with Dr. Beale in reproaching the extravagant assertions "that phthisis, cerebral congestion, epilepsy, general paralysis, and insanity," have been proved to stand in the relation of cause and effect in the cases of so-called spermatorrhœa quoted in books. Believing firmly in these opinions, I do not go the length of asserting that what is a normal condition may not in some cases lapse into that which is abnormal, and that cases of spermatic incontinence do not occasionally occur requiring medical treatment. I am at present preparing for publication a small treatise "On the Functional Diseases of the Renal, Urinary, and Reproductive Organs", in which it shall be my endeavour to expose not a little of the extravagant assertions of certain writers.

November 18th, 1871.

I am, etc., GLASGOWENSIS.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

DR. PIRRIE ON ACUPRESSURE.

SIR,—I observe in your impression of October 28th, a reply by Dr. Will to my remarks on Dr. Pirrie's recent paper on Acupressure. Had Dr. Will confined himself to answering the question I put, his wisdom would have been evident. As I cannot receive his *ipse dixit* without proof, I must again trouble you in order that the points referred to may be settled.

If Sir J. Y. Simpson used torsocclusion in 1860, Dr. Pirrie must have been in ignorance of the fact when he called it the Aberdeen method; for he says, even in his last paper, that he was the first to describe it. This statement of Dr. Will's shows that I was not so very far in error in drawing attention to the circumstance. I feel grateful to Dr. Will for mentioning this fact; but as it is only an assertion, and as I am always willing "to extend my information", Dr. Will, perhaps, may supply the proof that Sir J. Y. Simpson was the first to adopt torsocclusion.

Dr. Will plumes himself with his superior information, and, in the plenitude of his wisdom, dictates from the pinnacle of his hardware experiences; but I fear the profession will not accept the source whence he derives his facts. "Any wire-worker" would scarcely be an acceptable demonstrator to give ocular proof of the soundness of the application of terms in surgery. It has been said that "there is nothing new under the sun"; and it would be foolish in me, therefore, to deny that Dr. Pirrie has discovered some new property of iron-wire, of which he only informs us *en passant*. I have failed to procure elastic and inelastic iron wire; and such men as Weiss and Son know it not.

I quite understand what is meant by hard-tempered and by annealed iron-wire—the terms used by most people. Resilience and flexibility are properties of hard-tempered wire; and ductility that of soft. Most elementary school-books will give Dr. Will this information should he be humble enough to learn therefrom. If he be not, he will find an exposition in the more advanced text-books of Natural Philosophy. A substance is elastic when, having been altered in shape by some applied force, it retains its form when this force is withdrawn. India-rubber is a good example of this kind of substance. If you take a piece of iron or iron-wire, let it be hard or soft, tempered or annealed, and draw it from its shape, it will not assume the same form *per se* on the withdrawal of the force. Take a piece of hard iron-wire, and bend it—it will resist, because of its inherent flexibility; but it cannot therefore be said that it is elastic; neither can the contradistinctive term inelastic be used to designate a property of iron-wire which it does not possess. In some respects, resiliency and elasticity are synonymous terms; but the former implies more of a rebounding—the line, but not the form of the substance having been altered; the latter, the resuming of the original shape—both line and form having been altered.

May I be permitted further to remind Dr. Will that he has omitted, perhaps inadvertently, to mention "the otherwise excellent works on surgery" that contain "only obsolete modes" of "a new means of arresting surgical hæmorrhage." His commission may not have extended thus far. But in justice to the authors of such works, and in justice to the gentlemen who may present themselves for examination at Aberdeen, prepared from the unreliable text-books of those authors, it is but right that such assertions should be accompanied by the names of the books, especially the editions which are so far behind the times.

Fettercairn, November 11th, 1871. I am, etc., A. E. McRAE, M.B., C.M.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Daily Courier, Nov. 23rd; The Ipswich Chronicle, Nov. 15th; The Irish Times, Nov. 25th; The Sheffield Daily Telegraph, Nov. 29th; The Midland Counties Express, Nov. 25th; The Bedfordshire Mercury, Nov. 25th; The Lincolnshire Chronicle, Nov. 24th; New York Tribune; etc.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. F. H. HEATHCOTE, not later than *Thursday*, twelve o'clock.

CAUTION.

It having come to the knowledge of the Publisher that circulars have been distributed calculated to mislead advertisers as to the circulation of this journal, he feels it incumbent on him to state that its circulation far exceeds that of any other medical periodical, and that it has for many years past steadily increased, and is still increasing.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Sir J. Ranald Martin, London; Dr. Henry Thompson, London; Dr. Gailly Hewitt, London; Mr. James Dixon, London; Mr. G. Greenwood, Blackheath; Dr. J. Warburton Begbie, Edinburgh; Dr. Creighton, Berlin; Mr. Hammond, London; Mr. Churton, Erith; Mr. Southall, Birmingham; An Associate; The Secretary of the Pathological Society; Mr. Bickersteth, Liverpool; Mr. F. H. Hodges, York; Dr. Cortis, London; Mr. F. Grant, Market Harborough; The Secretary of the Clinical Society; Dr. Cecil Tessier, Biddenden; Dr. Alfred Hollis, Dorchester; Dr. Edis, London; Dr. C. Black, Clifton; Dr. J. Matthews Duncan, Edinburgh; Dr. J. H. Carruthers, Manchester; Mr. Kemp, London; Mr. Taylor, Birmingham; Dr. Barham, Truro; Dr. Moore, Dublin; Dr. Arthur Farre, London; Dr. Woodward, Worcester; Dr. Todhunter, Dublin; Mr. De Renzy, Kingstown; Mr. H. Cripps Lawrence, London; Dr. Glover, London; Mr. R. W. Parker, London; Mr. M. C. Soutter, London; Mr. Warrington Haward, London; Surgeon-Major Wyatt, London; Dr. Boyd Mushet, Southgate; Mr. Bartleet, Birmingham; Mr. Higginson, Liverpool; Dr. R. W. Taylor, New York; Dr. Liebreich, London; Dr. Payne, London; Staff-Surgeon Hogg, Woolwich; Mr. Jessop, Leeds; Dr. Neil McGreevy, Drogheda; Mr. William Stokes, Dublin; Mr. Nicholson, London; Dr. C. E. Fitzgerald, Dublin; Mr. Harry Leach, Greenwich; Dr. Wardell, Tunbridge Wells; Mr. Turton, Wolverhampton; Mrs. Trevor-Roper, Rock Ferry, Cheshire; Dr. Corfield, London; Our Liverpool Correspondent; Mr. J. W. Kenyon, Folkingham; Mr. Annandale, Edinburgh; Dr. McRae, Fettercairn; Mr. Tait, Crieff; Mr. Callender, London; Dr. Marcet, Nice; Dr. Bradbury, Cambridge; Dr. Elliott, Hull; Dr. Hughlings Jackson, London; Dr. Bishop, Paris; Dr. Morell Mackenzie, London; The Secretary of the Harveian Society; Dr. Brunton, London; Dr. Shapter, Exeter; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. W. W. Reeves, London; Dr. Playfair, London; Mr. Symonds, Oxford; Dr. Moxon, London; Mr. John W. Langmore, London; Mr. Benson Baker, London; Mr. Holland, London; Mr. Hodgson, Brighton; Dr. Cobbold, London; Dr. Thorowgood, London; Dr. Pitman, London; The Secretary of the Hunterian Society; Dr. Hermann Weber, London; Mr. Berkeley Hill, London; Mr. Bottomley, Huddersfield; Dr. W. Young, Malton; Dr. Ritchie, Edinburgh; Dr. Morell Mackenzie, London; Dr. Spencer Cobbold, London; Dr. Charles Parsons, Dover; Mr. F. H. Edmunds, Rochester; Mr. J. B. Walker, Edinburgh; Mr. Peter Campbell, Bridge of Allan; Dr. Trollope, St. Leonard's; Dr. R. Liveing, London; Mr. Stansfeld, Redland, Bristol; Dr. Foster, Birmingham; Dr. Warwick, Richmond; Inspector-General Murray, London; Mr. E. Norton, London; Mr. Buxton, Liverpool; Dr. Marshall, Windsor; Dr. Bott, Bury; Dr. Davies, Ebbw Vale; Dr. Savage, Alston; Dr. Woodward, Worcester; Dr. J. Harley, London; Mr. Steel, Hampstead; Dr. H. Bennet, Mentone; Mr. C. Casey, Carlow; etc.

BOOKS, ETC., RECEIVED.

- Symptoms and Treatment of Malignant Diarrhœa, better known by the name of Asiatic Cholera, as treated in the Royal Free Hospital during the years 1832, 1833, 1834, 1848, and 1854. By William Marsden, M.D. Fourth Edition. Edited by Alex. Marsden, M.D., F.R.C.S.E. London: 1871.
- Anæsthesia, Hospitalism, Hermaphroditism, and a proposal to stamp out Small-pox and other Contagious Diseases. By Sir James Y. Simpson, Bart., M.D., D.C.L. Edited by Sir W. G. Simpson, Bart., B.A. Edinburgh: 1871.
- On the Treatment of Hyperpyrexia, as illustrated in Acute Articular Rheumatism by means of the External Application of Cold. By Wilson Fox, M.D., F.R.C.P. London and New York: 1871.
- On Decapitation as a Mode of Delivery in Cases of Shoulder-Presentation, in which Version cannot be safely effected. By George H. Kidd, M.D., F.R.C.S.I. Dublin: 1871.
- Report on the Sanitary Condition of the Parish of St. Mary Abbots, Kensington, during the year 1870. By T. Orme Dudfield, M.D., Medical Officer of Health. London: 1871.
- The Seventh Annual Report of the Royal Albert Asylum for the Education and Training of Idiots and Imbeciles belonging to Lancashire, Yorkshire, Cheshire, Westmorland, Cumberland, Durham, and Northumberland. Lancaster: 1871.
- A Handbook of Therapeutics. By Sydney Ringer, M.D. Second Edition. London: 1871.
- Essentials of the Principles and Practice of Medicine. A Handbook for Students and Practitioners. By Henry Hartshorne, A.M., M.D. Third Edition, thoroughly revised. London and Philadelphia: 1871.
- A Practical Treatise on Fractures and Dislocations. By Frank Hastings Hamilton, A.M., M.D., LL.D. Fourth Edition, revised and improved. Illustrated with Three Hundred and Twenty-two Woodcuts. London and Philadelphia: 1871.
- Transactions of the Pathological Society of London. Vol. xxii. London: 1871.

LECTURES

ON THE

EXPERIMENTAL INVESTIGATION OF THE ACTION OF MEDICINES.

By T. LAUDER BRUNTON, M.D., D.Sc.,

Joint Lecturer on Materia Medica, and Casualty Physician, at St. Bartholomew's Hospital; etc.

IV.—DETERMINATION OF THE EXACT STRUCTURES THROUGH WHICH DRUGS AFFECT THE HEART AND VESSELS.

Comparison of the Effects of Drugs on different Animals in different Doses.—Mode of determining the Exact Cause of Symptoms.—Mode of raising Blood-pressure.—Modes of counting the Beats of the Heart.—Causes of Quickened Pulse.—Direct Stimulation of the Sympathetic.—Stimulation of Cardiac Ganglia.—Paralysis of the Vagus-roots and Fibres, and of its ends in the Heart.—Causes of Slow Pulse.—Irritation of Vagus-roots.—Mode of supplying the Head and Body with different kinds of Blood.—Indirect Irritation of Vagus-roots through the Blood-pressure: mode of lowering and raising it.—Reflex Irritation of Vagus-roots.—Indirect Irritation through the Respiration.—Irritation of Vagus-fibres.—Increased Conducting Power of Fibres.—Stimulation of Vagus-ends.—Paralysis of the Sympathetic.—Paralysis of the Cardiac Ganglia.—Part of the Ganglionic Apparatus Affected.—Nervous System in the Heart.—Motor Ganglia.—Stimulating Ganglia.—Inhibitory Ganglia.—Connecting Apparatus.—Action of Drugs on the Inhibitory Apparatus.—Nicotia, Muscaria.—Antagonism of Atropia and Physostigma: bearing of this on Therapeutics.—Paralysis of Co-ordinating Apparatus.—Paralysis of the Muscular Fibres of the Heart.—Blood-pressure: mode of determining whether changes in it are due to alterations in the Heart or Vessels.—Elimination of the Action of the Heart: Division of its Nerves.—Irritation of Vagus.—Ligature of Aorta.—Artificial Circulation; in Mammals, in the Frog.—Observation of Vessels.—Action on Vasomotor Centre; on Vascular Walls.—Influence of the Action of Parts surrounding the Vessels upon them.—Action of the Pulmonary Circulation on the Blood-pressure.—Use of the Sphygmograph.

COMPARISON OF THE EFFECTS OF DRUGS.—Before proceeding to examine separately the different structures through which a drug may act on the blood-pressure, it is advisable to compare the effects which it produces on animals of different kinds, such as dogs and rabbits, as well as the action of larger and smaller doses on animals of the same kind. Continuing to take as an example the action of atropia, admirably investigated by Von Bezold, we find the following results.

With a small dose of atropia injected into the jugular vein towards the heart:

The blood-pressure rises in both rabbits and dogs:

The pulse becomes quick, rising in rabbits from 256 to 288; in dogs, from 80 to 240.

With a larger dose:

The blood-pressure, in both rabbits and dogs, falls at first and afterwards rises to the normal.

The pulse becomes quick in both.

With an additional dose:

The blood-pressure in rabbits falls very low as the poison reaches the heart; afterwards rises; and falls again below the normal.

The pulse becomes slower, and then quicker.

With a very large dose:

The blood-pressure sinks instantly in both rabbits and dogs.

The pulse in rabbits becomes slower and weaker, and then stops; in dogs, it becomes quick.

This comparison between the effects which atropia produces in different animals, and in large and small doses in the same animal, shows us that it sometimes raises and sometimes lowers the blood-pressure, but that it always quickens the pulse, except when a large quantity of the poison is introduced at once into the heart of the rabbit. On consulting the table already given (BRITISH MEDICAL JOURNAL, June 3rd, page 583), it will be seen that quickening of the heart may be due to stimulation of the sympathetic, either directly by the drug or indirectly by diminution of the blood-pressure; to stimulation of the cardiac ganglia; or to weakening or paralysis of the vagus. Any one of these conditions may cause quickened pulsation; and, in order to determine which of them really does it, we must test each one of them separately by farther experiment.

MODE OF DETERMINING THE EXACT CAUSE OF SYMPTOMS.—The plan which we follow is this: we suppose for the time being that the

cause which we are testing is the true one, and consider what effects it will produce under certain conditions. We then supply these conditions experimentally, and see whether or not the results we obtain correspond with those which we should find if our supposition were correct. So in the present instance we first ask, Is the quickening of the pulse due to indirect stimulation of the sympathetic roots by diminished blood-pressure or not? We suppose for the moment that it really is so, and we consider that if we raise the blood-pressure we shall remove the cause of quickening and bring the pulse down again to its normal rate. We then proceed to raise the pressure, and see whether or not the pulse is rendered slow, as we expect it to be. In the case of atropia, a special experiment is not necessary for this purpose, as we have seen that small doses do not lower but raise the blood-pressure, at the same time that they quicken the pulse; consequently the quickening cannot be due to indirect stimulation of the sympathetic. Other drugs, however, such as nitrite of amyl, even in small doses, lower the blood-pressure at the same time that they quicken the pulse; and in their case we must raise the blood-pressure artificially.

MODE OF RAISING BLOOD-PRESSURE.—This may be done either by injecting a sufficient quantity of the defibrinated blood of another animal of the same species, warmed to 98 deg. Fahr., into the carotid or crural artery towards the heart, or by compressing the aorta. The aorta may be either compressed by the thumb of the operator, or by a narrow pad of cork laid over it and pressed upon it by a tourniquet, of which the strap has been passed round the animal's body.

MODE OF COUNTING THE BEATS OF THE HEART.—Now, if we wish to determine the blood-pressure at the same time with the pulse-rate, we may count the latter from the oscillations which each beat of the heart produces in the tracing of the kymographion, or from the sphygmoscope attached to it; but this is not always necessary, and we may wish to ascertain the pulse-rate without going to the trouble of opening an artery and using a manometer. We may do this in three ways—1. By feeling the pulse in one of the large arteries, such as the crural, with the finger; 2. By listening to the beats of the heart with a stethoscope; 3. By the motion of a needle stuck into the ventricles. For this purpose a fine harelip-needle is inserted at the point where the apex beats, and is pushed upwards into the substance of the ventricle. At its upper end it may have either a knob, or a loop to which a thread can be attached, and a barb at the point will prevent it from changing its position in the heart when traction is made upon it. In rabbits, the point where the needle should be inserted is in about half an inch to the left of the sternum in the third intercostal space, and the length of the needle used should be about three inches. Various means have been proposed for counting the oscillations more readily than can be done by simply watching the movements of the needle itself. The knob of the needle may be allowed to strike against a wineglass, and the pulsations may thus be counted by the ear; or a needle without a knob may be used, and a rice-straw with a piece of bright-coloured paper attached to it may be slipped over it, so that its vibrations, amplified by the long straw, and made more visible by the bright-coloured paper, may be readily counted by the eye.

A convenient way of registering the oscillations on an upright cylinder is one devised by Professor Stricker. One of Marey's cardiographic levers is fixed on a rod close to the side of the animal and some distance above it, and a small piece of cork attached to the lever. One end of a fine thread is then fastened to the needle, and its other end pulled through a slit in the cork till it is sufficiently tight to make the lever vibrate with each movement of the needle; it is then fastened by twisting it round the lever, or by a little sealing-wax. If the lever be not raised several inches above the needle, it is pulled too much to a side and not sufficiently downwards to give a good tracing. The tracing may be taken either on plain paper with a glass-pen or camel's hair-brush attached to the lever by a piece of cork, or with a dry point on smoked paper. Instead of a vertical cylinder a horizontal one may be used, and is perhaps still better. In this case the lever should be nearly on a level with the needle, and not raised much above it.

IS THE QUICKENING OF THE PULSE DUE TO DIRECT STIMULATION OF THE SYMPATHETIC?—If so, the injection of the drug should cause an increase in the pulse-rate after the vagi have been divided as well as when they are intact. We, therefore, divide the vagi, inject the drug into the veins, and see whether or not the pulse-rate is increased. On doing this with atropia it is found that the pulse becomes slower rather than quicker, showing that the drug does not stimulate the quickening nerves of the heart. The increased rapidity of the pulse which it produces when the vagi are intact is, therefore, not due to this cause.

IS THE QUICKENING DUE TO STIMULATION OF THE CARDIAC GANGLIA?—The experiment just mentioned shows that it is not, for if it were, injection of atropia should cause quickening after division of the vagi. Supposing, however, that it had caused quickening, the question

whether the acceleration was due to the ganglia or the sympathetic would have to be decided by dividing all the nerves going to the heart with a platinum-wire heated by electricity, and then injecting the drug, or by applying it to the heart of the frog in a way which I shall afterwards describe. If it quickened the beats of a heart thus separated from all other nerves, it could only do so by acting on the cardiac ganglia themselves.

IS THE QUICKENING DUE TO PARALYSIS OF THE VAGI?—The exclusion of the other causes leads us to believe that it is due to this; but, in order to avoid the possibility of error, we must try to confirm our conclusion by other experiments; and, moreover, we have still to find out which part of the vagus is affected—its roots, its fibres, or its ends in the heart.

ARE THE VAGUS-ROOTS PARALYSED BY THE DRUG?—We are enabled to answer this question by our knowledge of the fact, that poisons only act on the parts to which they are carried by the blood, and that when introduced into the circulation they do not reach every part of the body at once, but are carried on with the blood-stream first to one part and then to another, and will reach a part near the point where they were introduced before one which is farther off. Thus if we inject a drug into the carotid it will be carried direct to the head, and will act on the medulla oblongata and the roots of the vagus before it reaches the heart; but if we inject it into the jugular vein it will reach the heart and act on the vagus-ends in it before it reaches the roots in the medulla. If atropia paralyse the vagus-roots, then its injection into the carotid towards the head should be followed by rapidity of the pulse more quickly than its injection into the jugular; but if it act on the vagus-ends in the heart, the pulse should become rapid more quickly after injection into the jugular vein towards the heart than after injection into the carotid. On testing this experimentally, it is found that, when atropia is injected into the jugular vein towards the heart, the pulse at once becomes quick, even before the injection is finished; but, when it is injected into the carotid towards the head, the pulse is not quickened for a quarter of a minute or more, or, in other words, till the poison has had time to pass through the capillaries of the head and go through the veins to the heart. This, then, shows that it is the vagus-ends in the heart, and not the roots in the medulla, that are paralysed by it.

ARE THE VAGUS-FIBRES PARALYSED?—From the rapidity with which paralysis of the vagus occurs after atropia reaches its ends, we have already come to the conclusion that the ends are the part affected rather than the roots or fibres; but it is well to substantiate our conclusion by further experiment. We divide the vagus and galvanise its peripheral extremity. If we do this to a normal vagus, the heart will beat more slowly or stand still altogether; but if either the fibres or ends of the nerve have been paralysed, no change will be produced in the heart's rhythm by the application of galvanism to its trunk, and this we find to be the case after the administration of atropia. But this experiment does not enable us to decide which part of the nerve is paralysed—the fibres or the ends, for in either case the effect would be the same. We may do this, however, by observing the effect which irritation of the vagus-trunk produces on such of its fibres as do not go to the heart. If it were the fibres which were paralysed, we should expect that those which go to the heart would not be the only ones affected, but that those going to other parts would be paralysed likewise.

I have hitherto spoken of the vagus as if it were a simple nerve containing only inhibitory fibres for the heart, but it is really a most complicated bundle, containing centripetal fibres having probably no fewer than eleven different functions, and centrifugal ones having nine or ten; so it is little wonder that it has long been a puzzle to physiologists, and even yet its functions are not completely investigated. Among these fibres are some which produce contraction of the oesophagus and muscles of the larynx; and if we find that irritation of the vagus continues to produce contractions in these parts after it has ceased to render the heart's action slow, as is the case after injection of atropia, we conclude that the fibres are not paralysed. Dr. Rutherford has shown that the best mode of observing the effects of irritation of the vagus on the muscles of the larynx, is to open it in front and place the animal so that the light may be reflected from the inner surface of the arytenoid cartilage, as the slightest movements can then be readily detected. In this way it is found that atropia produces complete paralysis of the cardiac branches of the vagus, while the others are unaffected; and we are forced to conclude that it acts not on the fibres but on the ends of the heart. A more direct method is to apply the drug dissolved in an indifferent fluid, such as half per cent. solution of chloride of sodium, to the vagus itself, and then to irritate the nerve above this point, and see whether the irritation produces its usual effect. This may be done by dropping the solution on the nerve after placing a piece of gutta-percha tissue below it, so as to keep the fluid from reaching the tissue below and being absorbed.

HOW DOES A DRUG RENDER THE HEART'S ACTION SLOW?—We have now gone over the experiments which are necessary to determine what the structure is through which a drug quickens the heart's action, and we have now to consider those which we require when investigating the action of one which renders it slow. It may do so by irritating the vagus-roots, fibres, or ends; by increasing their excitability, so that they act more strongly when stimulated; or by paralysing the sympathetic, the cardiac ganglia, or the muscular substance of the heart itself.

DOES IT ACT BY IRRITATING THE VAGUS-ROOTS?—In order to answer this question, we divide both vagi and then inject the drug. We thus separate the heart from the vagus-roots and deprive them of any influence over it, so that, if they have been the cause of slowness of the pulse in previous experiments, it will not occur in this; but if the slowness have been due to other causes it will, with one or perhaps two exceptions, be noticed in this experiment just as it would had the vagi been intact. These exceptions, which we will consider afterwards, are increased excitability of the vagus-fibres and ends. The vagus-roots can only act on the heart through the medium of the fibres and ends; if the drug itself should affect these structures, its action on the heart may be much altered or even destroyed. If the vagus-ends be paralysed, the roots can exert no more action on the heart than they can after we have cut through the trunks; and if the excitability of the ends be increased, the power of the roots over the heart will be greatly augmented, so that the heart's action may be made slow without there being any actual irritation either of the roots or ends. In order, then, to find out what effect the drug has on the vagus-roots themselves, we must inject it into the carotid, so that it may reach them before it reaches the fibres or ends; and note what change occurs in the heart-beats immediately after injection. This is the effect of the drug on the roots themselves; and, by comparing it with the pulse-rate a quarter of a minute or so afterwards, when the drug has reached the vagus-ends, we may discover whether their excitability has been increased or diminished. Thus, in the experiment already mentioned for ascertaining whether or not the vagus-roots are paralysed by atropia, we find that, when we inject it into the carotid, we get immediate slowness of the pulse, showing that the vagus-roots are irritated by the drug; but whenever it gets round to the heart it paralyses the vagus-ends, and the slowness at once disappears. If we were to keep the head alive by supplying it with an artificial stream of blood containing atropia, and prevent any of the poisoned blood from reaching the heart, the slowness might be continued indefinitely.

MODE OF SUPPLYING THE HEAD AND BODY WITH DIFFERENT KINDS OF BLOOD.—In his researches on respiration, Hering employed a method of this sort, at one time supplying the brain with blood loaded with carbonic acid while the blood of the body was richly arterialed, and at another sending arterial blood to the brain while respiration was stopped and the blood circulating in the body was intensely venous. For this purpose he opened the thorax and tied the left carotid and innominate close to the aorta, and the vena cava superior close to the heart in a cat; he then introduced one cannula into the innominate artery, and another into the vena cava, and injected dog's blood, defibrinated and warmed, into the innominate artery, while he allowed it to flow out by the vein.

In atropia, we have an example of a drug which acts on more than one part at once, and whose action on one part completely neutralises the effect which its action on the other would produce. In the case of others, however, we have the action on the different parts strengthening each other, as in veratria, which, like atropia, stimulates the vagus-roots, but, instead of paralysing the ends, increases their sensibility, and thus greatly augments the effect which the excited roots would have exercised over the heart, even had the ends remained unaltered.

ARE THE VAGUS-ROOTS IRRITATED DIRECTLY BY THE DRUG OR INDIRECTLY THROUGH INCREASED BLOOD-PRESSURE?—Along with the slow pulse, produced by the injection of atropia into the carotid, a rise occurs in the blood-pressure; and how are we to determine whether the irritation of the vagus-roots is due to this increase, or to the direct action of the drug itself? This is a question very difficult to solve in the case of atropia, on account of the rapidity with which the vagus-ends are paralysed and all influence of the root over the heart destroyed. In the case of other drugs, however, where time is allowed, the question might be settled by diminishing the blood-pressure and seeing whether or not the slow pulse returned to its normal rate, and then raising it again and observing whether the pulse again became slow.

MODE OF LOWERING AND RAISING THE BLOOD-PRESSURE.—The blood-pressure may be lowered by opening a large artery, such as the carotid or crural, and allowing the blood to flow out into a vessel warmed to 98 deg. Fahrenheit, and again raised by injecting the warm blood back into the artery. Or we may adopt Ludwig and Asp's plan, of inserting into the central end of the carotid a straight tube with a

stopcock in its middle, and the moist bladder of a small animal, well emptied of air, tied to its free end. When the stopcock is opened, the blood rushes from the carotid into the bladder, and the tension in the arteries is diminished; but, when we press the blood out of the bladder back into the arteries, the tension on them is again increased.

ARE THE VAGUS-ROOTS IRRITATED REFLEXLY FROM SOME OTHER PART OF THE NERVOUS SYSTEM?—There are two ways of deciding this: the first is to inject the poison in such a manner that it shall reach the vagus-roots before it reaches the other nervous structures through which we suspect it to act reflexly; the second is to remove these nervous structures themselves, or to destroy their function by means of some other poison. Thus, if we think that atropia, when injected into the carotid, acts on the medulla through the cerebrum, we may either remove the latter, or abolish its function by opium or chloral. The application of irritating vapours, such as ammonia or tobacco-smoke, to the nasal mucous membrane of a rabbit, produces still-stand of the heart. We ascertain that this is due to irritation of the vagus by cutting it and finding that the vapour then has no effect; and we next decide that the irritation is conducted to the nervous centres through the trigeminus and not through the olfactory nerve, by observing that section of the former likewise prevents the action of the vapour on the heart, while section of the latter does not affect it.

ARE THE VAGUS-ROOTS IRRITATED INDIRECTLY BY THE DRUG IMPAIRING RESPIRATION, AND THUS ALLOWING CARBONIC ACID TO ACCUMULATE IN THE BLOOD?—In the experiment just mentioned, we have ascertained that the vagus is irritated, and that irritation is conducted to the nerve-centres through the trigeminus, but we do not know that the irritation is directly reflected from the trigeminus to the vagus. It might be due to irritation of the vagus-roots by carbonic acid, which has accumulated in the blood from impeded respiration; for the irritating vapour applied to its nose causes the rabbit to close its nostrils and stop breathing for a while if the trigeminus be intact, but when it is cut no irritating impression can be conveyed to the brain, and so no closure of the nostrils takes place, either voluntarily or reflexly. The rabbit, therefore, continues to breathe freely; no carbonic acid accumulates in the blood, and no irritation of the vagus occurs. Other drugs, such as strychnia and curare, etc., impede respiration—not by causing closure of the nostrils and consequent obstruction to the passage of air to the lungs, but by acting on the muscles and nerves and diminishing the respiratory movements. Strychnia does this by producing tetanic contraction of the respiratory muscles, curare by paralyzing them, and chloral by diminishing the excitability of the respiratory nervous centre. In all such cases, in order to ascertain that indirect irritation of the vagus from impeded respiration is not the cause of the slowing of the pulse, we insert a cannula into the trachea and begin artificial respiration; we then note the rate of the pulse and blow the irritating vapour into the nostrils, or inject the drug into the veins, and see whether or not the pulse is rendered slow, taking care to keep up artificial respiration all the time. If the drug cause convulsive movements which interfere with the proper performance of artificial respiration, curare should be given so as to prevent their occurrence, and the experiment should be again repeated.

ARE THE VAGUS-FIBRES IRRITATED?—To ascertain this we apply the drug dissolved in an indifferent fluid, such as a solution of half per cent. of chloride of sodium, or serum, to the nerve, and notice whether any change occur in the heart-beats. Care must be taken that the solution of the drug be not applied in too concentrated a solution, as it might then have an irritant action, which it could not have if it reached the part through the circulation, and false conclusions might thus be arrived at.

IS THEIR CONDUCTING POWER INCREASED, SO THAT THE ROOTS CAN ACT THROUGH THEM ON THE HEART MORE READILY AND POWERFULLY?—If their conducting power be increased, other stimuli as well as those from the roots will act more powerfully on the heart. We therefore divide the vagi and irritate the peripheral end of one or both by means of one of Du Bois Reymond's induction-coils, and note at what distance from the primary coil the secondary one must stand in order to produce stoppage or slowness of the heart; we then apply the drug to the nerve below it and again irritate. If the excitability of the nerve be increased, stoppage or slowness should be produced when the distance between the primary and secondary coils is greater—that is, when the current is weaker than before. It is generally assumed that the fibres are not likely to be affected, and these experiments are rarely performed.

ARE THE VAGUS-ENDS EXCITED?—We may test this in the same way as the action on the roots, by injecting the drug at one time into the jugular and at another into the carotid. If it increase the excitability of the ends without affecting the roots, we should find it produce, when injected into the jugular vein, immediate slowness of the pulse,

which would not be increased in a quarter of a minute afterwards, when the drug had reached the roots. When injected into the carotid, no slowness should occur till sufficient time had elapsed for it to pass round to the heart. If it increase the excitability of both roots and ends, immediate slowness should occur, whether it be injected into the jugular or carotid, and this should become more marked after fifteen or twenty seconds. If, like physostigma, it increase not only the excitability of the vagus-ends, but that of the quickening centre in the head, injection into the jugular should be followed by immediate slowness, which would become less marked when the drug reached the head, and injection into the carotid by an immediate quickening, which would become less or give place to slowness when the drug reached the heart.

At first sight one might think that, after time had been allowed for the drug to pass round the circulation and be applied both to the vagus-roots and ends, its action on the heart would be the same whether it had been originally injected into the jugular or into the carotid; but this is not the case, for that organ towards which the drug was injected gets a larger dose, and its action is more strongly excited than that of the other. Thus when physostigma is injected into the carotid, the quickening centres are stimulated and the pulse-rate rises; and, although the pulse falls somewhat after the vagus-ends have also been acted on, it nevertheless continues above the normal, the stimulation of the vagus-ends not being able to counteract the still more excited quickening centres. When it is injected into the jugular, the vagus-ends get the largest dose; and, although the pulse, which is at first made very slow, may afterwards, become quicker, it does not reach the normal, the quickening centres being unable to counteract the more strongly excited vagus. If the vagus be cut, however, the pulse becomes quicker than it would have done had no physostigma been given; or, if the vagi be first cut and the drug injected, the pulse is quickened at once. One might think that, since the drug acts on the vagus-ends, its action should remain after the nerves themselves have been divided; but since it is by increasing the excitability of the ends that it acts, if we separate these ends from the roots, and thus remove their normal stimulus, their increased excitability can have but little effect. In order to measure the amount of increase, we divide the vagi and irritate them by an induction-coil, noting the strength of current required to produce still-stand or slowness of the heart before and after injection of the drug into the veins.

[To be continued.]

RUPTURE OF AORTA WITHIN THE PERICARDIUM.*

AT a recent *post mortem* examination, I obtained the morbid specimen now exhibited; and, as it appears to me of sufficient pathological interest to warrant my bringing it under your observation, I must beg your indulgence for a few moments while I narrate its history. It is a well defined instance of rupture of the aorta within the pericardium. It was procured from the body of a blacksmith, aged 34, who for the last twelve months had been constantly under my notice while at work in his forge, and who, during the whole of that time, was distinguished for energy and skill in his business. About fifteen months before his death, he consulted Dr. Kersey for palpitation and dyspepsia, and was also seen by me; but in spite of frequent and careful auscultation, no morbid cardiac sounds could ever be detected, and a little palliative treatment speedily put him to rights. Since then, if questioned about his health, he always affirmed that he was quite well, except on one occasion a few weeks since, when he complained to me of indigestion, but would not take anything for it.

On the evening of his decease, he worked hard at finishing a job up to seven o'clock, and was in his usual good spirits. He then made a hearty supper, and retired to rest. In less than half an hour, he suddenly exclaimed that he felt choking, and immediately expired. Being soon on the spot, I was able to gather these particulars with precision. A necropsy was made twelve hours subsequently. The body was that of a well nourished man, of medium height, and muscular development. All the thoracic and abdominal contents appeared normal, with the exception of the pericardium, which was much distended, and contained more than two pints of blood separated into liquor sanguinis and crassamentum, the latter very firm and unbroken. The source of this hæmorrhage was a small rent of the ascending portion of the aortic circle on the left side, not larger than a crow-quill. No distinct aneurismal pouch could be found; the rupture, therefore, appears to have been due to the giving way of a small atheromatous spot in the artery.

BENJAMIN BROWNING, Littlebourne.

* Read before the East Kent District of the South-Eastern Branch.

ABSTRACT OF A CLINICAL LECTURE ON THE DIAGNOSIS OF URETHRAL AND VESICAL DISEASES.

Delivered at University College Hospital on November 21st, 1871.

BY SIR HENRY THOMPSON,
Surgeon to the Hospital.

I COMMENCE to-day my usual course of lectures, modified somewhat by circumstances. Thus I desire to condense a little my opening remarks on diagnosis to-day. I may premise that I give this course of lectures on the diseases of the urinary organs, because my wards offer you so large a field for their study, and also because there is no class of diseases in which you can afford so much relief to the patient as in this, or so certainly mitigate suffering. There are no diseases more painful, and none the relief of which will gain you more gratitude from your patients.

In the matter of diagnosis, however, it is of the greatest importance that it should be a correct one, and not only correct, but rapidly made. I have now to say what I have said to you before, that I interrogate all these patients on the same system, and I advise you to follow this plan. I employ only four questions for urinary patients, and I advise you to use these four questions also, and always in the same order. The first question is, Is there any deviation in the frequency of passing urine? The second is, Is there any pain in the act? The third, Is there any blood in the urine? And the fourth is, Are the characters of the urine altered [quality and quantity]?

We shall see that in all cases of urinary disease these four questions are sufficient, together with the supplementary inquiries which arise out of them; yet we know how often such cases are misunderstood—indeed, the simplest are often mistaken, through not pursuing a systematic method in arriving at a diagnosis. First of all, let us look at the question of *frequency*. Almost every disease of the urinary organs produces some deviation in the natural frequency of passing urine. As a rule, let it be understood that a man in health does not generally rise at night to pass urine, and that he passes it during the day about five or six times; but when there is any degree of inflammatory action in the mucous membrane of the bladder, however slight, frequency of micturition is induced. Now, how does cystitis produce this increased frequency? When the mucous coat of the bladder is inflamed, it cannot bear to be much extended; and when the bladder contains five or six ounces of urine, or even less, the sensitive mucous membrane suggests that it should be emptied: instead of comfortably containing fifteen or sixteen ounces, it cannot endure the extension, and calls on the muscles to contract without delay. There is one, and one only, of these affections which does not necessarily produce, at first, frequent micturition. I speak of stricture: here it always occurs after a time; but a man may have a considerable amount of stricture for years before he is troubled in the way referred to. Calculous disease produces cystitis, and thus causes an increased frequency in passing urine. Now, as a supplementary question, you should next ask, Is the frequency greatest at night or in the day? If a man have calculus in the bladder, he is not so much disturbed at night, but in the day he is frequently micturating—all movements make him do so. Now, that extremely common complaint, *hypertrophy of the prostate*, is worse at night than by day, as far as frequency of passing urine is concerned. Hence, if a man of about sixty years of age says that he has but recently had urinary troubles, and these are greatest by night, the case is almost made out; you may be sure that a very little further inquiry will demonstrate the fact that he is the subject of hypertrophied prostate.

I come to the second question of *pain*. This question is of greater significance. Suppose the patient says he feels pain. Where do you feel pain—low down in the belly? Then there is almost certainly chronic cystitis. Suppose he says that his pain is in the penis or perinæum, you must ask if he feels the pain before, during, or after, passing urine. If the pain be before, that is because the mucous membrane is becoming uneasy in consequence of distension. If he find it painful during or after passing urine, and in the end of the penis, he is likely to have stone; and especially, also, if the pain be increased by exercise. The pain is at the end of the penis in stone. It is almost pathognomonic of calculus to find the pain near to the end of the penis during and after micturition. In chronic prostatitis, the pain is also at the end of the penis. This simulates calculus in the bladder more than any other disease.

The third question is, Has *blood* passed? This brings us nearer still to the point. Blood may be seen in cystitis, but very rarely. The mode and the circumstances in which the blood has passed, however, determine the nature of the disease. An elderly man, who passes blood in-

timately mixed with the urine, dark in colour, and not altered much by circumstances, with frequent rather than painful micturition, has probably hypertrophy of the prostate. In calculus of the bladder you find blood: it is as common in calculus as hæmoptysis is in phthisis. Then a calculous patient will find blood in the urine after a drive or a ride, or after hunting, and none if he keep quiet; or he may pass a drop or two with the last expulsive effort at micturition, and with pain at the time. Such urine is usually rather florid in tint, while, generally speaking, blood passed from the kidney remains long in the bladder, and, from contact with the urine, becomes brown in colour—it is like porter. This, also, may happen when the bleeding is due to hypertrophy of the prostate.

Lastly, Is the *character* of the urine perceptibly changed? A man will often tell you his urine is thick; but he does not discriminate between the thickness of pus or mucus, and that from deposited salts, as lithates. Patients are generally very much disturbed unnecessarily on account of thick urine. In this cold weather, the urine, on cooling, deposits its lithates readily, where none would be seen in summer; and you may tell him that, if he apply a little heat to it, he can see for himself that it will become quite clear again, which is never the case if the thickness be due to organic matters like pus or mucus; and if this be not an habitual appearance, you may make light of it. If, on the other hand, a heavy deposit of lithates be constant, you must look into his habits and correct his digestion—probably restrict some indulgence in diet. If, also, the urine do not become clear with heat, you have an organic compound to deal with, and you must find out carefully the source of it.

Let me advise you always to make your patient pass his urine into two vessels for examination. I should not thank you for an examination of urine passed into one vessel; for whatever a man may happen to have lying in the urethra—a passage which is by no means always clear and sound—passes with it. Let him pass an ounce or two into one vessel, and examine only what you find in the second vessel. If there be gleet discharge, if there be stricture of the urethra, you will find shreds of pus and mucus and blood-corpuscles in the first glass, but not in the second. In chronic prostatitis, always in hypertrophy of the prostate, sometimes there will be a deposit in the first vessel, which would much mislead you if you imagined it to come from the bladder or kidney. This specimen you must examine for albumen, for sugar, and you must inquire also the quantity passed *per diem*. Well, then, if a patient have told you that he has frequency of passing urine, increased by exercise; that he has pain at the end of the penis; that he passes blood; and that his urine is changed, you may arrive at a pretty good diagnosis of his case. But you would be very much to blame if you did not further examine the man: you must pass an instrument. It is best to be straightforward with patients and tell them so. People have too much common sense to be dealt with otherwise than plainly in these matters. You need not always sound a man with a stiff rigid metallic instrument at first, who has never had an instrument of any kind in his urethra. It is best to take a soft instrument, pass it gently into the bladder, which produces very little discomfort, and so diminish the patient's fear. You can then say, pass another instrument (which will give you a little more pain), and ascertain completely what is the matter.

[Sir Henry Thompson then exhibited the various instruments used in the diagnosis of diseases of the bladder and urethra, and explained their several uses—promising to continue the subject on the next occasion of his lecture.]

THE ANTISEPTIC TREATMENT OF WOUNDS.*

BY WILLIAM NEWMAN, M.D.LOND., F.R.C.S.ENG.,

Surgeon to the Stamford Infirmary.

YOU will all, doubtless, have seen the scattered notices in the medical journals of the "Antiseptic Treatment of Wounds"; and many of you will have read with much interest the admirable Address in Surgery given by Mr. Lister at the annual meeting of our Association in August last. To this novel mode of dealing with wounds I would invite your close attention, convinced as I am that the results, so to be obtained, far outweigh any of the usual sequences of the more ordinary surgical dressings—whether they be looked at from the ready and successful response to the surgeon's art, or from the safety and comfort so ensured to the anxious patient.

My short summer holiday this year was spent in Edinburgh; and

* Read before the South Midland Branch of the British Medical Association, October 10th, 1871; and before the Shropshire Scientific Branch of the British Medical Association, October 27th, 1871.

to the kind courtesy of Mr. Lister I owe the opportunities of close observation of his treatment in many and severe cases in his hospital practice. On the lessons there learned I have based my subsequent surgical work, and on them, too, as a foundation, I venture to speak to-day, bringing forward some few cases which have been under my own care, and describing, as clearly as I may, the modes of dressing which are employed. Throughout I am but the humble exponent of the views of a most able surgeon, and my only merit is that of having seen what I attempt to paint.

"Segnius irritant animos demissa per aures,
Quàm quæ sunt oculis subjecta fidelibus."

Whether the so-called germ-theory of disease be or be not correct, is no part of my purpose to inquire; the process would be simply wearisome and ill-managed. The only postulate I ask you constantly to bear in mind is that, for the successful dealing with wounds on antiseptic principles, it is imperative thoroughly to *exclude the external atmosphere as such*; and a most rigid obedience to this requirement can alone command the desired success, whether the air be *per se* a toxic agent, or whether it be dust-carrying, and so but a vehicle of those impurities which determine the occurrence of suppuration in an open wound. It is imperative, in other words, that the air in contact with the exposed portions of a wound shall be fully charged with some convenient disinfectant: so charged, it may be admitted to wound or cavity without risk to the patient or anxiety to the surgeon.

Taking, then, the simple case of an ordinary abscess, in which immediate incision is needed, the antiseptic treatment must be carried out as follows. 1. Destroy any putrefactive material about the integument of the part by washing it thoroughly with a lotion of carbolic acid (one part of the acid in twenty of water). 2. A constant cloud of fine spray must be kept up by an assistant, so managed that the hands of the operator and the part to be incised are always enveloped in the spray: one or more of Richardson's spray-producers may be needed for this purpose. The carbolic acid solution for the spray will be sufficiently strong if made of one part of the acid to a hundred of water. 3. The knife employed must first be dipped in carbolised olive oil (one part of the acid to ten of olive oil). 4. The incision being made, the abscess-cavity may, as far as possible, be emptied by gentle pressure. If any vessel should have been divided and need a ligature, it should be tied with some prepared carbolised catgut, and both ends of the ligature be cut off short. 5. The wound may thus be dressed: A piece of "protective" oiled silk, coated with copal varnish, and then covered with a layer of dextrine, so as to retain a little of carbolic acid lotion (one part to forty of water) on its surface—cut not much larger than wound—should be dipped in the lotion just named and then applied; on this a pad of the antiseptic gauze* must be placed, large enough to overlap thoroughly the wound, and not less than eight layers in thickness. Between the seventh and eighth layers, or those most distant from the patient's surface, must be placed a single layer of macintosh cloth, so as to prevent direct soaking of any discharge through the gauze-covering, and to insure that any moisture which may be poured out shall pass through many antiseptic layers and over some wide space before it can possibly be exposed to the impure influences of a septic atmosphere. 6. For the retention of this covering in place, a strip of the above-named muslin (cut to the width of, and rolled up as, an ordinary bandage) may be applied. The slightly adhesive character given to the muslin will make the requisite turns fit very easily, and be less liable to displacement, than the common calico roller. 7. If it be necessary to wait for some little matter—to replenish the bottle of the spray-producer with the lotion, to change the assistant, etc.—the wound should be covered with a piece of rag, dipped in lotion, containing one part of acid in forty of water. This, for convenience, is known as "a guard". 8. Subsequent dressings—first every day, then at longer intervals—must always be managed in the same way. The spray will need to be unremittently kept up; the fingers to be soaked in the lotion or wetted with the spray; all adhering discharge carefully washed away; and the protective outside pad and bandage applied as before. 9. To small operations, removal of tumours, etc., the above process is thoroughly applicable. If the wound made be deep or tortuous, a tent of lint—a narrow strip—dipped in carbolised olive oil (one part of the acid to ten of oil) must be introduced before the sutures are inserted. At the end of twelve or twenty-four hours this tent may be removed; it will have absorbed the serum oozing from the deeper part of the wound, and so have prevented distension of the deeper parts, and possible formation of pus. 10. In larger operations—*e.g.*, amputations—a larger volume of spray must be secured from two or more of the usual spray-producers, or from the apparatus employed by Mr. Lister. [A new spray-pro-

ducer, which seems likely to be very effective, has just been sent to me by Mr. Gardner, surgical instrument maker, South Bridge, Edinburgh.] Sponges should, before using, be dipped in carbolic acid lotion (one to a hundred): when soiled, they must be washed, first in clean water, then in a lotion of one to forty; and then, just before using, in a lotion of one to a hundred. 11. The following cautions may not be out of place. *a.* The lotions for spray-producers need very careful filtration before being used. It is exceedingly easy to choke the fine apertures through which the spray is delivered. *b.* Hold the muslin-padding closely down over the wound until the layers of bandages shall have retained it closely in place; and leave no channel by which septic air may reach the wound, unprotected by several layers of gauze-bandage. If dressings be loose or displaced, air will soon reach the surface of the wound, and in twelve hours suppuration will be established. *c.* Redress so soon as any trace of stain shall have shown itself at the outer edge of the gauze covering. *d.* Sinuses and wounds opening into mucous canals are ill-fitted for thorough antiseptic treatment.

The advantages may be briefly summed up:—1. The dressing is clean, almost odourless, and singularly painless. 2. The formation of pus as a consequence of the injury, surgical or accidental, is, with due care, prevented. 3. Erysipelas and pyæmia, if not absolutely extinguished, are very rarely seen. 4. The wounds are free from local irritation; no swelling of incised integument and no local redness are to be noticed. 5. There is no constitutional disturbance (traumatic fever) after even severe operations. The dressings are infrequent, and in themselves free from irritating material. 6. The wounds heal rapidly.

CASES—I. *Abscess in Leg*.—T. W., aged 10, was admitted July 18th, 1871, with a large abscess in the calf of the right leg. An incision was made under the spray, and antiseptic dressing was employed. No pus was discharged after the first day. The blood-clot filled up the incision, and soon became organised. On July 25th, he was discharged cured, having been a week under treatment.

II. *Abscess in Breast*.—E. T., aged 17, was admitted September 12th, with an acute and large abscess in the right breast. An incision was made September 13th under spray; the dressing was as above. No pus was discharged after the first three days. On September 26th, she was discharged cured, the breast being quite well.

III. *Large Chronic Abscess*.—J. W., aged 17, was admitted September 12th, 1871. She was the subject of old hip-joint disease on the left side. The limb was shortened an inch or more, and the femur was dislocated upwards and backwards on the dorsum ilii. There was a large fluctuating swelling on the left thigh, fully six inches long by four broad, reaching upwards nearly to the trochanter, downwards below the middle of the thigh. It was first noticed six months previously. On September 13th, chloroform was given, and I made a free incision into the swelling on antiseptic principles, letting out thirty ounces of fairly healthy pus, with shreds of areolar tissue. No constitutional disturbance followed. The girl became free from pain, and could at once eat and sleep. Subsequent dressings were applied about every two or three days. Now from an ounce to two ounces of pus are discharged at each dressing. The shreds of tissue are no longer to be noticed. Within the last week some small fragments of carious bone have come away, so the abscess is most probably connected with the old bone-disease.

IV. *Large Abscess in Lumbar Region over Right Kidney*.—W. J., aged 38, was admitted October 5th. He was much emaciated, and could not stand upright. He had a swelling in the right lumbar region nearly of the size of a small foetal head. Pulse 120; temperature 103 deg. He had hectic fever, much sweating, and loss of appetite. On October 6th, under chloroform, I incised the swelling, evacuating nearly thirty ounces of pus. The dressing was applied as above described. Pulse 96; temperature 98.4. The hectic never returned, and the man is much better. The back is dressed every two or three days, and about an ounce of pus is discharged. I have had occasion (October 15th) to open also for him a large abscess in the perinæum, due, it would seem, to the urethra giving way behind a tight stricture; but this wound, through which some urine filters, could not be subjected to antiseptic dressing.

V. *Compound Fracture of Left Tibia*.—M., aged 12, sustained a severe compound fracture of the left tibia in the upper third on September 16th, 1871. On September 18th, I saw him in consultation. Two inches of the tibia were denuded, and there was a deep wound into the calf separating the muscles from the posterior surface of the bone. The wound was filled with blood-clot, which was just beginning to become offensive. I injected some carbolic lotion (one in twenty) beneath and into the substance of the clot. The limb having been securely fastened on a side-splint, the usual antiseptic dressing was applied. A fortnight later, I heard that the boy was doing very well. There was no pus-formation to be seen; no putrefaction; the blood-clot was becoming organised.

* For detailed description of this gauze, see BRITISH MEDICAL JOURNAL, January 14th, 1871, page 31. It is supplied by Messrs. Macfarlane, chemists, South Bridge, Edinburgh.

VIII. *Fracture of Right Leg at the junction of Middle and Lower Thirds: Severe Transverse Wound two inches above the Ankle down and into the Tibia.*—W. M., aged 54, was admitted September 8th, 1871. He was thrown down this morning at 8 o'clock, when at work with a reaping-machine. The right leg was seriously injured. When he was seen at 2 P.M., there was found to be a simple fracture of the tibia at the junction of the middle and lower thirds. There was a wound about two inches above the ankle-joint, gaping widely; all the tendons, etc., were divided down to the bone, and the knife of the reaper had made a groove into the tibia itself. He had lost a good deal of blood. The limb was much swollen. The two points of injury, doubtless, communicated. There was hardly an inch and a half of clear skin space between them, and pressure above the fracture made blood well up from the wound below. The leg was put up in a swing splint; the skin was washed, and the wound mopped out with carbolic lotion (one to twenty), and a tent of carbolised oiled lint was introduced to the deepest part of the wound. The tent was removed in twenty-four hours. There was large oozing of blood-stained serum on the dressings throughout the first eight or ten days. The man had had no constitutional disturbance. He had eaten meat since the day after admission. He needed no sedative, and had very little pain. On October 4th, from some want of care in the dressing, and the consequent admission of air, a few drops of pus were noticed for the first time, and small suppuration (never more than half a drachm in two days) afterwards continued. On October 23rd, the wound was all but well; the fracture was sound. He was ordered to have a starched bandage applied.

IX. *Incision into Knee-Joint.*—G. B., aged 23, was admitted August 11th, 1871. He had disease of the right knee-joint of fifteen months' standing. Since an accidental slip the symptoms had been much aggravated. The joint was much swollen, and he could not bear the slightest movement; there was also much pain on pressure. The limb had been confined at home by a long splint, and a weight, working over a pulley, attached to the foot; but these measures had given very small relief. Destruction of cartilage was, no doubt, going on. On August 11th, chloroform being given, I made a free incision on the inner side and parallel to the right patella, letting out at once about a tablespoonful of sero-purulent fluid. Antiseptic dressing was applied. The interrupted splint and pulley was reapplied. The relief was immediate; the man was at once able to eat and sleep. No constitutional disturbance followed. The joint soon became smaller. The blood-clot, which ultimately became organised, filled up the incision, and through the intestines of this clot for ten days or more pus slowly oozed. On September 12th, the wound, which had not been dressed for the past eight days, was now quite well. On October 5th, a starched bandage and pasteboard support was ordered to be applied to the limb. The patient was allowed to move about on crutches. On the 20th, he could bear some little weight on the limb, and was in very fair health.

XI. *Incision into Knee-Joint.*—R. F., aged 17, was admitted September 19th, 1871. She had had for some long time weakness in the left knee. Pain and swelling about the joint came on six weeks before admission, since which time she had kept her bed. On admission, the left knee was much swollen; fluctuation was perceptible; she shrieked on the slightest movement. She had lost flesh; had no appetite; and could only sleep with large doses of opium. On September 23rd, Mr. Eddowes made an incision on the inner side of the patella, letting out sero-purulent fluid mixed with blood. The patient was under chloroform. Considerable relief followed. In two or three days the appetite was much improved. There was no constitutional disturbance; no redness around the wound; no pus from the wound. On October 3rd, the joint was much diminished in size.

XII. *Ovariectomy.*—S. A., aged 32, the subject of marked ovarian disease, was tapped in July 1871, when thirteen pints of fluid were removed—a solid mass remaining in the left iliac fossa. On September 21st, ovariectomy was performed. Carbolic acid spray was employed, and antiseptic dressing. The pedicle, which was thin, was tied in two halves with catgut, and returned. On the 30th, it was necessary to break up the adhesion of the lower part of the wound to relieve the distension from contained fluid. There was a large effusion of blood into the lower third of the abdominal cavity. No putrefaction, however, occurred, and no pus formation until a month after the operation; then it was superficial, from accidental displacement of the dressings. The woman is steadily recovering.

REMARKS.—The two cases of acute abscess call for little remark: one was quite well in a week; the other in a fortnight, from date of incision. The cases of chronic abscess have exhibited no sign of constitutional irritation since the evacuation of the contained matter. Both have been much relieved by the procedure; and, as yet, without the risk and dangers which not uncommonly follow the emptying of large

collections of matter. Both instances of compound fracture were so severe that a few months ago I might justifiably have thought of an immediate amputation. In not one particular has there been in either case a trace of uneasiness either to patient or surgeon. The power of making incisions into large articulations, without even a fear of after trouble, is of no small interest; and one, if not both, of these patients will probably owe their limbs to the antiseptic dressing. More than once have I seen amputation through the thigh for less marked states of joint-disease. In the ovarian case, I claim nothing more than the prevention of putrefaction, in the large quantity of blood effused into the peritoneal cavity, by the dressing employed. And, too, so far as one single case may be a precedent, this shows also that the spray of carbolic acid (one to a hundred) does not irritate even the sensitive lining of the abdominal cavity. Other cases might well have been added to the list; but I have chosen these as marked instances of surgical procedure, of not infrequent occurrence, and, I might truly add, not uncommonly followed by tedious recovery or by serious after-trouble when the more usual surgical dressings are employed.

ON A REGULATED TEMPERATURE IN THE TREATMENT OF DISEASE, ETC.*

By ALEXANDER ROBERTSON, M.D.,

Physician to the Town's Hospital and City Parochial Asylum, Glasgow.

GENERAL REMARKS.—The conclusions deducible from these observations regarding the physiological and therapeutical effects of maintaining a high uniform temperature in such diseases are the following.

1. The results are similar in kind, though differing in degree, with all the modes of application; but, upon the whole, they are more decided and satisfactory with the combined poultice and bag than with either of the others.

2. An uniform high temperature has a powerful general action on the system. But the most striking influence is exerted on the skin, free perspiration usually occurring within half an hour after the agents have been applied, and in some cases continuing for some hours afterwards.

3. In a considerable degree, as a consequent of perspiration, there is a reduction of the general temperature. This, however, is not constant; but where an increase is associated with perspiration it is not great, and does not exceed 0.2 or 0.4 deg. Should there be no perspiration, the general temperature is occasionally increased as much as a degree.

4. As a rule, the high temperature does not excite the heart, but appears rather to have a tonic effect on that organ; for in the majority of the patients there was a reduction in the number of pulse-beats per minute, and it was also generally fuller in volume. Occasionally, however, where perspiration did not appear, there was some, though not a great, increase in the action of the heart; but it is also to be observed that, when sweating was excessive, an enfeeblement of cardiac power was the result.

5. A reduction in the respirations usually occurs when these are abnormally frequent. When, however, there is no perspiration, there may be an increase in the number, but only to a slight extent.

6. According to the testimony of the patients, pain and oppression in the chest are usually relieved, and sometimes entirely removed, and a general feeling of relief is experienced. This remark applies not only to the ordinary bronchial affections, but also to those exacerbations of phthisis pulmonalis in which oppression of breathing is associated with a suppression of perspiration; for relief in that condition was obtained in the cases observed by a restoration of the cutaneous discharge.

7. Perspiration is induced in many cases of renal disease with dropsy, with consequent advantage to the sufferers, and afterwards diuresis may be more free.

8. The application of an uniform high temperature is useful in such disorders as lumbago; the pain in one of the two cases treated being entirely removed, and in the other considerably alleviated, immediately after the application.

9. Its local action on the sensory nerves is not unduly great; for, unless the heat be raised to an unnecessary height, the different media through which it is applied are not complained of by the patients.

10. Its local effect as a counterirritant, so far as is indicated by the vascularity of the integument, is considerable, and may even be so increased as to produce vesication of the surface.

With respect to the results which followed the renewal of the water every half hour during two hours—none of the applications being meanwhile removed—I have only to remark that, as they were very similar

* Concluded from page 640 of last number.

to those which warranted the above deductions, like conclusions may be predicated of them. The chief difference was, that the effects were obtained after a longer time—free perspiration in many cases not occurring before an hour and a half.

It is evident from the numerous observations here recorded, that the heat of a poultice can be maintained during any period desired, at from 110 to 115 deg., and that of a fomentation from 115 to 120 deg.; and these temperatures are as high as can be borne by the patients when continued for one or more hours. It is also proved that, when the water is only changed at intervals of half an hour, the temperature of the poultice may be restored to from 121 to 125 deg., and that of the fomentation to from 126 to 130 deg., by pouring into the bag water at 130 deg.

The beneficial effects of these applications, so far as could be observed, were more decided than those which resulted from the mustard or mustard-and-linseed-poultice in the same class of diseases. Their respective actions, I need scarcely say, are to a great extent different. Locally, mustard acts chiefly as a counterirritant; but, as we have seen, it produces pain, and, in children especially, excites the heart's action considerably. On the other hand, a continued high temperature, besides being, to a certain extent, a counterirritant, exercises a more powerful general influence, as is manifest from its stimulating effect on the leading function of the skin. The combination of the linseed with the mustard, no doubt, during the short time the extra heat is retained, produces the combined effects of an elevated temperature with counterirritation, but the latter action preponderates. The difference between the effects of the two applications—namely, the continued uniform heat and the poultice of mustard and linseed—was well brought out in the observations on the healthy boy, which I have already detailed at length. Besides the specified diseases, there are many others in which there seems reasonable prospect of advantage being derived from these new applications. For instance, inflammatory affections of the abdominal viscera, many of the inflammations which fall more particularly under the care of the surgeon, and local cutaneous eruptions, particularly when they are little dependent on a constitutional vice.

Should Dr. G. Johnson's theory of cholera—that there is a spasm of the pulmonary capillaries—be sound (it has lately obtained the high sanction of Sir Thomas Watson), then we might anticipate that benefit would be derived from the maintenance of a uniform elevated temperature over the lungs. Whether or not this should prove to be the case, there seems at all events a cordial concurrence in acknowledging the advantages of hot applications to the abdomen.

By means of this bag, with or without moisture, we have the power of applying and maintaining heat as high as can be possibly endured, and for as long a period as is desirable, without disturbing the patient; and were this all it accomplished, it is surely a boon of some moment in a disease usually accompanied by so much suffering.

Another group of diseases of a different kind, in which the application of this principle of treatment promises to be of no small service, are those attended with hyperpyrexia. At the outset, reference was made to the very striking effects of the cold bath in that condition. As has been stated, water of any temperature between the boiling and the freezing points may be circulated through the apparatus, so that in the use of iced water we have a powerful agent for reducing febrile heat. It certainly cannot be so active as the bath; but after the latter it may suffice to maintain the reduced temperature so induced. In cases of medium severity, it may of itself be competent to lower the heat to a point compatible with the safety of the patient. It is assuredly a much less formidable and a more comfortable and convenient means of treatment, and one whose effect is more easily regulated than the cold bath. I regret that no opportunity has as yet presented itself in my experience for testing its power over the febrile state.

I have only further to remark, in reference to the chest-bag, that the calibre of the tubing of which it is made is such that, when it is sufficiently distended, it contains about eight ounces of water, and that the material and coverings are light, so that the combined weight of the bag and contents is less than that of an average poultice. In order to test this point, which is one of practical importance, I caused an experienced nurse to make three linseed-poultices, without instructions regarding the quantity of the meal, but in other respects to be as follows; viz., to be spread on ordinary cotton cloth $8\frac{1}{2}$ by $9\frac{1}{2}$ inches, and to have muslin on its other surface; the whole to be covered with thin waterproof sheeting about an inch wider than the poultice. So prepared, the entire weight of each poultice and its coverings was 16 $\frac{3}{4}$ oz., 17 oz., and 20 oz. respectively—average, about 18 oz. On the other hand, the weight of the bag, when sufficiently distended with water, is about 12 oz.

Regarding its durability, it is sufficient to state that I have used the same bag in all these observations, which extend over several months, and it is still as serviceable as at first.

We now turn to the uterine bag. Hitherto no means have existed for directly fomenting or applying a low temperature to the neck of the uterus otherwise than by injecting water into the vagina; and we all know that in many cases this method is very inconvenient and of doubtful advantage. Both these ends can be accomplished through the instrumentality of this bag, with comparatively slight disturbance of the patient.

My observations have all been made with the bag alone—that is, without covering of wet lint or other material. The reason of that is, that the idea of attaching loops to it, by means of which a moisture might be applied, only occurred to me quite recently. But though I have not

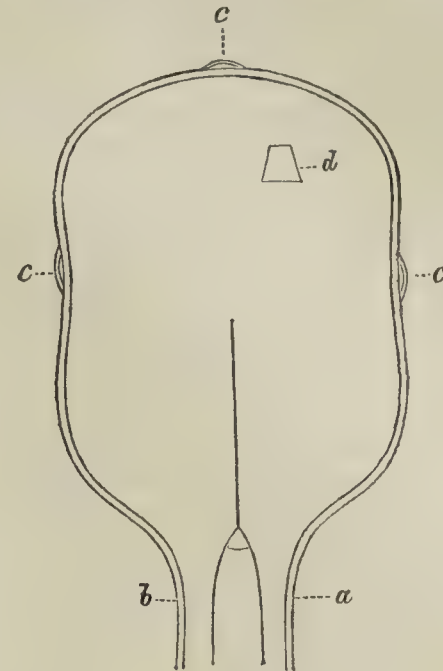


Fig. 2.—Section of Uterine Bag.
a. Inlet; b. Outlet pipe: outlet one has tap at end. c. Loops for attaching covering of lint. d. Pouch for director to assist insertion.

used it otherwise than uncovered in the treatment of disease, I introduced it in one case with wet lint, first on one surface and then on both, and satisfied myself that in either way it worked quite satisfactorily. Of course, when both surfaces are covered, its introduction is not quite so easy as when only the smooth bag is in contact with the vagina. I need scarcely point out that the lint may be soaked with various medicated solutions.

The cases in which I have had opportunity or leisure to observe its effects are but few, and I will therefore briefly describe them individually.

CASE I.—C. M., aged 53, was suffering from chronic inflammation of the uterus with hypertrophy, remaining after the removal of a fibrous polypus about a year previously. She had endured pain for months in the uterine region, especially at night, and was unable to follow her employment. The bag was introduced and pushed well up behind the neck of the womb; and water on two occasions at 120 deg., and at others it was 110, circulated through it. Within half an hour from the commencement, free perspiration generally occurred. The application was made in the evening and was continued one, two, and sometimes three, hours, for six times in all. The patient stated that on each occasion the pain was relieved, and sometimes temporarily removed altogether, and that she usually obtained refreshing sleep for some hours afterwards, to which she had been previously a stranger. The alleviation of all the symptoms continued, and she shortly afterwards undertook the post of nurse, which she at present holds.

CASE II.—The patient, aged 35, had cancer of the uterus in the ulcerative stage, and was suffering severe pain. Warm water, at a temperature regulated by the patient's feelings, was circulated for two hours on each of two occasions. The day following each application, she stated that she had been soothed by it; that the heat was very comfortable and allayed the pain; that, especially after one of the applications, she had a very good night, sleeping several hours continuously, and that throughout the morning she had none of the sickness and backache which was customary in her experience.

CASE III.—M. M., aged 50, had malignant disease of the uterine neck with deep excavations. A current of hot water, as warm as she could bear it, was circulated for about an hour. At the close, she stated that she had felt the application very comfortable, and, next day, said that she had spent an unusually good night, and was easier.

CASE IV.—J. M., aged 43, had cauliflower cancer of the uterus, and

was subject to hæmorrhage, lasting often about a week, at the menstrual period. The ordinary astringent measures, internal and external, had been carried out on each successive occasion, but often with very little benefit. In this case, cold water has been circulated continuously five different times, for periods varying from half an hour to six hours, with the result of always checking the bleeding at the time. Twice, however, oozing returned after two or three hours, but at other times it did not recur for several weeks.

CASE V.—Martha Q. had hæmorrhage recurring at uncertain intervals, and lasting for a week, and occasionally nearly a fortnight; the exact cause could not be ascertained by a careful examination of the uterus and ovaries. Remedies, local and general, having failed, I circulated cold water for an hour, with the effect of at once stopping the bleeding. Next day it recurred, but again ceased immediately after the use of the bag. This time, however, it soon returned, and I thought it advisable to plug the vagina with sponge soaked in glycerine with tannic acid. On the removal of the plug, it reappeared once more, but gradually passed away.

CASE VI.—Mary M., aged 40, had disease of the right ovary of many years' duration, attended with much loss of blood at the menstrual periods throughout the last two years; and for several months the discharge had never been entirely away. Cold water was circulated in this case for five hours. Bleeding had entirely ceased when the bag was removed, and did not return till two days afterwards, and then only to a slight extent. The patient said that it was "decidedly less" than previous to the use of the bag. She now left the Hospital.

These are all the cases in which I have used this instrument. In the patient Martha Q., the plug on one occasion was apparently more successful in restraining hæmorrhage. But plugging, as is well known, is sometimes followed by dangerous symptoms. I had an illustration of that in the patient H. M. On the last recurrence of the bleeding, the bag not being in my possession at the time, I plugged by the means described in Q.'s case; but afterwards she had severe shiverings, vomiting, and great prostration, which I attributed, at least partially, to the absorption of some of the decomposed blood retained by the plug. No unpleasant effect in any case has followed the use of the bag.

Besides its beneficial action in such cases as I have described, I am hopeful that this apparatus, or other forms constructed on the same principle, may be found to be of service in gradually overcoming some cases of organic stricture, not only of the vagina, but of other passages also. Its distending power is considerable, and might be increased by employing a longer and wider inlet-pipe. In cases of vaginismus, it seems likely to be useful.

Respecting its application: When the object is to stop bleeding, the vessel containing water is raised about two feet above the level of the patient's body, so that, the bag being fully distended, the combined action of pressure and cold is exerted internally. Should we seek to soothe a painful inflamed uterus, no pressure being desirable, the vessel is elevated only a few inches, so far, in fact, as will maintain the circulation of the water.

With respect to the other apparatus, I regret that as yet I have had no leisure to test them in the treatment of disease, except in two cases, which were only imperfectly observed. I have, however, satisfied myself that they work correctly, and are applicable to the objects for which they were designed. A few remarks are called for to indicate the disorders in which they may probably be found useful.

1. *The Spinal Bag.*—Besides its evident suitability for the treatment of ordinary painful and inflammatory affections of the spinal cord and spine, the action of a regulated high or low, or alternately high and low temperature, in such diseases as tetanus, tetany, locomotor ataxy, etc., is worthy of ascertaining. Should it be possible to affect the condition of the sympathetic by cold applications over its course, it may be conveniently done by circulating ice-water through this instrument. I have applied it in a case of slight inflammation of the cord from injury, circulating hot water for an hour. The patient was certainly relieved next day; but to what extent the improvement was due to the continued high temperature it was impossible to determine, as she was receiving other treatment at the same time.

2. *Head-Bag.*—I was particularly anxious to have a suitable apparatus for the treatment of diseases of the brain, inclusive of insanity, and have devoted much thought and time to its construction. I have long been of opinion that there was considerable probability of benefit being derived from tepid or warm applications in certain forms of cerebral disorder. It is accepted as a pathological doctrine that there are two opposite states of the blood-vessels of the brain—one of anæmia, another of hyperæmia; so we might anticipate that opposite modes of treatment would probably be of service in conditions so dissimilar. And yet how seldom do we hear of heat being applied to the scalp, by any medium, in affections of the encephalon. Struck by this anomaly,

about two years ago, I prescribed warm fomentations to the head in a case of acute insanity. There did not, however, appear to be any material improvement through their action in that case. On thinking over the subject afterwards, it seemed to me that the temperature was too high, being probably from 130 to 140 deg., and had proved exciting rather than soothing to the brain. Although the results were not encouraging, my belief in the soundness of the principle was not shaken. But I felt that it was impossible to apply it with that degree of exactness which is requisite in the use of so powerful an agent, by such means as I had employed, or were then in existence. By this cap, the difficulty is entirely obviated, as any degree of temperature may be maintained as long as is desired. With respect to cold, also, it is, I think, in all respects a far more convenient and suitable apparatus for its application than the ice-bag, as ice-water may be circulated through it even when the head is resting on the pillow. I would, however, remark that it is very doubtful if real benefit is obtained by the application of a temperature so low as that of ice during a considerable period. The after-effect of a large reduction of heat in a part of the body, or in the system generally, is a reaction to a higher degree than previously to the action of the agent on which the reduction depended. This is illustrated locally in congelation of the skin by ether, and generally by the bath of very cold water. Greater permanent improvement is likely to be secured by a more moderate and prolonged reduction of temperature; and this may be effected by means of these apparatus.

In closing, I have only further to observe that I am deeply conscious of the incomplete form in which the subject has been submitted, more especially in relation to the apparatus last described. My apology lies chiefly in the extent of the field to be overtaken. The labours of many inquirers would be required to determine the value of this mode of treatment in the numerous diseases to which it is applicable. I trust, however, that I may have succeeded, at least to some extent, in demonstrating its importance; and I hope, also, that I may have contributed means, however humble, to enable the profession to employ agents whose capacities both for good and evil are great, with that degree of precision which ought always to be aimed at in using remedies of every kind, and through which alone solid and lasting progress can be made in the science and art of medicine.

CLINICAL MEMORANDA.

CYANOSIS: MURMUR WITH THE FIRST SOUND OF THE HEART: PATENT FORAMEN OVALE.*

A FEMALE child, five months old, was brought as an out-patient to the Children's Hospital on October 23rd. Its face and extremities were of dusky colour; it had cough, hurried breathing, and much palpitation, and a distinct murmur with the first sound over the heart. I did not ascertain whether this was propagated or not up the great vessels. The child had been dark-coloured from birth, and had had convulsions at intervals. It did not seem colder than others. The mother was not strong. She had suffered during pregnancy from palpitation and faintings, and at the seventh month had fallen down stairs. The child was born at the full time. She had two other children, healthy; and she had no cardiac disease. The child was ordered an expectorant and stimulant mixture, and I saw it once more and verified the presence of murmur. A few days afterwards it died in convulsions. On the following day I made a *post mortem* examination, at which Dr. Foster was present. The fontanelle was not closed. The abdomen was distended. The chest was markedly cone-shaped, the apex being at the neck. The surface was not so dark as during life. On opening the thorax, the lungs were in part pink-coloured and healthy; in part dark and collapsed. The pericardium contained more than the usual quantity of serum. The heart was larger than normal, but in its ordinary position. The right cavities were larger than the left, and contained clots; the left were empty. The walls of the right ventricle were somewhat hypertrophied. The aortic and pulmonic valves were healthy. We examined carefully the orifice of the pulmonary artery, and there was no contraction about it; on the contrary, it was, if anything, larger than usual: it was so far larger than the orifice of the aorta that it admitted my little finger readily to the second joint, whilst the aorta admitted the same only to the first joint.† The foramen ovale was pa-

* Read before the Pathological and Clinical Section of the Birmingham and Midland Counties Branch.

† Dr. Foster has obliged me with the following measurements as to relative size of aortic and pulmonic orifices in females (from Bizot), from which it will be seen that the latter is normally the larger. The circumference is given in English inches:—aortic, 2.557; pulmonic, 2.671.

tent, admitting a goosequill above the edge of its imperfect valve. The Eustachian valve was well developed. The liver was large.

The interest of this case lies specially in the fact of a murmur being heard without there existing any other condition to account for it than the open foramen. There was no contraction nor abnormality of the pulmonary artery; and thus the case supports the views of Dr. Markham, and those expressed by Dr. Foster in his paper on the subject in the *Dublin Quarterly Journal of Medical Science* for August, 1863.

EDWARD MACKEY, M.B. Lond., Extra Acting Physician to the Children's Hospital, Birmingham.

MECHANICAL DYSMENORRHOEA AND CHRONIC ENDOMETRITIS.*

IN the following case, mechanical dysmenorrhoea and chronic endometritis were cured by dilatation with laminaria-tents and the application of a solution of nitrate of silver to the uterine cavity, the result being remarkable fecundity. The patient was thirty-four years of age, well formed, and healthy-looking. Her case was characterised by a history of long continued menstrual trouble, dating from the first catamenial epoch—pain in the left hypochondrium, symptoms of spinal irritation, hysteria, and dyspepsia. The menstrual flow usually lasted seven or eight days, but brought no relief to the pain. Marriage in 1867 brought no change: on the contrary, an attack of menorrhagia aggravated her condition. The lips of the os being found excoriated, and the cervix congested, blood was taken by puncture, and nitrate of silver applied, but without much benefit. Finding considerable contraction in the cervical canal and os internum, I dilated it with laminaria-tents, of which two were used, at an interval of ten days; and a solution of nitrate of silver (two scruples to an ounce) was applied twice a week to the interior of the uterus. Marked benefit ensued. The next three catamenial periods passed off without any suffering. Pregnancy then occurred, and she was delivered of a full-grown female child at term; which, however, she could not suckle. After passing two more periods naturally, pregnancy again occurred. She went the full time, and was delivered of another healthy infant. This she was also unable to suckle. For the third time pregnancy ensued at the end of three months from her last labour. She went the full time as before, and on this occasion gave birth to three female children, all well formed and healthy. She was unable to suckle them. Two died within the month, and the third is now in a state of slow decline. Thus this poor woman gave birth to five full-grown infants in the short period of one year and ten months.

ALFRED HALL, M.D., Brighton.

OBSTETRIC MEMORANDA.

RUPTURE OF MEMBRANES SEVEN WEEKS BEFORE DELIVERY.

A CASE similar to that mentioned by Mr. Bradley occurred to myself. On June 30th, 1866 (whilst acting as assistant to Mr. Woody of Tamworth), I delivered a woman, aged 30, of her fourth child. The membranes had ruptured seven weeks previously, and the liquor amnii had been dribbling away ever since. As with Mr. Bradley's case, symptoms of labour occurred with the first discharge of liquor amnii.

EDWARD NORTON, L.R.C.P. Lond., Maida Vale.

OBSTRUCTED LABOUR.

THE case related by Mr. Johnson in the *JOURNAL* of November 25th recalls to my mind one, though quite dissimilar, which occurred in my practice some five years ago.

Mrs. C., aged 38, was taken ill in labour for the first time on January 29th, 1866. She had been married twelve years. An unqualified man attended her as my assistant, and came for me, saying it was a case for Cæsarean section. On examination, I could only pass my finger about two inches within the vagina. There I found a hard unyielding structure, feeling like cartilage, in which was a small hole, only admitting the tip of the finger; so that I was unable to ascertain the state of the os. The pains, which were strong and regular, caused no pressure upon it. After waiting for some time, I made four incisions with a hernia-knife into the circumference of the aperture, in opposite directions; and then, finding the os freely dilated, I ruptured

the membranes. The labour was terminated in the natural way in about two hours. The patient had a good recovery, and, I have been told, has borne two children since without surgical aid.

Walsall.

JAMES CLARK, M.D., F.R.C.S.E.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF HEART-DISEASE WITH LOUD MUSICAL MURMUR, WHICH PASSED AWAY.

(Under the care of Dr. DUCKWORTH.)

W. D., aged 28, porter, a rather spare pale-faced man, with brown hair, weighing 9 stones 3 pounds, came to the out-patient room complaining that he had suffered from night-sweats for about a fortnight; also that a noise was audible in his chest both to himself and to his wife at night when in bed. The latter complaint had existed for three or four months previously. He had never had any important illness, certainly not rheumatic fever; and he declared that he had led a temperate and regular life. For four or five years past he had been somewhat short-winded. Eleven years before, he had sustained a severe blow on the left side of the chest, but not over the præcordia. His father died of phthisis; also a brother. His mother and one sister were living and healthy.

The finger-ends were somewhat dusky. His pulses were generally visible, and of aortic type. The cardiac impulse was very extensive and wavy. The apex-beat was in line with the left nipple in the fifth interspace. There was a thrill of diastolic rhythm on palpation. The first sound was clear; but a loud purring and musical murmur replaced the second sound all over the chest. The murmur was of maximum intensity at the right base of the heart, and was loudly conveyed to the ensiform cartilage. It was, moreover, clearly audible along the aorta, down the back, and even on the parietal regions of the cranium. There was no anæmia. An emplastrum opii was ordered to the præcordia; and five grains of citrate of quinine and iron were given thrice a day out of infusion of calumba.

The patient did not return for a fortnight, when it was found that the loud murmur had entirely ceased; and a double bellows-murmur was heard at the base of the heart, and generally over the cardiac region, not being audible behind. The impulse was as before; and the pulse had the same characters, about 120. The man was well aware that the noise had passed away from his chest. The night-sweats continued. Careful examination of the lungs revealed no morbid signs; and the chest expanded well. Some streaks of blood were seen in the sputa during a bad cold two years ago. Three grains of oxide of zinc, with two grains of extract of hop, were ordered at bedtime each night; and the draught to be continued.

In a week, the man reported that he felt much relieved, and he hardly suffered from the night-sweats. In ten days, this latter symptom had returned as severely as before. There was no change in the physical signs in the chest. Pulse 128, visible, of aortic regurgitant type. A draught with some dilute acetic acid was ordered at nights, to replace the zinc pills. The patient ceased to attend from this date.

COMMENTARY.—It was to be regretted that this patient passed from further observation. Cases of transient musical cardiac murmur, though not perhaps common, are well worthy of study. In this instance there could be no doubt that there was progressive disease at the aortic orifice, and it is most likely that the loud and musical noise was due to a phase in the growth or development either of true vegetations about the sigmoid valves, or of a fragment of fibrinous deposition in connexion with the same. It is perhaps not too much to aver that the loudest and most distinctly musical cardiac murmurs are generally due to the presence of fibrinous masses about certain valves: moreover, musical murmurs are conveyed further along the arteries than any other kind. The fact of their fleeting character lends much support to this view of their origin. It is of course in such cases that there is risk of various visceral infarctions, more especially of the spleen and kidneys, and also of the cerebral arteries. There was, however, no reason to believe that such events had occurred in the above case. It is exceedingly common to find no antecedent rheumatic history in like instances, and the causes of the endocardial degeneration must be sought in other directions. Such changes often proceed slowly, and lead sud-

* Read before the East Sussex District of the South-Eastern Branch.

denly to rupture of valves or tendinous chords, whereupon murmurs are generated, and such may change their character from day to day, varying, no doubt, with the form, amount, and texture of the new growth or the fibrinous deposition thereon from the blood-current.

It is proper to consider whether the severe injury to the left side of the chest eleven years before had anything to do with the cardiac lesion. In such a case pleuro-pericarditic adhesions might have occurred to an extent sufficient to damage the due nutrition of the heart, but there was no evidence of this, and it is probably quite fair to leave this part of the history out of consideration.

From this patient's family history and his severe night sweats it seemed likely that he might be phthisical, but as stated above, there was no evidence of such disease in the chest. The urine was not examined, or, if it was, no note was made as to its condition. In such a case it is of much importance to know whether or not the kidneys are sound, for aortic disease is not uncommonly associated with renal degenerative change.

It is noteworthy how much relief to the night sweats followed the use of oxide of zinc, although the remedy soon lost its power over this symptom. The opium or belladonna plaster, and the use of steel and quinine in these cases, are often of marked service, while digitalis is as certainly contraindicated.

ST. THOMAS'S HOSPITAL.

FRACTURE OF THE LOWER PART OF THE SPINE FROM A HEAVY LOAD.

(Under the care of Mr. LE GROS CLARK.)

AN interesting case is now under treatment in this hospital of fracture of the lower part of the spinal column, from carrying an over heavy burden. The man was carrying a weight upon his shoulders, when it crushed him down forward, and fractured the spine. Mr. Clark stated that he had seen many such cases when the railway system was not so developed as now, and when the tunnels were being made. The men sat doubled up with their chins almost on their knees; and it was not uncommon for a mass of earth to fall upon them in this position, so heavy that the spine was forced to yield. As might be expected in these cases, the fracture commonly occurred towards the lower part, where there is an increase in the length of the leverage, and where the spine is not supported by the ribs and their attachments—that is, in the lower dorsal or lumbar region. The interest of the case in St. Thomas's is, that the nerves which supply the limbs seem to retain their function.

OPERATIONS, WEDNESDAY, DECEMBER 6TH, 1871.

Sequestra in both Femurs.—Mr. Sydney Jones had a case requiring the abstraction of sequestra from both femurs; but in consequence of the low condition of the patient, and his having serious heart-disease and great albuminuria, he only operated on one leg. After some chiselling of the outer side of the right femur, he was able to remove a very carious sequestrum an inch and a half long, and a number of smaller pieces. The use of the trephine was useful in two places. As he could not discover any trace of dead bone near the original cloaca, he concluded that he had taken away all the source of mischief in that bone.

Excision of Knee-joint.—Mr. Jones also excised the knee-joint of a girl aged 7, where the disease had lasted for two years. The girl had been under his treatment in the old Hospital. The pain in the knee and about it was most excruciating when the part was touched, and the leg was perfectly useless in consequence of the joint being bent and fixed. On an incision being made, the articular surfaces and the bone below were found extensively diseased; these were removed, and it is hoped that she will now enjoy a very useful limb.

Disease of the Ankle-joint.—Mr. Croft operated on a young man for disease of the tarsus. He had been operated on a month before for extensive disease of the os calcis and ankle-joint. In the former operation, Mr. Croft had left the joint between the astragalus and scaphoid open, as well as the articular surface of the cuboid. He gouged out the disease of the os calcis, as he supposed. Since then the joint had closed up, and only granulations could be felt on the surface of the cuboid. The remaining portion of the os calcis was now in a state of complete disintegration, and the present object was to remove the carious bone. After this was done, the cavity was filled up to keep it dilated, and, if possible, to encourage the necessary development of bone to preserve the walking power of the foot. This man had consulted some of the

surgeons of Paris on his case; but they could only propose amputation as a remedy. Mr. Croft hoped that this would be unnecessary.

Case of Strangulated Hernia.—The patient was a woman, who had suffered for some time with double inguinal hernia. On the morning of November 29th, the hernia on the left side came down before breakfast, and became irreducible; and pain began in the epigastrium. Shortly after breakfast she was sick, and in the course of the subsequent week had had pain on several occasions after taking food. The bowels had not been open since November 30th. The hernia of the right side remained quite reducible. The difficulty of the case lay in the extreme fatness of the patient. However, behind a thick mass of fat, the hernial tumour could be distinctly felt. Her temperature was high, the pulse quick, and symptoms of fever had appeared, calling for an early operation. Mr. Croft cut down upon the sac, which he carefully dissected, and, by a puncture, let out a small quantity of fluid like port wine and water. In the sac, he found the small, dense, and smooth piece of intestine. The stricture was found distinctly at the internal ring, and divided. The intestine, when returned, was of a very deep colour, and had a most disagreeable smell. However, as there were no adhesions, and the surface was perfectly smooth, Mr. Croft thought she might make a very good recovery.

MIDDLESEX HOSPITAL.

PLACENTA RETAINED FOR THREE MONTHS AFTER AN ABORTION, CAUSING HÆMORRHAGE.

(Under the care of Dr. HALL DAVIS.)

MR. J. W. LANGMORE, M.B., Resident Obstetric Assistant, has kindly supplied the following particulars.

A married woman, aged 28, applied at the Middlesex Hospital, stating that she had been suffering for three months from abundant uterine hæmorrhage, accompanied by sharp bearing-down pain. The symptoms dated from a miscarriage in the fourth month. The patient was weak and anæmic; the uterus still a good deal enlarged; the os was nearly closed, and rather soft and congested. She was ordered twenty-minim doses of liquid extract of ergot in acid infusion of roses three times a day. She returned three days afterwards, saying that the pains were more severe, and the hæmorrhage still abundant. She was passing clots. She was ordered to continue the mixture. At the end of the week she came again, and brought a small mass, about three inches by one, which she had passed on the previous day from the vagina. It proved to be the placenta, with the stump of the umbilical cord attached. It was quite fresh and free from smell. The flooding at once ceased, and the patient recovered rapidly. She had called in a medical man after the miscarriage; but the ovum had been thrown away before he came.

CHARING CROSS HOSPITAL.

LARGE CONGENITAL NÆVUS OF FACE: OPERATION: RECOVERY.

(Under the care of Mr. BELLAMY.)

A. B., aged 6 months, was brought as an out-patient to the hospital in May last, with a large congenital nævus, occupying the greater part of the left cheek, about one half of the upper lip, a portion of the ala and side of the nose, and the inner half of the upper and lower eyelids of the same side. The nævoid tissue implicated the true skin very deeply. Chloroform having been administered, Mr. Bellamy transfixed the greater part of the implicated tissue with two harelip pins diagonally, and tied the mass with a stout ligature. From some want of attention the proceeding was unsuccessful; and on the next visit Mr. Bellamy passed a stout needle under both the facial artery and vein as they passed over the jaw, a second under the left coronary vessels, and a third enclosing the angular vessels at the root of the nose, retaining them by twisted sutures.

The mother brought the child to the hospital in a week's time, with the contents of the constricted nævus converted into an abscess, pointing at the conjunctival surface of the lower eyelid. A scalpel was passed between the superior maxilla and the skin, and a great quantity of pus evacuated. The needles were withdrawn, and the cheek was dressed with wet lint. All went on well; and when the child was last seen, on October 11th, there was scarcely any evidence of the former disfigurement, excepting one or two small cirroid points at the extreme outer margin of what had been implicated tissue. There was no contraction of the cheek or eyelids, from which appendages the nævoid tissue had almost disappeared; and there was every appearance of complete recovery.

GENERAL HOSPITAL, NOTTINGHAM.

CASES OF HYDROPHOBIA: WITH REMARKS.*

By GEORGE ELDER, M.B., Junior House-Surgeon to the Hospital.

[Concluded from page 643 of last number.]

CASE IV.—On the evening of January 7th, 1871, the fourth and last case which I shall mention was admitted into hospital under the care of Mr. Wright. Ten weeks previously, the patient had been bitten by a dog at Calais on the left forefinger. Lunar caustic was at once applied to the wound by a medical man. The patient, whose health had been bad for a twelvemonth before the infliction of the bite, felt much as usual, until the night before admission. Just before going to bed, he attempted to drink a quantity of rice-water, when spasmodic action of the muscles of respiration ensued. During the night that followed, sleep was entirely prevented by their frequent recurrence.

On admission, the patient was noticed to be a sallow yet fairly nourished man of 30 years. The expression of the face was haggard, anxious, and frightened in the extreme. At and around the cicatrix of the bite there was an erythematous blush, but it was not the seat of pain. To the hand, the body felt hot and moist. At the wrist, the pulse was soft and uncountable. Frequently spasms occurred, during the duration of which the breathing was very laboured. The patient could only breathe in the sitting posture. In this case, whilst cold air, or attempts to eat and drink induced spasms, the same effects were produced by the mere mention of water. Great thirst and pain in the throat were complained of. His mental faculties were unclouded. His volubility in describing his symptoms, coupled with the cheerfulness which pervaded his remarks, was remarkable. He kept constantly spitting viscid saliva untinged with blood. From 9 P.M. till midnight he received three draughts of chloral hydrate, amounting in all to eighty grains, with the effect of decidedly diminishing the frequency and severity of the spasms, and rendering his condition more comfortable. About 10 o'clock on the morning of the 5th the saliva became tinged with blood; and the patient complained of distressing cardiac palpitation and pain, coupled with extreme weakness. At no time was his manner excited or irritable; on the contrary, he was remarkably quiet, hopeful, and occasionally jocular. Frequently during the day he sucked ice, expressing himself thereby much refreshed. Occasionally he was delirious; but more often his answers to questions resembled those of a man semi-intoxicated. During the last hours of his life large quantities of "coffee-ground" matter were vomited. At 6 P.M., after a sleep of two-and-a-quarter hours' duration, the skin was felt to be clammy and cold, and the pulse soft, quick, and irregular; respiration was slow and stertorous, and now the patient assumed the recumbent posture. Spasmodic muscular actions were of short duration, but not severe, and succeeded each other rapidly. He lay with his eyes shut, but not asleep, or unconscious, for at this moment he recognised his mother and brother, but could not return answers to their questions: so weak was he, that he was unable to spit out the bloody saliva which kept trickling from his lips. Gradually becoming weaker and weaker, he died of exhaustion at 10.30 P.M.

During the last day of his life, 440 grains of chloral hydrate were administered to him, with the happy effect of at least robbing the disease of most of its terrors.

The *post mortem* appearances were similar to those seen in the other cases, with the addition of aortic constrictive disease and hypertrophy of left ventricle.

REMARKS.—In all recorded instances of hydrophobia, a period of incubation, varying from a few days to some years, but generally, as in our own cases, varying from eight to nine weeks, intervenes between the infliction of the bite and the commencement of the disease. At the termination of this season a feeling of *malaise*, which usually takes the form of a cold, is felt by the patient. This constitutes the premonitory or first stage of writers, and may last from a few hours to two days, as in our first case. An inflamed condition of the cicatrices is by no means a regular concomitant of this stage. In only one out of the four cases was any abnormality visible; that simply being a slight erythematous blush, unaccompanied by pain. At the termination of the premonitory stage, the disease assumes its distinctive character. In all our cases the dread of water was particularly well marked. The respiration at this juncture assumes a peculiar sighing character, occasionally varied by difficulty of breathing and gasping, due principally to spasm of the muscles of respiration. The spasms seem to be due to the extreme hyperæsthesia of the afferent nerves of respiration. If examined, the pulse will be found to be rather quicker and

fuller than normal, and the skin hot and dry. There are also generally extreme thirst and dryness of the mouth and throat, with occasional pain referred to these parts. The expectoration of mucus, at first clear and frothy, then viscid, and latterly tinged with blood, seems to be an almost constant symptom. In none of our cases did I once meet with the "barking" noise often alluded to in essays upon the subject. The knowledge that eating and drinking aggravate the disease, instinctively as it were, seems to curb the desire for solids and liquids; but the bodily sufferings, however terrible, are not the worst which the patients have to bear. Usually in disease night brings some respite to the sufferer; but in hydrophobia, night and day, mind and body are both on the rack. At the outset of the second stage, the patient is usually quiet; but, as its end draws near, delirium, or occasionally, as in our first case, maniacal fury, supervenes. After a shorter or longer period, according to the age and previous health of the patient, the third or exhaustive stage begins. Now all the symptoms appear in miniature. The spasms, which before had been so terrible in their intensity, without losing in frequency, perhaps diminish in power; the respiration becomes feeble—very feeble—yet retains its peculiar sighing or gasping character, or at times is stertorous. From being dry and hot, the body feels clammy and cold, or, it may be, becomes livid towards the last; from being well nourished, it becomes shrivelled and emaciated; and the face, sharing in the general decay, becomes prematurely old, whilst from the lips slowly trickles the blood-stained saliva. In three out of our four cases, consciousness remained almost until death. Generally death from exhaustion ensues on the third or fourth day. The average duration of our cases was three and a half days. The symptoms during life seem to point to some part of the cerebro-spinal system as the seat of the diseased action—probably the medulla oblongata—yet, so far, pathology has not confirmed this. Neither has chemistry been more successful; so that we are obliged to construct a theory of hydrophobia based upon its analogy to other diseases. No one, I think, will dispute that this malady is due to a poison transmitted to man by the saliva of the rabid animal. This being admitted, the disease is brought within the pale of those due to blood-poisoning. The treatment of hydrophobia resolves itself into the prophylactic and the remedial. With regard to the former, lunar caustic does not seem to give security against the invasion of the disease. Whether stronger escharotics may be more trustworthy, I cannot say; but certainly, when the operation can be performed without seriously affecting the after usefulness of our patients, excision of the bite or bites should be at once performed. When the disease has declared itself, besides careful hygienic and dietetic observances, it will demand all our tact and discrimination in the use of remedies. In our four cases, chloral hydrate alone possessed any influence over the disease; it acted simply by deadening the nervous sensibility, thus destroying in great measure the power of reflecting impressions possessed by all nerve-centres. If the disease be due to blood-poison, is it not possible that we may convert what has hitherto been an incurable affection into a curable one, by the administration of drugs calculated to destroy the poison or eliminate it from the system? Although at the present time our knowledge of septic agents and antiseptic remedies is limited, still, with the first-mentioned object in view, a preparation of carbolic acid would seem to offer the best chance of success. From its ready solubility and consequent speedy access to the blood, the sulphocarbonate of calcium should be preferred. The remedy should be given in large and frequent doses. Baths, either moist or dry, which have not, so far as my reading goes, been tried in any well authenticated case in this country, would offer the speediest method of effecting elimination.

Since the preparation of this paper, another case has occurred in this hospital, an account of which I am, through the kindness of Dr. Robertson and Mr. White, enabled to give.

CASE V.—The patient was admitted on May 30th, 1871. Ten weeks before admission, whilst playing with his own dog, he was bitten on the under surface of the left thumb. For some days previously, the dog had been shy and evidently "out of sorts." Immediately on the infliction of the bite, nitrate of silver was freely applied to the wound. Rather more than two days before admission, the patient felt as if suffering from a severe cold; but, coupled with what he thought to be the decidedly "catarrhal symptoms," there was a difficulty in swallowing. On admission, the patient, a very muscular and well-proportioned man, looked frightened and haggard. The eyes were staring, and the face was pallid. The whole body sweated profusely. On attempting to drink, the muscles, especially of respiration, were thrown into violent spasm. There was no disturbance of the mental powers. The cicatrix of the bite was not the seat of pain or of inflammation.

On the day of admission, at 4.30 P.M., and again at 6.15 P.M., two forty-grain doses of chloral hydrate were administered *per rectum*. So much was his condition improved, that between the latter mentioned

* Extracts from a paper read at the Midland Branch of the British Medical Association.

period and 11 P.M., he several times slept, and ate an egg without seeming to suffer much uneasiness. Without difficulty, at eleven o'clock, a draught containing in solution thirty grains of chloral hydrate was drunk by the patient. During the night, he slept fairly, with occasional intermissions. In the intervals of sleep, two eggs were eaten, and a good quantity of ice was sucked, from which he derived much relief. Between 2 A.M. and twelve o'clock midnight on the 31st, nine thirty-grain doses of chloral hydrate were given; the first three *per rectum*; the remainder by the mouth. At 3.15 P.M. he ate and drank easily. Early on the morning of June 1st, whilst at his breakfast of bread and butter and tea, swallowing was observed to be rather difficult. He was also slightly delirious and excited. Towards noon, the difficulty of swallowing had disappeared. For dinner he ate a mutton-chop, and drank with apparent comfort half a pint of beer. At 7.30 P.M., he was quiet and dozing. Between 4 A.M. and 11 P.M., seven thirty-grain doses of chloral hydrate were taken in milk. The case underwent but little change during June the 2nd. At 2 A.M., he was very restless, and swallowed with difficulty. As the morning wore on, the difficulty increased; the tongue swelled; the eyes became congested; and the patient talked or sang incessantly. Yet abundance of nourishment, both liquid and solid, was partaken of during the day, and now and then he slept. In six portions, from 2 A.M. until 10.15 P.M., 240 grains of chloral hydrate were swallowed by the patient either in milk, beef-tea, or iced water. On June 3rd, slight spasms were noticed for the first time since the patient had been under the influence of the drug. For dinner he ate a chop and drank half a pint of beer; during the day he had also several eggs and two or three pints of beef-tea. From 1 A.M. until 11.30 P.M., 330 grains of chloral hydrate were given in seven doses. On the following day, the swallowing became very difficult, yet not so much so as to prevent the injection of solids and liquids. Occasionally, he had a spasm more decided and more severe than those noted as occurring on June 3rd. He was restless, evidently much exhausted, and slept but little. Only 90 grains of chloral hydrate were taken on June 4th. At 2 P.M. on June 5th, he died. Up till within an hour of his death, he was able to swallow solids and liquors with comparative ease.

A *post mortem* examination, made a few hours after death, revealed nothing more than was observed in the other cases.

REMARKS.—This case is chiefly remarkable for its duration, and the marvellous way in which the spasms were kept in check by the administration of chloral hydrate. No doubt the long duration of the case was in great measure due to the ease with which large quantities of solids and liquors were taken. Neither was there in this case any of those severe paroxysms of muscular spasms which soon wore out the first case. From the admission of the patient into hospital until the time of his death, none of the most horrible features of this frightful malady were observed.

ROYAL UNITED HOSPITAL, BATH.

MALIGNANT DISEASE OF CÆCUM.

(Under the care of Dr. COLE.)

FOR the following interesting report we are indebted to Mr. L. W. Marshall, M.B.

J. D., housewife, was admitted on July 24th, 1871. There was no history of any hereditary tendency in her family. She had for the past two years suffered from failing health, but, until three months since, has been able to attend to the duties of her house. At this time she was seized with violent pain in the right hypochondrium, which continued, to a more or less extent, up to the time of admission, being accompanied by great depression. On admission, she was pale, emaciated, and of a sallow complexion; she complained of great thirst, nausea after taking food, anorexia, and depression. The tongue was pale and flabby, but clean; the bowels were constipated. On pressure in the right hypochondriac and lumbar regions, signs of great pain were elicited; at the same time some amount of resistance was felt, giving the impression of a hard firm mass being present immediately beneath the surface. The ascending colon was distended with flatus, and the abdomen was swollen generally, but a bulging was perceptible on the right side. She complained of slight dyspnoea, which, however, was unattended by cough, the respiratory sounds being somewhat loud and coarse. No increase of hepatic dulness was discoverable. The cardiac sounds were normal. The catamenia were regular, but scanty. The urine was scanty; it contained no albumen, was of specific gravity 1.016, and acid; pulse 100, small and feeble; temperature 100.2.

Until August 5th, she remained much in the same condition, both

pulse and temperature being high, whilst the bowels were relieved by enemata; but on this day she vomited, and the pain became much more severe, the prostration also being considerably increased. A vaginal examination was made on this day, when the uterus was found to be anteverted. On August 6th, the pulse was 116, feeble; temperature 103. She had had a bad night; vomited twice. The pain was still severe; the bowels open; the abdomen was much swollen and tympanitic. On the 7th, the pulse was irregular and intermitting; the temperature 101.2. Vomiting still continued; sonorous and sibilant râles were heard all over the chest. There was slight expectoration of a frothy nature. On the 8th, she sank rapidly and died.

Necropsy twenty-five hours after death.—Rigor mortis was present. The body was much emaciated, and of a sallow hue. The lungs were somewhat congested at the base, but otherwise healthy. The heart was fatty, but there were no valvular lesions. On opening the abdomen, large quantities of curdy serum escaped, and signs of general peritonitis were well marked. The ascending colon and cæcum were both firmly adherent to the abdominal parietes, and the cæcum was removed with difficulty; in doing this, a large abscess was opened into immediately behind it. The small intestines were adherent in many parts. On laying open the cæcum, a large ulcerated mass of a dark grey colour was exposed; the boundaries by which it was attached to the parietes were hard and firm. Three inches of the mucous membrane were removed in each direction. The lumbar glands were much enlarged, and all presented the appearance of encephaloid. The head of the pancreas was considerably enlarged, and hard and firm. On making a section of the liver (which was not enlarged), numerous patches of an "apoplectic" nature were discovered, and in the right lobe also five or six cancerous deposits, varying in size, having hard, firm edges, but soft and cheesy in the centre. Both kidneys were deficient in cortical substance. The uterus was large, and an erosion of the os was present.

THERAPEUTIC RECORD.

NITRITE OF AMYL IN ANGINA.—Dr. H. C. Wood, jun., of the Philadelphia Hospital, records, in the *American Journal of Medical Sciences* for October, a case of severe angina connected with chronic mitral disease, in which on repeated occasions the inhalation of five drops of nitrite of amyl gave immediate and marked relief, and finally prevented the recurrence of the attacks.

TOXIC EFFECTS OF CHLORAL.—Prof. N. R. Smith of Baltimore, states (*Boston Medical and Surgical Journal*, July 20th, 1871), that four cases of a peculiar affection of the fingers, resulting from the use of chloral, have come under his observation. This affection consists of erysipelatous inflammation of the integuments of the fingers, with desquamation of the cuticle and ulceration around the border of the nails. He further states that three deaths have come to his knowledge from toxæmia caused by chloroform. The details of these cases seem to us too indefinite to fully establish the conclusions of the eminent author of this communication.

COMPOUND SYRUP OF ASSAFÆTIDA.—Mr. J. J. Rambo, of New York, calls attention (*American Journal of Pharmacy*, September, 1871) to a formula for this preparation, which, he says, he has been for a number of years in the habit of preparing, to obviate the great objection felt by most patients to the disagreeable smell and taste of assafœtida, and which has prevented to a great extent the more general use of this valuable drug. "The formula I find to answer the purpose effectually, at the same time its medicinal qualities are enhanced by composition with syrup of wild cherry, possessing the valuable therapeutic properties of both. *R.* Infusi pruni Virginianæ, Oj; Assafœtida, ʒj; Sacch. albi, ʒxxiv; Magnes. carb., ʒij. Rub the assafœtida and magnesia with the infusion gradually added, so as to make a uniform mixture and filter; to this, transferred to a bottle, add the sugar and agitate occasionally until it is dissolved. As a result, we have a handsome syrup which does not differ in appearance from the sprup of wild cherry. The property possessed by the volatile oils of bitter almonds, cherry laurel leaves, bark of wild cherry, etc., containing hydrocyanic acid, of removing the odour of assafœtida has long been known, and advantages taken of this property by M. Maheir, a French pharmacist, to remove the odour from mortars and bottles with which it came into contact; but I am unaware that the fact has ever been applied to its administration as a medicinal agent."

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 9TH, 1871.

THE ILLNESS OF H.R.H. THE PRINCE OF WALES.

THE progress of the illness of the Prince has during the week been depicted in bulletins which, to medical readers at least, have presented quite unmistakable indications; and, while respecting the divinity which doth hedge those nearest to the throne, by avoiding unnecessary details, they have afforded almost as accurate a clinical record as if the thermometric figures and the bedside observations had been published. Thanks to the accurate labours of English and German observers—Stewart, Jenner, Murchison, Budd, Wunderlich, Niemeyer—we have a knowledge of the natural history of typhoid more complete than that of most other disorders. It has been aptly said that, to fulfil all its purposes, a medical bulletin should so ascend from details of fact to generality of expression, that the verbal generalisation should enable the skilled reader to travel back from the generalisation to the particulars which it expresses, and reconstruct the case from the information which the bulletin affords. This has been so with the medical bulletins from Sandringham. Reading them from day to day, we have been able to follow the progress of the patient. On the one occasion, at the close of the week, when the evening temperature was beyond the normal excess of evening over morning heat in enteric fever, the bulletin distinctly warned us of the fact, of which we could all interpret the somewhat threatening indication. But we were able also to note its rapid subsidence; and, as there were still no complications, we were able to dissipate the fears of immediately impending peril which the case of Lord Chesterfield had vividly impressed upon the public mind. We know well what is the “fever-process” in typhoid, and what is meant by its being severe but regular. It is not the part of the bulletins to prophesy; nor can this function be safely assumed even by unofficial critics of them. We can therefore only say now, what all educated physicians have by this time been able to say to those who have questioned them: that, in such a case as this, the process of the fever is not likely to be completed before the twenty-eight or perhaps even the thirtieth day; and that, meantime, positive predictions are out of place, for the events of typhoid sometimes occur at a moment when least expected. But we may also say that any but a favourable termination would now be contrary to the probabilities; while of course, when we last wrote, it was still in the region of doubtful and almost open questions. We may say, too, that the bulletins are not less cautious than they are accurate; they encourage no false hopes, and conceal no sinister events. They are altogether to be trusted; and the very favourable anticipations which on this twenty-fourth day arise from them are legitimate and well-grounded.

We turn now to a question—which we see with pleasure is occupying a large share of public attention—that of the causation of the illness. If impressive lessons such as those which are to be derived from the recent sufferings from typhoid disease of our own royal family, and of the reigning family of Portugal, are to have their just and appointed influence, it can only be by strictly investigating and rightly applying their teachings.

The origin of the sufferings of a high personage, to whom a nation is deeply attached, will always have something more than a private interest. When his illness is one of a preventable character, and due to causes which we all recognise as ignominious and preventable incidents, but which annually strike with death many thousands of our population, the conclusions to be derived from the study of the origin of the illness have a national importance, and the duty of investigation assumes a serious character.

We stated last week, in detail, a number of circumstances which led to the belief that the local origin of the fever of the Prince was sewer-poison imbibed in air or water while at Scarborough; and, added to the fact that a groom, who had not been at Scarborough, was subsequently taken with enteric fever while staying at Sandringham, this pointed to the necessity of a twofold investigation. This we have assisted to institute, from information kindly volunteered from various sources, and by direct inquiry.

In entertaining a royal guest, a gentleman does not the less remain the master of his own house. We communicated, therefore, in the first instance, with Lord Londesborough, and placed at his disposal the services of a metropolitan hospital physician, whom, with his permission, we requested to proceed to Scarborough for the purpose. Lord Londesborough very readily facilitated his inquiries, and Mr. G. P. Dale, F.R.C.S., and Mr. Peacock, kindly afforded assistance by his direction.

The report which we publish gives details which we may briefly sum up, by saying that it shows conclusively that the construction of the Lodge affords in perfection all the conditions fitted to favour the introduction and propagation of the enteric poison. We abstain altogether from the discussion of the recent question whether the fermentation of sewage and its evolved emanations induce typhoid by the production anew of the poison, or by the multiplication and propagation of a pre-existing germ-poison already present in the sewage-matter or gas. It is a point which is here not practical, although otherwise of high importance. The conditions were equally favourable to the introduction of the enteric virus under either circumstance. Here was a house, ill built and difficult to ventilate, with thirteen communications with cesspools. In the basement and inside the house are two cesspools, into which all refuse passes. Turning to the published certificate of the architects and contractors attached to Mr. Dale's letter, we find that they state that “we have carefully examined the drains and cesspools at the above Lodge, both inside and outside the building, having had them opened for the purpose”; and they describe them as perfect. It will be seen, however, that this statement was somewhat hasty. One of the gentlemen who signed this certificate accompanied our representative through this part of the inquiry, and admitted that the cesspool most likely to be the source of evil—if such be chargeable to the place—was not opened, and had not been opened, so far as any evidence could be obtained, for at least six years: in fact, there was not any available evidence to show what date it had been opened, if at all, since the reconstruction of the drainage. We say that this was the most important of these most obnoxious appendages to a house—cesspools—because this particular cesspool received the drainage of five out of six closets. It was in the basement immediately below the cabinet of the bedroom occupied by the Prince; and that cabinet which opened into the Prince's bed-chamber, and with which this cesspool was directly connected by a pipe about ten feet long, had no through-ven-

tilation. These cesspools—abominable and dangerous superfluities—emptied themselves into sewers which ran by a common outlet downward towards the sea, and joined the system of common sewers of the south district of Scarborough.

As to this sewer system, we may state that it is, at and above the point of junction, subject to great backward pressure from the influence of the tides. This and other circumstances mentioned in our detailed report, produced so great a pressure of sewage-gas upon the traps, in the absence of ventilation of the sewers, that the most efficient and complete traps—at the best very delusive contrivances—could not resist it. And during the reflux of the tide, this house, with its thirteen sewer-openings, and its cesspools beneath, would be subject to frequent inundations of the sewer-gas. We may add that we are informed from an independent source, that, when the present system of drainage was being constructed at Londesborough Lodge, “after the workmen had very thoroughly done their work, there was such back-draught up the drain that it blew the candle out, and would have blown out a dozen if they had been there.” The contractor admitted that at certain times there was great pressure of gas on the traps, and that no traps could withstand it.

As to the epidemic conditions of the town specially relating to typhoid fever, we have been favoured by the Registrar-General with the opportunity of examining the registration records to this date, which show the following results.

In the quarter ending September, the following deaths from typhoid fever occurred in Scarborough: on the 12th July, a female, aged 42, in Nelson Street; July 31, a female, aged 40, in Brook Street; Aug. 19, a female, aged 4, in Brook Square; August 28, a male, aged 20, in Burmiston; Sept. 25, a female, aged 11, in Church Street; Sept. 27, a female, aged 5 years. There are also two deaths which he has registered as typhus, one as continued fever, and one with disease not named, but symptoms which are the usual complications of fatal typhoid. Since the commencement of the present quarter, there have been registered as dying from this disease a male, aged 5, at Hyde Park Terrace, 17th Nov.; a male, aged 5, at Cook's Row, 29th Nov.; a female, aged 5, 17th November—the last two being of the milder form known popularly as gastric fever; four cases from typhus, a case of “fever” and of “infantile remittent fever”, also typhoid, in a child aged three.

Finally, we may say that typhoid fever has existed, and at this moment exists, in at least one district, Ramsdale Hill, whose sewers fall into a common outlet with those of Londesborough Lodge; so that the back-draught might have carried back to the Lodge any poisonous emanations with which the common sewer was charged.

As to the vital history of the case, we have already mentioned the fact that a large proportion of the party assembled to meet His Royal Highness became affected by diarrhoea, etc.; and we have now to add the highly important and authenticated statement that, besides the illness of His Royal Highness and Lord Chesterfield, two other persons—servants employed at the house at the time—are also suffering with typhoid fever. The one is a temporary servant of the Duke of Beaufort (who is not, as His Grace has well observed, a groom), and the other is a servant of Lord Londesborough. Moreover, it has to be noted that the visitor who occupied the Prince's room just before the Prince, was taken with diarrhoea; and we were informed that Lord Chesterfield occupied the same room after the Prince's departure, and this was the room of which the cabinet was immediately connected with the cesspool beneath.

There are other circumstances of which we have not lost sight. As to the general state of Scarborough, we may say that while the new town is fairly well sewered, the old town, which is the northern part, is one of the worst drained in England. It is, in the graphic words of one of our medical correspondents at Scarborough, “simply not drained at all—a mass of middens, and ash-holes, and bad stench. We want the Health of Towns Act—we have only a pseudo Local Board acting under the Council, which includes many strong economists.” Moreover, the royal party were shooting for days from Ayton to Willoughby, “a low black swampy land, five miles of drains: Ayton, two years ago, was pregnant with typhoid fever; Old Scarborough has this summer never been free from low fever.” They passed several times the disgusting public midden on the Seamer Road, which was very offensive, and was complained of at the time. The stench from this midden sometimes infects the air half a mile.

As Mr. Dale, whose candour and courtesy are much to be commended, has stated, the water used was that of the town and the “celebrated Bristol water”. The town water we are having submitted to examination. The microscopical report is unfavourable. The chemical analysis is not yet complete. The “Bristol” water comes from the Hot Wells, Clifton, Bristol. It is, we are informed, “put into the bottles hot, and remains perfectly good for any number of years, without sediment.” It is a beautifully clear and well-flavoured water, considered to be of great purity. We have been supplied with samples of it; and, as the test of most value in respect to the possible zymotic characters of such water is a physiological test, which cannot be completed within a week, we reserve any further comments upon it. We may say, however, that the physical conditions of the well are, we are informed on good authority, not beyond suspicion by the faculty in Bristol.

Thus far as to Scarborough. Further investigation has only tended to produce a twofold series of facts, from which the obvious deductions are well-nigh irresistible.

But it would not be satisfactory to omit an investigation at Sandringham. Here, however, we are in face of a different set of circumstances. General Knollys has very naturally and wisely, we venture to think, determined to undertake a satisfactory official investigation by proper persons, when His Royal Highness shall have sufficiently recovered to give authority and directions. Meanwhile, during the illness of the Prince, it would be obviously improper to make such structural investigations. In view of these circumstances, we should have thought it intrusive and improper to intervene with unauthorised investigations and curious perquisitions. There have, we believe, been many offers to undertake volunteer analyses of the water within the bounds of Sandringham, by which the house is supplied. These have been declined, inasmuch as it is intended to place the water in the hands of authorised persons. We shall content ourselves with stating, upon proper authority, that Sandringham House, which was only built two years since, is provided with a complete system of trapped and ventilated sewers; that it has an abundant water-supply from two wells within its limits, something like eight thousand gallons *per diem* passing through the drains; that this water was examined three years since by an eminent chemist, and pronounced good; and that the drinking-water cisterns are provided with filters. There is a separate well to the stable-yard; and Blegg, the groom who has been taken ill with typhoid, had been in London after coming from Scotland.

As to the health of the surrounding district, we may state that, in the whole of the widely extended superintending registrar's district of Freebridge Lynn, there was only one death registered from typhoid fever during the Michaelmas quarter, and that at South Wootton, six miles from Sandringham, in July. In the subdistrict of Hillington, which includes Sandringham, West Newton, and seven other villages, there have not been any deaths from typhoid since the commencement of the quarter. We mention West Newton, because it is not a healthy village, and lies close to Sandringham. Scarlet fever is prevalent there, and a low type of disorders generally. Its cesspools and wells require remodelling; and we trust that the attention which will probably now be called to it, will lead to much needed amendments. There have been four deaths registered from scarlet fever since September in the district. Last year typhoid fever was prevalent there, and was reported by Mr. Barrett of Grimston. But there has been none, as we are enabled to state upon his authority, since last year.

There is probably no district in this county of which the same could not be said of some of its villages. But the vague and distant suggestions thus engendered are of little force against the overwhelming facts that a large portion of the Scarborough party suffered the symptoms characteristic of mild and immediate action of the sewage-poison; that four adults of that party, going to different parts of the country, were, within the ordinary periods of incubation, seized with this identical fever, which comparatively rarely selects adults of this age; that the house itself has all the worst faults which seem specially, and even peculiarly, to breed and foster the poison, and offers all the conditions requisite for drawing in and diffusing the sewage virus from connected sewers. Add to this, the almost certainty that these sewers were at the time charged with the typhoid infection.

Should all these facts—one of the most striking series that can be mentioned—still fail to afford ground for reasonable conviction, they will, we trust, at least, have an effect still more important—that for which our labour has been expended, and towards which our efforts are constantly directed, of impressing upon the careless population and neglectful authorities of this country the necessity of paying attention to the construction of efficiently ventilated sewers, and the preservation of their drinking water from pollution. The present system by which every house-sewer is ventilated into our houses, and (by the waste-pipe) into our cisterns, costs us annually some thousands of valuable lives. We venture to hope that the lesson will not be lost on house-builders and engineers, who put their faith in delusive “traps”, tolerate cesspools, and omit to ventilate the street and house drains.

VENTILATION OF SEWERS.

IN the statements which have been made regarding the drainage and water-supply at Scarborough, with reference to the illness of His Royal Highness the Prince of Wales, little or no notice has been taken of the *ventilation* of the sewers. This, however, is a matter of great importance; for it has been shown that hurtful results are liable to arise where sewers and drains are trapped, on account of the extreme lightness of sewer-gas, if proper attention have not been paid to their frequent ventilation, especially at the highest outside points. In such cases, typhoid fever, when it occurs, as a rule does not attack the houses in the low-lying parts, but those in the higher localities. At Croydon, for instance, five or six years ago typhoid fever broke out, but affected only

the high and best parts of the town. The sewers and drains were found to be in good order and properly trapped; the water was pure; but there was no system of sewer-ventilation. Since then all the sewers and house-drains have been properly ventilated, and a case of typhoid has scarcely been known. Again, at the Orphan Asylum at Beddington, an outbreak of typhoid which occurred three or four years ago, was distinctly traced to the absence of outside ventilation for the house-drains, which discharged their gas into the various parts of the building. At Eastbourne, in 1868 and 1869, typhoid was prevalent, and in the high-lying parts of the town. Here there were ventilators, but they were blocked with charcoal, and, as the waste-pipes of the house-cisterns communicated directly with the sewers, they became, in fact, real sewer-ventilators inside the houses. A similar occurrence is mentioned by Dr. A. Carpenter as having taken place at the Warehousemen and Clerks' Schools at Caterham in 1867. In this latter case, the disease occurred in the colder period of the year, when ventilation by means of open windows was not much resorted to; and, the rooms being heated by hot-water pipes, there were no open chimneys to act as ventilators. Nearly forty per cent. of the children who used the classrooms in the morning suffered from typhoid fever. These schools are situated on the summit of a high country hill of chalk.

A system of sewerage cannot be held to be complete, or even proper, when the ventilation is not perfect. Traps are quite useless when the gas has reached a certain pressure, for it will force them; but with proper outside ventilation of the sewers, the communicating house-drains cannot ever store in them so much sewer-gas as will be sufficient to force a properly made trap. We must urge our medical brethren to impress upon those who have to do with these matters, that drain-traps will not give security and ensure freedom from poisoning with sewage-gas unless the sewers with which the drains communicate are thoroughly well-ventilated.

IN the case of *O'Reardon v. the Law Life Assurance Society*, tried in the Court of Queen's Bench on November 30th, a non-suit was entered, on the ground that the plaintiff had concealed from the Society material facts of ill-health at the time of assuring.

THE foundation-stone of the intended new building for the Tewkesbury Rural Infirmary was laid by John Surman, Esq., the President, on Thursday in last week, in the presence of a numerous assemblage, after special Divine service in the Abbey.

WE recommended some time since, that the extremely unprofessional pamphlets circulated by Mr. Washington Evans should be brought under the notice of the Council of the Royal College of Surgeons. We understand that this has been done, and that Mr. Evans's conduct is likely to form the subject of investigation at an early meeting of the Council.

A TELEGRAM from the Governor of Havannah announces that some medical students profaned the cemetery in which had been interred the remains of a Spanish journalist named Castanon, who was killed last year in a duel with an American, through a dispute in which Castanon supported the Spanish domination in Cuba. A Council of War had condemned several of the students to the galleys, and eight to death. The latter were immediately executed. This event had created a deep impression in Havannah.

THE French Government has conferred upon Dr. Vintras the Cross of the Legion of Honour, in recognition of the services he has rendered to his countrymen for the last ten years at the French Hospital and Dispensary in London. Dr. Vintras was in truth one of the most active founders of this hospital, and has never ceased to devote the utmost care to it. This physician was educated in this country, and the many friends whom he has made during his residence in London will welcome this well deserved recognition of his labours.

THE LATE MR. DELAGARDE.

AT the last monthly meeting of the Committee of the West of England Eye Infirmary, the following resolution was passed. "The Committee desire to record their sense of the great loss which the Eye Infirmary has sustained in the demise of its senior surgeon, Mr. P. C. Delagarde, F.R.C.S. His devotion to its interests continued to the latest moment of his life. His eminently skilful treatment of diseases of the eye, and his anxious solicitude for the welfare of the patients, to whom his kindness of manner greatly endeared him, combined, during the long period of thirty-five years, to render Mr. Delagarde a most valuable officer to this institution. His death is felt by the Committee to be an event that calls for an expression on their part of sincere regret at their loss, and at the same time of their cherished recollection of his eminent services to this Infirmary."

SEWAGE-GASES AND TYPHOID FEVER.

AN outbreak of typhoid fever of the most serious but instructive character has broken out during the last few weeks, and is still in progress, in an institution in the south of London; and the occurrence is one of much interest, not only from the limitation of the locality of the fever, but from the fact that it aids to establish the connection between sewer-gases and typhoid fever. The following outline of the particulars has been communicated to us from an eminent and authentic source. The institution—a nunnery—contains about a hundred and fifty inmates, nuns and girls being educated. Some time ago, a grating was put across the main drain to prevent rats from coming into the house from the sewers. In consequence, an enormous accumulation of sewage took place on the side of the grating nearest to the house. When the drain was opened, sixty basketfuls were taken out. Ultimately, fluid sewage would not pass the obstruction; the drain burst; the basement of the house was flooded, and sewage percolated through the surrounding soil. The well which supplied the house with water was within a few yards of where the drain burst; but whether the water became contaminated or not, has not yet been determined. The first case of enteric fever occurred on November 1st, in a girl who had not left the convent for weeks; and since that time there have been thirty-seven cases and three deaths.

SURGEON-MAJOR WYATT.

WE referred recently to a letter addressed by Surgeon-Major Wyatt to the *Times* in connection with the late criminal trial at Dublin. We learn now that Mr. Wyatt was invited by the eminent surgeons who originated the intended manifesto to allow his name to be added to the list of signatures which appeared in the *Times*. Mr. Wyatt, who was then in North Wales, at once stated his willingness to testify to any expression of conviction that the utmost *bona fides* had been observed with regard to the treatment of the unfortunate wounded man, but that he regretted to be unable to sign the document, for reasons which were stated in reply; moreover, his original letter to the *Times* was forwarded to that journal through the eminent surgeon previously alluded to. These facts acquit Mr. Wyatt of that which has been laid to his charge, and will remove any unfavourable impression which such comments may have created. He responded loyally to the first invitation; and the extent to which he differed from the manifesto was laid before the surgeon who invited his attention to the subject, and received publication after passing through his hands.

CERTIFICATES OF DEATH.

THE police reports inform us that a poor man residing in Clare Market made an application to Mr. Vaughan for advice under the following peculiar circumstances. He said his wife had been for eleven weeks an inmate of University College Hospital, and died that day week. The house-surgeon wanted to make a *post mortem* examination; but he (applicant) and his friends objected to this, and had the body removed to his home at once. The body was still unburied, as the surgeon refused to grant a certificate of death. Mr. Vaughan, after hearing the

application, ordered the house-surgeon to attend. The medical gentleman arrived soon afterwards, and said that he refused to grant the certificates until after a *post mortem* examination had been made, because he could not otherwise tell how the poor woman died. Mr. Vaughan, after addressing the surgeon severely, directed him at once to make out a certificate, or a summons would be issued. The dead body, it appeared, had been nearly a week in the poor man's room. It was in a coffin, and that was all that could be said of it; and it appeared that the body was to remain unburied because no certificate was granted by the surgeon. The surgeon said he did not think he was responsible, but bowed to the decision of Mr. Vaughan, and the certificate was subsequently granted. His worship observed that this appeared an important question. We quite agree with the able magistrate that this is an important question. It would be very satisfactory, therefore, if he would give to it a little more careful attention. It would be extremely satisfactory, for instance, if he would say how a surgeon is to give a certificate of death if he have not sufficient elements for determining what was the cause of death; and, unless a *post mortem* examination be made to satisfy the surgeon of what he cannot know without it, we should be glad to know how the surgeon is to obtain the information which the certificate requires. We should be curious to see the form of summons issued, and the degree of enlightenment which it would produce. We regret extremely that the surgeon did "bow" to the decision. It would have been much more satisfactory that he should have bowed to the magistrate and asked him to supply the elements for something better than a guess. There is quite enough, and more than enough, danger to the community already from the hasty and perfunctory manner in which certificates are often given now; and Mr. Vaughan, we feel sure, would be sorry to settle an important question in such a manner as to increase the existing sources of error in vital statistics and the facilities for crime. That will, however, we fear, be the effect of his remark, as reported; and would certainly result if surgeons generally were to suppose, upon his dictum, that they were to fill up a statement of the cause of death by guesswork. We hope the surgeon filled up that column with the single word "unknown". We hope Mr. Vaughan will remember that surgeons are officers only a degree less useful, and not less important in their sphere, than coroners. The surgeon should have called, in the extreme case, for an inquest, or let the body be buried on a coroner's warrant without inquest, if that functionary proved as easy-going as the Bow Street magistrate.

INCREASE OF LUNATICS.

AT the last meeting of the Middlesex magistrates, Mr. W. H. Wyatt moved, pursuant to notice—"That the Court recognises the necessity of making further provision for the care of pauper lunatics belonging to the county; but taking into consideration that the county of Middlesex has already asylums at Hanwell and Colney Hatch, it resolves that the additional accommodation to be provided shall be of a character suitable for patients who may be determined to be incurable, but not dangerous to themselves or others, and who shall be draughted from the existing county asylums when it may become necessary, or expedient to make room for cases of a different class." He urged in support of this motion that they were bound to provide accommodation for the number of patients requiring admission. The motion was agreed to.

ASSOCIATES OF ST. LUKE.

ON Monday evening last, the first ordinary meeting was held of a new religious society for medical students, called the "Order of Associates of St. Luke." A paper was read by the Secretary of the Society, upon the question of the lawfulness of the destruction of the foetus *in utero*; and, both in the paper and in the animated discussion which followed it, the moral and religious aspects of the question were specially considered. Professor Bentley occupied the chair, and students from most of the London hospitals were present. The society is established upon a distinctly Church of England basis; and, besides students and lecturers of the medical schools, a few clergymen share in the work,

attending the meetings, and taking part in the discussions, which are intended to be as far as possible limited to such religious subjects as specially concern medical students and practitioners. Such a course is likely to lead to some definite and practical results in the raising of the moral tone of medical students generally, and will commend itself to many students desirous of such mutual help, but unable hitherto to obtain it.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

THE foundation-stone of the new wing of this hospital, the funds for which have been raised by the subscriptions of working men in Birmingham, was laid on Monday last, in masonic style, by Lord Leigh, Lord Lieutenant of the county of Warwick. After the ceremony, a luncheon took place at the Great Western Hotel, which was attended by above three hundred ladies and gentlemen, Lord Leigh presiding. Mr. Gamgee, to whom is eminently due the success which has so far attended the project of raising the working men's fund, in replying to the toast of "The Queen's Hospital", gave a history of the proceedings, and briefly described the plan of the new building. The cost he estimated at £20,000; towards which were already received, working men's contributions, £3,600; fund in aid, £2,450; together with interest amounting to about £240.

WARNING TO MOTHERS AND NURSES.

LITTLE children are sometimes dragged about by careless nurses in a most inconsiderate manner—especially where there is temper on both sides. A little girl about two years old was brought to the Great Northern Hospital to have an abscess opened in front of the axilla. When this was done, a large quantity of pus escaped. The mother stated that a fortnight before she had been hastily seized by one arm and lifted up by the girl who had charge of her. She was taken to a surgeon—Mr. Soutter—who declared that the pectoralis major had been ruptured. There was a clear and distinct groove between the two ends of the muscle, both being curled up like balls. Apparently the most perfect retraction of the fibres had occurred. Mr. Soutter bound the arm across the chest, to bring as far as possible the ends near each other. The child was kept quiet, and had nourishing food, etc.; but in spite of every measure suppuration took place; a large abscess formed, and for this the mother brought the child to the hospital. It is now doing well.

SANITARY STATE OF BAHIA.

IN consequence of the reported prevalence of malignant fever and of some other diseases, especially beriberi, in Bahia, the inspector of health, Dr. Siqueira, has made an official report on the health of the city. He says that at the date of the report (October 19th) the general health was better than on any previous occasion, in spite of numerous causes of insalubrity. The average death-rate for the months of July, August, and September, was 20 per 1,000; the ordinary death-rate of Montevideo and Buenos Ayres being 30, and that of Rio de Janeiro 21.5 per 1,000. He then takes the opportunity of giving his government a lesson on the neglect of sanitary measures. "Granting", he says, "that the city presents a better sanitary aspect than in previous epochs, it does not follow that we should cease to consider the urgent necessity which exists for various provisions and improvements, of the highest importance to the public health. . . . The terrible epidemics of which we have been the victims have afforded us opportunities of carrying out improvements for the protection of the public health; but, by a cruel fatality, we preserve almost the same faults, the same defects, and the routine which we inherit from our forefathers. In the matter of building, for example, we proceed on a regular fixed plan, forgetting, in the construction of both public and private dwellings, the precepts and the most simple rules of sanitary science." The author of the report supports his statements by referring to the reports of the English Registrar-General on the influence of cubic space on mortality; and concludes with an urgent appeal to the Vice-President of the Province to carry out sanitary reforms, seeing that the country has already been

subjected to grievous epidemic ravages, and that cholera, which is prevailing in some parts of Europe, may visit its shores.

THE CHARITY ORGANISATION SOCIETY.

AT the meeting of the Medical Committee on Saturday last, at which several of the medical officers of free dispensaries were present by invitation, a strong feeling was expressed in favour of extending the provident principle. In the course of the discussion it was mentioned that it has been determined to convert the Notting Hill and Shepherd's Bush Dispensary into a provident institution. We understand that, at the conference which is to be held at the house of the Society of Arts on Tuesday next, at 3 P.M., in addition to Mr. W. H. Smith, M.P., the Chairman, and Mr. Stansfeld, the President of the Local Government Board (whom we mentioned last week), it is expected that the Earl of Lichfield, Sir Charles Trevelyan, Mr. Kennaway, M.P., Mr. Fowler, M.P., Mr. Randolph Robinson, Dr. Acland, Dr. Sibson, Dr. Fuller, Dr. James E. Pollock, Dr. John Ogle, Mr. Charles Hawkins, Mr. Holmes, and many others, will be present. The conference has been called to consider the best methods of checking the abuses now incidental to out-patient hospital relief, with special reference to the expediency of extending the provident principle; and we are requested to mention that it is open to all ladies or gentlemen interested in the subject.

CAMBRIDGE PHILOSOPHICAL SOCIETY.

THE annual dinner of the Cambridge Philosophical Society was held on Saturday evening in the hall of Jesus College. Dr. Humphry, the President, was in the chair, and was supported by a distinguished company. In addition to the members of the Society, the Earl of Kintore, the Presidents of the Royal Colleges of Physicians and Surgeons, Professors Huxley and Williamson, and Dr. Carpenter, were present. Dr. Humphry, in proposing "Prosperity to the Cambridge Philosophical Society," remarked that it was in a flourishing condition, and pointed out its importance as a means of promoting original research, especially among the younger members of the University. The Master of St. Peter's College proposed the toast of "The Presidents of the Colleges of Physicians and Surgeons," which was duly responded to, both these gentlemen expressing their satisfaction at the steps taken by the University in medical study, and their willingness to co-operate in joining heartily in any scheme such as a joint board of the University and other licensing bodies. Professor Huxley, in proposing "The University," complimented them upon the advance they had made in natural science. The Vice-Chancellor responded.

SCOTLAND.

SIR ROBERT CHRISTISON, President of the Royal Society of Scotland, opened the first ordinary meeting of the present session on Monday evening last with an address on the Fresh Waters of Scotland.

ABERDEEN ROYAL INFIRMARY.

DR. HARVEY has resigned the appointment of Physician to the Aberdeen Infirmary after a long term of useful service; and has been elected consulting physician. We understand that several candidates are likely to present themselves for the vacant office. It has been resolved, for some reason not stated, that the vacancy shall not be advertised.

UNIVERSITY OF EDINBURGH: LADY STUDENTS.

AT the meeting of the University Court on the 1st instant, three resolutions were come to regarding the lady medical students. The first was to take the appeal against the decision of the Senatus as to rescinding the regulations for the education of women in medicine into consideration, at a meeting to be held on the 21st December. The second was not to consider the memorial submitted by Miss Jex Blake and other documents connected therewith, until after the above appeal has been

decided. The third was that if, through misapprehension of the University regulations, mixed classes have been held outside the University, these classes should be viewed as exceptional, and attendance on them considered as equivalent to attendance on separate classes.

CONVALESCENT HOSPITAL FOR DUNDEE.

A MUNIFICENT offer has just been made by Sir David Baxter, and it has, of course, been accepted. He has intimated his intention of erecting and completely endowing a convalescent hospital for his native town, Dundee, for which he has already done so much in public gifts. The new hospital will be in connection with the Infirmary, and will contain fifty to sixty beds. The hospital will be open not only to infirm convalescents, but to others from the town. A committee has been appointed to carry out Sir David's object, and building operations will be commenced as soon as possible.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE following office-bearers for the ensuing year were elected on November 30th. *President*: R. Paterson, M.D. *Vice-President*: A. H. Douglas, M.D. *Council*: R. B. Malcolm, M.D.; Alexander Wood, M.D.; W. H. Lowe, M.D.; J. M. Duncan, M.D.; W. Sanders, M.D. *Examiners*: Drs. Begg, Alexander Wood, Douglas, Paterson, Wright, Keiller, Pattison, Cumming, Duncan, Haldane, G. W. Balfour, Struthers, Ritchie, Stewart, Linton, Muirhead, A. Macdonald, and Frazer. *Treasurer*: S. Somerville, M.D. *Secretary*: D. R. Haldane, M.D. *Curator of Museum*: T. R. Fraser, M.D.

SPECIAL REPORT ON THE SANITARY STATE OF SCARBOROUGH.

FAVOURED by a letter from Lord Londesborough authorising his employés and requesting Mr. Dale to assist the gentleman whom we commissioned to undertake the inquiry, we have commenced an investigation, as careful and complete as the circumstances will admit, which includes an examination of the system of drainage and sanitary arrangement of Londesborough Lodge, an investigation of local cesspool nuisances, and a general survey of some of the zymotic diseases in Scarborough, and of causes likely to affect this class of diseases.

Londesborough Lodge is situated on the south side of the town of Scarborough, on an elevated position on the slope to the north side of the Valley Road. It is placed about midway between the Ramsdale Valley and Cliff Bridges, and faces, at a distance of about three hundred yards, the beautiful reach of sands over which the sea comes rolling in. The Lodge is skirted on the north side by the Villa Road; and still further up the slope are The Crescent and Belvoir Terrace; the rather extensive grounds of the Lodge run down at a steep incline to the Valley Road.

Londesborough Lodge is, we were informed, built on clay; the original part of the building is about thirty years old, and was constructed without cellars. Eighteen or twenty years ago an addition was made to the house, and at that time the entire building was cellared. The house consists of a ground floor and first floor, with cellars and other rooms on the basement. We shall presently allude to the system of sewerage adopted at the Lodge; but, before doing so, we shall try shortly to explain the drainage of the locality.

There are, then, two sewers which drain the immediate locality of the Lodge. One is for the Belvoir Terrace houses on the elevated ground above the Lodge, which is again a continuation of that from the locality immediately above. This sewer runs eastwards towards Faulkner Road, where it is joined by several others from houses to the north. It then runs down the Faulkner Road, about a hundred yards to the east of the Lodge, towards the Valley Road. The other drain carries the sewage from the houses in The Crescent, which is a continuation, to the north-west of Belvoir Terrace. This sewer sweeps round the face of the decline towards the Valley Road, through the grounds of Londesborough Lodge, about forty yards beneath the house. This sewer in its course receives the sewage from Londesborough Lodge and one or two neighbouring houses. These two sewers meet in the valley, and, after receiving the drainage from St. Nicholas Cliff, further to the east, form, at the Cliff Bridge, the main sewer in the Valley Road. A little below the bridge, the sewer drain-

ing the Ramsdale Hill houses, on the north side of the valley, unites with this. The common sewer thus formed is carried along the south sands to a point below the "Castle Rock," where it empties its contents in deep water. The pressure on this sewer is at high tides very great, and we are informed dams up its contents to a considerable height. Into the Valley Road common sewer a rivulet, running down the valley from the "Mere," some high ground outside the town, has been conducted for the purpose of flushing the sewer. The volume of water of this brook varies considerably, but is at times large, and during the rise of the tide would tend rapidly to fill the sewer. We were unable to ascertain that ventilating shafts existed in the sewers in connection with Londesborough Lodge.

The sewerage system of Londesborough Lodge in connection with the town sewers is shortly as follows. There are two cesspools situated in the basement of the house, the overflow from which escapes from the house into the drains which join the common sewer of the district, viz., the Valley Road sewer, which has been just described. There are altogether thirteen communications by means of water-closets and sinks between these cesspools and different parts of the house. Into the smaller of these cesspools, one water-closet on the ground floor of the Lodge, and several sinks communicate; into the larger, the sewage of the remaining closets, five in number, and the majority of the sinks, flows.

The water-closets and sinks leading to the cesspools are in all cases trapped in one or other of the ordinary ways; and during our investigation additional traps were being put on in order, we were told, to diminish as much as possible the entrance of foul air from the sewers into the house. Any great back pressure in the sewers would, however, still result in the escape of foul air forced through the traps; and this was admitted by the contractor who accompanied us in our investigation.

The smaller of the two cesspools had been opened and repaired with good results last year in consequence of complaints of bad smells; and again, since the illness of His Royal Highness, when it was found in good condition. The other cesspool had not been examined or emptied for some years so far as we were able to discover. The drains leading to and from the cesspool had, however, been examined within the past few days, and been found in good condition. A syphon trap had just been laid on between the sewers and both cesspools.

Attached to the bedroom occupied by his Royal Highness is a water-closet, supplied with a large window opening on the lawn. The closet, however, affords no means of through ventilation except into the bedroom. It was not offensive at our visit. About ten feet below the closet and under the basement-floor the larger cesspool is situated, and between the closet and cesspool a pipe directly communicates. The other closets open out into the passages in different parts of the Lodge. In consequence of the limited space in the house, the means of ventilating are in several instances defective. Means were being taken, however, for improving their present state. New and more commodious and "improved" pans were being in some instances put in to replace those in use.

We have thus a building, not of modern construction and difficult of ventilation, with two cesspools within its walls, one of which has apparently not been examined for years. Connected with these, are as many as thirteen pipes, trapped in the ordinary way, and communicating with all parts of the house. The cesspools, again, are connected with a system of common sewers subjected to pressure from the sea and the "Mere" brook, to such an extent, indeed, that, as we learn, they are sometimes dammed up high above the sea-level. The chances to Londesborough Lodge of fever infection, notwithstanding the great precautions adopted by Lord Londesborough, are thus rendered very considerable, for of course the traps, such as those used here and commonly, are by no means sufficient to resist anything like the pressure in the sewers of the Lodge. The house, therefore, is likely, from the numerous communications with the cesspools, to suffer from the reflux of sewer-gas. If, in addition to this, the common sewers become the receptacle for the *dejecta* of typhoid patients, the chances of mischief are largely increased; and, indeed, we have received information to the effect that typhoid fever has been recently by no means absent from the houses in Ramsdale Hill district, which contribute their sewage to the common sewer of Londesborough Lodge district.

We have already given in a previous number, and we give now in another column, particulars which will show that the whole of the Scarborough party was affected by some poison which produced illnesses of a diarrhoeal character, attended with other characteristic symptoms of sewage-poisoning; and that, out of a limited number of adults, as many as four starting from this one centre and going to different parts of the country, were struck down with typhoid fever after periods corresponding to the usual variations of the time of incubation.

It has been urged that the children and others who had for some time been residing at the Lodge, did not suffer. This, however, is so perfectly in accordance with a long series of observations as to the greater liability of new comers, that we need not dwell upon the subject further than to refer to the excellent section which Dr. Murchison has devoted to it in his treatise on *Continued Fevers*. Nor, of course, can we omit to reflect on the comparative rarity of typhoid attacking so many adults of one party, except there be some common cause in operation.

Mr. Dale's communication to the papers during the week has led to an impression, which he wishes us to correct, that he was cognisant of the existence of bad smells in the Lodge. We have received, however, other evidence of their presence. The certificate of the architects which has been published, whilst alluding to the existence of cesspools, omitted to mention that they were in the basement of the house itself, and described them as being in a perfectly satisfactory condition. Only one of them, however, was, as we have said, opened; and that was not the one connected with the five out of the six closets, and which had a close and immediate connection with the closet opening into the Prince's bed-chamber. Possibly, this examination will now be made. Such a cesspool is an obvious and pressing source of danger; and we do not well see how that danger can be obviated otherwise than by thoroughly ventilating the cesspool by a shaft carried above the elevation of the house, or, better still, by doing away with it altogether. It is impossible to divine the use of domestic cesspools in connection with an efficient system of sewerage, except it be to breed disease and propagate fever.

The result of our examination of the general system of sewerage in Scarborough is as follows.

Scarborough may in this respect be divided into the north and south parts. As to the south part, we take the following summary from a brief statement which Dr. J. W. Taylor, medical officer to the Local Board, has been so kind as to furnish to us.

"The main sewer in this town contains nine ventilators. The shaft leading down to each is four feet by three feet in diameter, and contains a screen of charcoal for the noxious gas to pass through. This charcoal is renewed, in the summer months, every month, and in the winter not quite so often. Every street in the town is thoroughly well drained, and all the sewage from the south side is conveyed by the main sewer into the sea, at the foot of the Castle Rock. The plans for this sewerage were prepared by the borough surveyor, and approved by Mr. Ranger, C.E., who was sent down by Government in the year 1862. These ventilators open out upon the level of the main streets."

A medical correspondent resident in Scarborough writes as follows. "Scarborough (*i. e.*, the old town, adjacent to Londesborough Lodge) is not only the worst drained town in England; it is simply not drained at all—a mass of middens, and ash-holes, and stinks, very few even of these filthy holes. We want the Health of Towns Act; we have only a pseudo Local Board, acting under a highly economical Council. The south side is water-closeted, but very carelessly so, as Mr. Dale's letter on diarrhoea states. Moreover, the royal party were shooting for days from Ayton to Willoughby on low black swampy land, over five miles of drains. Ayton, two years ago, was pregnant with typhoid fever; old Scarborough has this summer never been free from low fever and small-pox."

Another medical practitioner resident in the town, and excellently well informed, as we have reason to believe, upon this subject, states—"The spread of zymotic diseases here undoubtedly demands a strict inquiry. Since the appearance of your last article calling attention to the subject, we have sent a petition to the Secretary of the Home Department to beg that the Commissioners of the Privy Council Office be sent down to investigate the sanitary condition of this place."

It has been pointed out to us that the mortality of the north part of the town is much greater than that of the south; and that, in drawing up the returns, the Registrar should be required to show which districts have bad sanitary arrangements.

We personally visited some of the worst districts of the town. Very strong language indeed would not be misemployed in describing the foulness of some of the sanitary arrangements. Some of the worst evils of the cesspit system are present. We made the following note after visiting one street, which is not by any means the worst or oldest. "Houses better, but in some of them no water laid on. The pumps, supplied by water from surface-well, evidently largely polluted with cesspool matters, turbid and smelling badly. The rent of some rooms in these houses, the residents stated, had recently been raised threepence per week, on the understanding that the town-water was to be supplied. This has, however, not been done. They have to go a long way off for a supply of drinkable water. They thought the children sometimes drank the pump-water; and in one house typhoid fever had existed."

We are informed, on good authority, that in some of the worst districts ashpits used as privies exist within the houses, sometimes even

in the living-room. Of this we have no personal knowledge; and it seems scarcely credible. On the edge of the town, on the Seamer Road, within half a mile of Londesborough Lodge, and on the route of the Royal party to their shooting ground, a huge town-midden constitutes an offensive nuisance, of which the stench spreads widely, and which has been the subject of frequent complaint.

As to the water-supply of the town, which is also that of Londesborough Lodge, it has been publicly stated to be pure and excellent. The information which we have thus far of the result of microscopic examination is not altogether favourable; but we are unwilling to make a hasty report on this subject, and shall reserve a fuller statement of its examination for next week. As Mr. Dale has already stated, the royal party was supplied with bottled water from the hot springs of Bristol. This water has a high reputation for purity, and is much in favour for domestic use with the family at the Lodge. We are informed that it is put into the bottles hot; they are corked and sealed, and the water remains perfectly good for any number of years without sediment. The bottles of water which have been kindly furnished to us are of crystalline clearness and agreeable flavour. We have, however, received several communications on this subject; and one medical gentleman writes to us:—"I have strong reason for believing that it may prove the source of His Royal Highness's lamented illness—the spring from which this water is obtained being only a few feet from the river's brink, and being liable, at spring tides, to contamination from this source. I may explain that the whole sewage of Bristol is passed into the Avon considerably above this spring, and that the river is at times like an open sewer."

The chemical and other characters of the Bristol Hotwell waters are as follows; temperature 74 deg.; saline matters per pint 6 grains; viz., carbonate of lime, sulphate of lime, and sulphate of soda, each $1\frac{1}{2}$ grains; chloride of sodium, 1 grain. We have placed samples of this water in the hands of Dr. Ferrier, that he may apply the zymotic test, with which he has had much experience while preparing his recent report for the Privy Council with Dr. Burdon Sanderson. The same test will be applied to the other waters.

It must, however, be remembered that only some of the members of the Royal party who suffered used this water; and that the *prima facie* evidence in its favour is very great, while the character of the rest of the facts seems to exclude it from the list of probable causes of this outbreak of typhoid fever. No other drinking-water than these was used, except aerated waters.

We cannot conclude this outline of the result of our labours without expressing our acknowledgments to Lord Londesborough, to the Dowager Duchess of Beaufort, to Lord Carnarvon, Mr. Dale, Mr. Peacock, Dr. Taylor, and others, who have given most ready and courteous assistance. Whatever may be the final conclusions, the greatest credit is evidently due to the Earl of Londesborough for the frank, honourable, and judicious course which he has pursued in favouring free inquiry into circumstances which have a national interest, although occurring within his private residence. The doubts raised must have been to him peculiarly painful; but there is no one who will not sympathise with that pain; and we desire to conclude this report with the expression of our conviction, that Lord Londesborough spared no pains nor expense to make the sanitary arrangements of his house perfect, and that he had every reason to believe that they were quite efficient. The thorough investigation which he has accepted at impartial hands has fully demonstrated this at least. It is no fault of his, that his intentions have apparently been frustrated by arrangements of which he could hardly be expected to appreciate the inefficiency. But his misfortune is likely to prove a great national lesson.

SIR RICHARD WALLACE, Bart., has given his name as a Vice-President to the Infirmary for Epilepsy and Paralysis, Charles Street; and at the same time he presented £200 to be added to the £2,000 fund which is being raised for the purpose of purchasing and furnishing new premises.

DONATIONS, BEQUESTS, ETC.—The following amounts have been given in reduction of the debt due to the Treasurer of the Bristol Royal Infirmary:—Mr. Wm. Fripp, £250; Mr. R. J. Pierce, £100; Mrs. Swann, £100; and Mr. S. S. Browne, £100.—Sir Richard Wallace, Bart., has given £200 to the Infirmary for Epilepsy and Paralysis.—Mr. W. H. Bracebridge, of Sherborne, has bequeathed £100 each to the Warneford General Bathing Institution and Leamington Hospital, the Buckingham Infirmary, and the Asylum for Idiots, Earlswood.—Sir Thomas Tilson has made his fifteenth donation of £50 to the Endowment Fund of St. Mark's Hospital for Fistula.—The Brighton and Hove Dispensary has received £100 (less duty) under the will of Miss Wilhelmina Hamilton.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

THE fifth anniversary session of this Association was held at the Freemasons' Tavern, Great Queen Street, on Friday and Saturday, the 1st and 2nd instant; HENRY DAY, M.D., of Stafford, President, in the Chair.

Officers and Council.—The following were elected for 1872. *President*: Deputy Inspector-General Dr. C. A. Gordon, C.B., Dover. *Vice-Presidents*: Dr. Crisp; Dr. Black, Chesterfield; Dr. Cholmeley; Dr. Wynn Williams; Dr. G. W. Balfour, Edinburgh; and Dr. Lush, M.P., Salisbury. *President of Council*: Dr. B. W. Richardson, F.R.S. *Council*: Dr. Thomas Ballard; Dr. Dudfield, Kensington; Dr. Day-Goss, Kennington; Dr. Cleveland; Dr. Buchanan, Glasgow; Dr. W. H. Day; Dr. J. T. Griffith, Camberwell; Dr. Wiltshire; Dr. Barnard Davis, F.R.S., Shelton; Dr. Jencken, Dublin; Dr. Ross; Dr. Royston; Dr. G. Bird; Dr. Brewer, M.P.; Dr. Lockhart Clarke, F.R.S.; Dr. William Cooke; Dr. Wharton Hood; Dr. Murray Lindsay, Hanwell; Dr. Nicholls, Chelmsford; Dr. Semple; Dr. Stedman, Guildford; Dr. Christie, Royal India Asylum; Dr. Bower Harrison, Manchester; Dr. Samuel Hill; Dr. Humby; Dr. Lipscomb, St. Albans; Dr. Macdonald, R.N., F.R.S., Woolwich; Dr. Moon, Brighton; Dr. Norris, Birmingham; Dr. Painter, Brompton; and Dr. Waring. *Treasurer*: Dr. Paul, Camberwell. *Secretary*: Dr. L. W. Sedgwick, London.

Presentation to Dr. Richardson.—A gown and hood of the Doctor of Medicine were presented to Dr. Richardson, F.R.S., as a slight acknowledgment of the eminent services which he had rendered to the Association during his four years tenure of office as President.

The Report of the Council dwelt chiefly on the mode of taking medical evidence in courts of law, and on the regulations for the degree of M.D. The Council reported that they were taking steps to circulate largely, among non-graduates, a memorandum referring to the present limitation of the annual number of degrees conferred by the University; stating that the University has recently attempted to amend the regulations by substituting for the provision that the candidate shall be forty years of age, one requiring him to have been in possession for five years of a medical or surgical qualification which would entitle him to be registered under the Medical Act, and by abolishing the limitation in the number of degrees to be granted annually; but that the consent of Her Majesty the Queen in Council, which is needed to render any new regulation of this kind valid, has been refused, for the reason that no sufficient ground has been shown for any further extension of the privileges of the University.

"This Association has contended that the report of the Scottish University Commissioners as to the sufficiency of ten degrees annually (which has doubtless influenced the decision of the Privy Council) is based on untrustworthy authority; that these arbitrary limitations as to the age and number of the graduates exclude from the degree many candidates who by their position and acquirements are entitled to offer themselves for examination; and that the true and only limit to the number of degrees granted to already legally qualified medical practitioners of acknowledged respectability and position should be afforded by an extended and searching examination.

"Under these circumstances the Association is wishful to ascertain, as nearly as may be, the exact amount and nature of the injurious effect of the present regulations; and for this purpose it is endeavouring by means of a form, which it is hoped will be largely used and promptly returned, to collect the opinion of those most intimately concerned; the opinion, that is, of those legally qualified members of the profession who may now or in a short time desire to obtain the degree of Doctor of Medicine.

"The Association, pressed by various and conflicting opinions and statements concerning the matter in hand, is only anxious to determine on absolute facts what is the true professional requirement; it is not, therefore, intended to publish the names of those who are good enough to express in this manner their opinion on the subject, but merely to furnish the University Court, and, if necessary, the Privy Council, with accurate data."

A Discussion on Habitual Drunkenness, and its Treatment, Medical and Legislative, was introduced by Dr. Swete, and continued by Dr. Griffith, Dr. Richardson, F.R.S., Dr. Lush, M.P., Mr. Hepworth Dixon, Dr. Seaton, Dr. Crisp, Dr. Thomas Ballard, the President, and others. The majority of the speakers considered that, in any legislative enactment that might be considered desirable, a distinction should be drawn between drunkenness as a disease, and drunkenness as a crime; and that the former might well be treated under similar regulations to those provided by the Lunacy Acts. On the other hand, it was contended that dipsomania, if there were such a disease, had no recognisable character, and that the description given of it was vague

and unsatisfactory. Great sympathy with the efforts of Dr. Dalrymple was expressed, and the object he had in view was emphatically approved; but there was a general opinion that many modifications were necessary in the provisions of the Bill. A strong opinion in favour of legislation of this character was expressed by Mr. Hepworth Dixon as one outside of the profession, and he asserted his emphatic belief that there was a good in what might be called mechanical or mathematical legislation—a legislation of hard lines and rules, whereby a man might see for himself that he was outside a standard of right, and was branded as a wrong-doer. In a new path like this, many mistakes would no doubt be made at first, and watchful attention would be essential to good progress.

On the motion of Dr. RICHARDSON, seconded by Mr. HEPWORTH DIXON, it was unanimously resolved—"That the Council of this Association be requested to watch the progress of Dr. Dalrymple's Bill, and, at the proper time, to prepare an analysis of, and an opinion concerning, the probable working of the Bill; and that the Council be empowered to communicate the same to a public meeting of the profession at large and of the public, if the proceeding be considered advantageous."

President's Address.—On December 2nd, the President, Dr. H. DAY, delivered the anniversary address on the Historical Steps of Modern Medicine. He passed in review modern progress in Histology both healthy and morbid, in Animal Dialysis, in the study of disease by Synthesis, in the methods of Physical Diagnosis, in Surgical Operations, and concluded a most interesting address with some remarks on Therapeutics.

"Three remarkable progressions," he said, "seem to my mind to distinguish modern therapeutics. The first consists in the study of the action of medicines by the investigation of the physical characteristics of each medicinal substance; the second consists in distinguishing the special action of different remedial substances on particular parts of the living organism; and the third consists in bringing the art of prescribing to the utmost simplicity, so that when we prescribe we know precisely on what we wish to rely for the good we would secure. All these methods of improvement hang closely together, and yet they are often distinctly pursued, not only by different men, but by men of diverse modes of thought. They are all good and productive of the best influences. It would be incredible to our forefathers to hear that we have men now, who—if you give them a chemical substance and tell them, this substance is composed of the following elements, it is of this specific weight, it is of this reaction, it is of this solubility, and it has certain other physical qualities therewith named—will tell you, in return, with an absolutely near approximation to the truth, what will be the physiological action of the said substance. Yet this is an accomplished fact, and, in the matter of those agents we employ to relieve pain, it has been one of the most fruitful means of the development of the triumph of human art over human suffering; a development belonging truly to the whole Christian era, but most to this latter-day section of that marvellous testimony of 'the ways of God to man.'

"Equally strange would it be to our forefathers to hear that we can now predict where a medicine shall, to speak plainly, go into the organism, and on what it shall act. Yet, in the case of some of our most potent agents, such as arsenic, nitrite of amyl, woorali, we know, when we give them, what will be the seat in which their influence or force will be expended, as well as the nature or quality of that influence.

"Finally, to the most distinguished of the older prescribers how strange it would be to tell them, we give up that long list of agents that constituted your favourite formulæ; we are content to try one agent at one time; and as to your method of putting your medicines into the body by the stomach only, we, in our day, wise as serpents and gentle as doves, put them in by the skin if we like, with a sharp tooth, or instil them in vapour by the lungs so subtly, that the administration is all but unperceived. Yet this, too, is daily done, and with a successful result undreamed of by the earlier pilgrims of medical progress, and certain amongst the historical steps of our time to remain.

"I close the page. If any out-door friend asks of me, and many do ask, what do you of legitimate medicine more than homœopaths, or other schismatics, to advance medical science and medical art? I point such friends, as I point you, my colleagues, to the deeds of medicine I have related so feebly, so imperfectly, to-day. I ask, in my turn, where would modern medicine have been if these things had not been achieved? And I affirm, honestly, that those who have achieved them, and none other, are the legitimate professors of the science and the art. To them I bow and declare renewed allegiance."

On the motion of Sir THOMAS WATSON, Bart., a cordial vote of thanks was offered to Dr. Day for his address.

In the evening the usual dinner took place.

THE MEDICAL INSTITUTIONS AND PREVAILING DISEASES OF VICTORIA.

[FROM A SPECIAL CORRESPONDENT.]

II.

ASYLUMS OF VICTORIA.—The YARRA BEND, the first, and still by far the largest of the asylums in Victoria, forms almost a village in itself, and is situated on one of the beautiful bends of the Yarra Yarra, three miles in a direct line from the centre of the city. Except that it lies somewhat low, its situation is unrivalled for beauty by that of any similar institution I have ever seen, and the numerous small cottages of which it consists are picturesquely embowered amid shrubs and evergreens, flowering plants, and creepers of all descriptions, while the river itself, flowing rapidly between its well wooded banks, embraces it on several sides in its windings. It has a very large extent of open ground belonging to it, granted by the Government—six or seven hundred acres, if I remember right—many of which are kept under culture as a vegetable garden by the patients.

It is built in two divisions—the upper and lower. The upper is the more recent, and is enclosed partly by a high brick wall on the outer side of a deep fosse, and partly by a zinc fence. It is used exclusively for the quieter class of male patients, and consists of a series of single-storeyed red brick cottages, standing each within a small garden plot. In front is a verandah, from which the day-room is entered. On each side of this sitting-room there are two sleeping apartments, each of which is meant to contain four patients, while a small room behind the day-room is used by the warder. Besides the cottages, there are three larger blocks in this division, each being quite separate from the others. The least of the three is only one-storeyed, and is used as a hospital, for which purpose it is tolerably well suited, the principal ward being built as a pavilion with a good cross-ventilation, though, owing to overhanging verandahs, it is not very well lighted. There are, besides, one or two isolated cells in the same block for refractory patients. The other two detached piles of building are larger and have two storeys, with the corridor running along nearly the whole length of each block, and parallel to the outer verandah. This corridor is used as the day-room, and it is cut into two equal halves by a warder's room, which has a window pierced in each wall so as to overlook each semi-division. From it open the isolated cells, most of which are lined only with wood, while a few are padded. At each end of the corridor there are bath-rooms, closets, etc., and a side-door leading into a sleeping-room designed for four patients, and projecting slightly beyond the verandah. The upper storeys are simply fac-similes of the lower.

The upper division, however, is not the only part of the asylum reserved for male patients; for, in the lower, there are confined, in one wooden and a couple of bluestone wards, nearly one hundred and twenty of the more violent patients, besides nearly all the criminal lunatics. The stone wards have long narrow rooms in their centres, with the dormitories and single cells opening off them on each side. Some of these latter are stone, others of wood, and only a very few are padded. Both wards are provided with a yard. The wooden ward, or shed—for it is little better—along with a similar one side by side for refractory female patients, are disgraces to civilisation. Their worm-eaten and rotten planks swarm with every kind of noxious insect, and the dormitories opening off the yard which encloses them have no provision at all for ventilation, except a few apertures in the walls. A couple of hours after the patients had retired for the night, it was sickening to enter these holes; but it is only right to say that they had long before been condemned by the medical inspector, as, apart from every other consideration, the slightest spark would set the whole place in a blaze, when its crowded wards could not fail to become the funeral pyres of most of the wretched occupants.

The female division in part consists of a series of small wooden chalets enclosed within a tolerably high fence, and very pleasing to the eye, standing, as they do, each in the centre of its own small garden, and covered, nearly from basement to summit, with clematis, passion-flowers, dolichos, and other creepers. Ten of these small cottages form an oblong, in the centre of which stands the wooden building, which answers the purpose of day- and sewing-room, chapel, and ball-room indiscriminately. Each cottage has a verandah in front, and is raised about a foot above the ground on wooden beams. The sitting-room is entered directly from the verandah, and on each side are the doors into the sleeping apartments, which are ridiculously small, though arranged for three patients, and rarely containing fewer than four. There cannot be said to be any ventilation in these cribs at all; a few apertures in the roof and above the windows being the only

attempt at establishing a through current. In fact, no architect could have contrived more effectually how not to ventilate; and in the hot and close summer nights these apartments, the shutters of which are necessarily kept closed to prevent escape, are simply asphyxiating. However much, then, we may admire the picturesque beauty of the cottages, or approve of the system, we cannot help expressing an earnest hope that the present wretchedly contrived huts may be left for as short a time as possible cumbering the ground. Two small wards, destined for female hospitals, and within the same enclosure, are thoroughly unsuited for this purpose; and the whole of the wooden buildings generally in this division cannot be too emphatically condemned. A few bluestone wards, near the enclosure just described, are reserved for the more noisy and violent female patients.

THE KEW ASYLUM.—Close to the Yarra Bend, but high above it, on an eminence commanding an admirable view in every direction, there has been in course of construction, for many years, an enormous pile of stuccoed brick building, which, when completed, will be “the asylum” of the colony. It was designed to hold over six hundred lunatics, and is entirely on the corridor system, the corridors being wide and spacious, and, in almost every case, intended for day-rooms. From the central block on the southern side of the asylum, built for administrative purposes solely, and apparently very handsome, though not quite completed at the date of my visit, there run two long wings, subdivided however by two small towers equidistant from the officers quarters. At the spot at which these towers rise there run, at right angles to the long wings, two others; and within the three sides of the square thus formed, and connected with the wings only by covered passages, there stands a very handsome central hall, surmounted by a high tower, with unexceptionable billiard and reading rooms attached; and, so far as I am able to judge, an admirable kitchen, with all the most recent improvements for cooking, baking, and distributing the food.

There does not seem to be any very regular system of wards, some of the rooms having only one set of windows; and those looking into the verandah which runs along the inner side of the building, are rather dark and cheerless, while others which, from being situated at the corners of the wings, project considerably from the main pile, and thus have windows on three sides, are light and airy. The single cells are very numerous, and, in almost every instance, open off the corridor. Some of them are lined with wood, others only have their brick walls oil-painted, while a few are delightfully white and pleasing to the eye, being covered with Kean's impermeable cement.* The shutters in all these cells have the ordinary arrangement, being made to move up and down by the action of a catch in the outer wall; and, besides having a ventilator over the window, there is a small wire-covered opening into the corridor above the cell-door. The whole cost of this palatial asylum has been over £120,000; for it ought to be borne in mind that labour is nearly three times as expensive in Victoria as at home. It has been many years in the hands of different contractors, I believe, and, even when thoroughly complete, will obviously prove an anachronism in such a climate as that of Victoria, for the brick cottages I have described as forming a large portion of the upper division of the Yarra Bend Asylum, would, if constructed on a better system for ventilation, have not only answered all the purposes required of them admirably, but would admit of a simple method of classification, and of a more ready means of separating different patients—an inestimable boon to the unfortunates themselves; while the slightly increased expenses entailed on the government in administration, would have been far more than counterbalanced by the cheapness of erection.

There are two other large asylums in Victoria—the “Beechworth” and the “Ararat,” both of which have only been in use a few years. The Beechworth Asylum I did not visit, but it is not quite so large as the one at Ararat, which, though standing on a good situation, has had its effect as a building completely destroyed by the ruthless and barbarous fashion in which every sign of vegetation has been cleared away from its immediate neighbourhood. It is in construction nearly a *fac-simile* of the Kew Asylum which I have just described, although not nearly as large, as it would be crowded with four hundred patients. The present energetic superintendent, Dr. Robertson, keeps it in admirable order, and it is in every respect a model asylum. Besides these larger institutions for the treatment of the insane, there is another smaller building in Melbourne, called the “Stockade,” to which chiefly incurable lunatics are drafted from the Yarra Bend; and there is one small private lunatic asylum in Melbourne, which, though the only one in the colony, has but very few patients.†

* A very expensive compound, however; as it costs, I was told, five shillings per square yard.

† The proportion of lunatics to the entire population is very much the same as in Victoria and in England; but some statistics I expect on the subject have not yet arrived.

CORONERS' INQUESTS, AND NECROPSIES AT THE YARRA BEND ASYLUM.—Strange as it may appear to the profession in this country, it is yet a fact that in Victoria, since the year 1865, a coroner's inquest has been held in every instance of the death of a patient in the Yarra Bend Asylum, quite irrespectively of the fact of the death having occurred under suspicious circumstances. It is clear, then, that, so far, the lunatics in Melbourne are quite as favoured a class of the community of Victoria as our own gaol-birds at home; as, in the case of anyone dying sane in mind, it is not thought at all necessary to inquire so particularly into the cause.

What those inquests imply is evident; a supreme distrust of the professional men the Government appoint to inspect and superintend the asylums of the colony, and an equally strong want of faith in the treatment of the medical men and attendants. Indeed, this absence of confidence in their own officers is, I am told, the only alleged reason for the necessity of holding such inquests at all. It is stated, although there is contradictory evidence on the subject, that some years ago grave and serious abuses were discovered in the only asylum then existing—the Yarra Bend; that, after a long inquiry into the alleged abuses, the superintendent at that time was dismissed, and the Coroners Statute Act so amended as to necessitate the holding of inquests in all cases of death in lunatic asylums throughout the colony. A new inspector was appointed, and a gentleman eminently qualified for discharging the duties of such an office, came out from England to discover that he was placed in the anomalous position of being considered worthy to occupy a post of serious responsibility, and yet find himself thoroughly snubbed by the absolute want of confidence in his judgment and integrity, which those inquests implied. This curious anomaly never seems to have struck the Victorians at all; and for the last five years, I am credibly informed, those inquests have been held at a great expense* to the colony, and with completely negative results, so far as the discovery of any particular abuses is concerned.†

It thus appears that, on account of one black sheep, all the members of the profession, who devote themselves to the study of lunacy in Victoria, find themselves in the strangely humiliating position of being appointed by the Government to look after and treat the lunatics of the colony, and then of having themselves suspected of maltreatment, in every case which ends fatally, by the very men who appoint them; and of being subjected to the degrading necessity of justifying their own treatment and that of their subordinates before a coroner and his jury-men. If the colonists can go on throwing away money in this remarkable fashion, one might readily fancy that Victoria had already become the earthly paradise which the term Australia Felix was used to express, and that there were absolutely no abuses to be remedied, no crying disgraces to be removed, in this land of gold and universal happiness. Have the unfortunate paupers in the Benevolent Asylum such admirable quarters? Do not the principal streets of Melbourne convey to the eyes and noses of travellers such sights and odours as are not even to be found in the lowest slums of London? and do not hundreds of infants yearly fall victims to the want of proper sanitary arrangements in that handsome city, which might easily be made the healthiest on the globe? Or even, to strike more directly home, can the thousand lunatics in the Yarra Bend be properly looked after by two medical men? When their country is thoroughly opened up by roads and railways, when there is a good system of irrigation, and when sufficient encouragement is given to immigrants, let the Victorians, if they find they have still money to throw away, after attending to those and a thousand other crying wants, indulge their pseudo-sentimentalism on the subject of pauper lunatics to their hearts' content, and enforce an inquest on every patient who dies in a lunatic Asylum.

Although to my mind, however, the insult to our profession, implied in these coroners' inquests, is sufficiently great, the council of the colony has yet contrived to make them even more insulting to the officers of these asylums, by appointing, in every case, extraneous medical men to perform the necropsies. What would professional men at home say, if, after having treated a patient to the end, they were not only forbidden to make the *post mortem* examination, but not even asked to be present at it? And what must we think of the accuracy of the verdict when the jury have to depend for the cause of death on the evidence of the pathologist alone? As soon as a patient dies in one of the asylums the coroner is informed of the fact, and he sends an order for an examination of the body to one of the staff of medical men in town appointed for this purpose. The asylum physician has, of course, merely to draw up his evidence on the signs and symptoms which he has observed during the patient's life, and, until the inquest, he is in distressing

ignorance as to whether any fact or facts, unnoticed by him, are to be brought out by the pathologist's evidence, and held *in terrorem* over him. When the two statements are taken, the result is, of course, in many cases conflicting; the medical officer judging from the symptoms which he has observed, and ascribing the death in many instances to an entirely different cause from the pathologist, who, it must be recollected, has never seen the patient in life. To show what inevitable discrepancies must arise in this way, it may be sufficient to cite a couple of instances. Thus in one woman, whose death was caused by exhaustion from the discharge of an enormous quantity of foetid pus from a large carbuncle, which had become a bed sore, the coroner's verdict returned it as resulting from disease of the brain, in accordance with the evidence of the pathologist, who very naturally ascribed it to what he regarded as the most important organic lesion; while, in another, the verdict was "death from hydatids," whereas, in reality, the hydatids of the liver and omentum which existed, had almost nothing whatever to do with the fatal issue, which was due to the exhaustion produced by very violent maniacal excitement in an enfeebled woman. In this last case the efforts of the jury-men, in their conscientious attempts to understand the true nature of hydatids, were highly praiseworthy, though the questions they put were supremely ridiculous. Of course, in those instances, the nature of the verdict was of no moment; but it is obvious that it would be easy for the pathologist to make a very grave mistake, supposing the medical men and attendants had some motive for garbling their evidence. Thus, if a lunatic had been poisoned by morphia, by strychnia, or had died even in many other ways, there would be so little to excite the pathologist's attention that, in nine such cases out of ten, he would be compelled simply to ascribe the death to the most prominent visceral lesion.

I need scarcely point out that the physicians to the asylums, thus finding themselves deprived of the opportunity of following up their cases after death, must lose, to a great extent, any interest in very accurate diagnosis; and even if they conscientiously treat the patients to the last, as I am firmly persuaded those gentlemen do, they must feel themselves balked and disappointed in their inquiries by the wretched obstacles the Government has thrown in their way; and, as a matter of course, however energetic or able they may be, we can scarcely expect to see psychological science make any very great advances in the colony of Victoria.

The truth is, that the inspector or superintendent is the proper official to look after the asylum in all respects. The appointment of men whom their Government cannot trust is surely too great an anomaly even for Victorians. If it were a rule that all cases of sudden death, or death from epilepsy, accident, or suicide, or under any suspicious circumstances, were to be investigated, and that an occasional inquest was to be held at the option of the inspector or coroner, the ends of justice would not only be fully as well attained, but the colony would be spared a large and unprofitable expenditure.

THE BALLARAT DISTRICT HOSPITAL, next to that of Melbourne much the largest general hospital in the colony, occupies a very pleasing situation in Ballarat, in the midst of pretty grounds, well-ornamented with shrubs and flowers; and, up to the present time at least, it has plenty of vacant space around it. As the oldest part dates as far back as 1855, it is, as a matter of course, on the corridor system, and in consequence very inadequately represents the present stage of improvement in hospital construction. The ventilation is necessarily imperfect, as a few perforated zinc plates, and a glass slide above the corridor, are the only attempts made at establishing a through current. The amount of cubic space to each patient in this part of the building is 1450 cubic feet. The second ward was more recently erected, and was so far a pavilion ward that there were opposite windows on two sides, with fireplaces at each end, and a couple of windows besides in the wall facing the door. It was a light, cheerful, and airy ward, the ventilators in the roof communicating with the outer air below the flooring of the second storey. Unfortunately the closets opened immediately off one of the side walls of the ward.

In connection with the visit of Prince Alfred to Ballarat, in 1867, the necessary funds were raised to erect an extra wing, which stands completely detached, and faces in the opposite direction to the main building. It is built in three storeys, and slopes in the opposite direction, so, as the ceilings are very high, it towers over the rest of the hospital in rather an ungainly fashion. The wards are, however, excellent, with so many windows that, on three sides, the walls seem literally made of glass, especially as the windows reach nearly to the roof from a couple of feet above the level of the beds. The wards are all entered from a side tower, which, besides the staircase, is intended to contain a hydraulic lift for the convenience of the patients. At the further end of the ward, from the tower entrance, there is a central apartment for the attendant, screened off by a glass partition, and to the right and left of

* Each inquest, with its concomitant *post mortem* examination, must cost over £7.

† The statute is strictly attended to in Melbourne, where the influence of the lower classes is greatly dreaded by the government. In at least one asylum in the colony, however, the inquests are only held at the discretion of the coroner.

this the closets, and a bath and pantry-room. There are earth-closets, on a Melbourne patent, said never to work. Each of those wards is intended for twenty-five patients, and the cubic space must be ample, though I unfortunately neglected to obtain the exact measurements. The lowest ward is as yet the only one in use.

[To be continued.]

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

A MEETING of this Branch will be held in the Theatre of the Midland Institute, Birmingham, on Thursday, December 14th, at 3 P.M.

A meeting of the Council of the Branch will be held in the same place at 2.30 P.M.

On the same day, and in the same place, the Committee appointed by the Branch for making arrangements for the annual meeting of the British Medical Association, will meet immediately after the Branch meeting.

T. H. BARTLEET, *Honorary Secretary*.

Birmingham, November 26th, 1871.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the above Branch will be held at the College Green Hotel, Bristol, on Thursday, December 14th, at seven o'clock: CROSBY LEONARD, Esq., President, in the Chair.

R. S. FOWLER, Bath, } *Honorary Secretaries*.
E. C. BOARD, Clifton, }

Bristol, December 1871.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of the above Society will be held at the Greyhound Hotel, Croydon, on Thursday, December 21st: Dr. COLES will take the Chair at 4 P.M.

The dinner will take place at 6 P.M.

Papers, etc., are promised by Mr. S. Lee Rymer, Dr. Jeaffreson, the Chairman, etc.

HENRY T. LANCHESTER, M.D., *Honorary Secretary*.

Croydon, December 6th, 1871.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE forty-second meeting was held at the Fountain Hotel, Canterbury, on Thursday, November 23rd, at 3 P.M.

Papers.—The following papers were read.

1. Rupture of Aorta within the Pericardium. By B. Browning, Esq. (See page 661).

2. Cases of Variola during the latter months of Pregnancy and at Delivery, with the Results. By G. Rigden, Esq. The author read an abstract of five cases of variola occurring in women during the latter months of their pregnancy; and two cases of the disease existing in the mother at the time of delivery at the full term, in which it seemed so little to affect their off-spring, that they were not only born at the full term without any evidence of the disease having affected them, but were in all the cases susceptible to the influence of vaccination at ages varying from three to six months. Three other cases were reported of females suffering from the disease in the earlier months of their pregnancy, in which the embryo did not appear to be affected, but there had been no opportunity of tracing the mothers to their time of delivery, and consequently it had not been possible to ascertain their susceptibility to vaccination.

3. Hernia, with Cases of Operation for Strangulation. By R. Hicks, Esq.

4. Remarks on the Diagnosis and Surgical Treatment of Fibroid Tumours of the Uterus. By Alfred Meadows, M.D.

The members afterwards dined together.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETING.

A MEETING of this district society was held on November 24th, at the Old Ship Hotel, Brighton; ALFRED HALL, M.D., in the Chair. Twenty-six members and two visitors were present.

Communications.—1. The PRESIDENT related a case of Mechanical Dysmenorrhœa and Chronic Endometritis. (See p. 667.)

2. Mr. J. JARDINE MURRAY exhibited an instrument invented by Mr. Spencer Wells for Tapping in Ascites. Opinions were much divided respecting its merits.

3. Dr. ORMEROD showed a Fractured Humerus from a young Horse four years old, caused by muscular action. Under the microscope, the bone-cells showed no canaliculi; there was a general infiltration of fat, but no fatty degeneration. Several members present mentioned cases of fracture from muscular action which had occurred in their experience, both in the human subject and also in horses.

4. Mr. J. JARDINE MURRAY read a paper on the Danger of Ill-constructed and Neglected Cisterns, which time would not permit of discussing.

Dinner.—Twenty-one members and two visitors subsequently dined together at the Old Ship, under the presidency of Dr. A. Hall.

The next District Meeting will be held at Lewes, in March 1872; Mr. R. Turner in the Chair. Communications will be thankfully received by the Honorary Secretary, Dr. Trollope, St. Leonard's-on-Sea.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETINGS.

THE second meeting of the session 1871-2, was held at Maidstone on November 28th; ALBERT DAVIES, M.D., in the Chair.

The Next Meeting was appointed to be held at Gravesend in March.

The election of a member of the Medico-Ethical Committee, *vice* Joy, was deferred.

New Members.—The following were elected:—Samuel Prall, M.D., West Malling; John W. Fry, Esq., Watlingtonbury.

Resolutions.—1. It was resolved—"That the Honorary Secretary shall use open circulars for convening the district meetings (as lately practised tentatively)."

2. It was resolved—"That the members of this district recommend the Branch Secretary to apply for *arrears* by closed letter."

Communications.—1. A Case of Concussion of the Brain. By Charles E. Hoar, Esq. A young gentleman, aged 23, sustained a severe concussion of the brain from being thrown out of a dog-cart. No bones were broken. There was no paralysis. Unconsciousness existed without stertor. The pulse was very slow, the upper lid of the left eye dropped, and other symptoms of paralysis of the third nerve were present. Ophthalmoscopic examination discovered no intraocular lesion. The patient gradually recovered, and after three months is able to use his left eye. He cannot, however, read for a long period. Mr. Hoar considered the paralysis of the third nerve to have been caused by a small effusion of blood at the back of the orbit. The slow pulse of 40 to 50 he attributed to shock.

2. Two patients were exhibited by Mr. M. Adams, suffering from Intraocular Tumour; viz. (a), fibrous tumour of iris; (b) sarcomatous tumour.

Dinner.—The members and visitors dined at the Mitre Hotel.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

Hip-Disease.—*Laryngeal Changes.*—*Tubercular Meningitis.*—*Mitral Stenosis.*—*Aortic Aneurism.*—*Factitious Urticaria.*—*Patency of Foramen Ovale.*—*Fracture of Neck of Scapula.*

THE second ordinary meeting of the session was held on November 24th. Present: ALFRED BAKER, Esq., in the Chair, and thirty-two members.

1. Mr. FURNEAUX JORDAN showed a specimen of Hip-disease in an early stage, undergoing repair. It was removed from a young man who died, while under treatment, from meningitis. The capsule was distended with liquid. The ligaments, synovial membrane (save slight thickening and vascularity), and cartilages, were little altered. The ligamentum teres was healthy. The epiphysal lines of cartilage were distinctly seen on section. The bone generally presented the appearance of sclerosis. The epiphyses were little diseased, the principal pathological change being in the extremity of the diaphysis.

2. Dr. SAWYER exhibited two specimens of Phthisical Ulceration of the Larynx. He also showed sketches of the laryngoscopic appearances in two cases of unilateral paralysis of the adductors of the vocal chords.

3. Dr. UNDERHILL showed two specimens of Tubercular Meningitis. In the first case, that of a boy aged 10, the symptoms were of about eight months' duration, commencing with typhoid symptoms. There were large cheesy deposits in the cerebellum, with meningitis and miliary tubercle at the base of the brain, cheesy deposits in the

bronchial and mesenteric glands, and general tuberculosis. In the second case, that of a boy aged 9, the symptoms seemed to date from an injury to the head received three years previously. There were found cheesy deposits in the cerebellum and meningitis of the base, but no miliary tubercle. There was also general tuberculosis. He also showed the temperature-charts of these and similar cases which had come under his notice at the Children's Hospital, briefly narrating their histories and *post mortem* appearances.

4. Dr. WELCH showed the Heart removed from a woman aged 54, who died of general dropsy. There were adherent pericardium, narrowing of the mitral orifice, with thickening of the mitral valves and tendons, thickening and bulging of the aortic valves. A small aneurism, of the size of a large pea, also projected from the left into the right auricle, at the site of the valve closing the foramen ovale.

5. Dr. WELCH also exhibited an Aneurism of the ascending and transverse portion of the Arch of the Aorta, perforating the left side of the sternum and the intercostal muscles between the first and second and the second and third ribs, and rupturing externally. Within the chest, the aneurism extended from the aortic orifice to just below the origin of the left subclavian artery. The walls of this part of the aneurism were formed by the dilatation of the coats of the aorta until it came into contact with the sternum and ribs; then the arterial coats disappeared, and the walls consisted of thickened pleura and cellular tissue. Outside the chest, the aneurism extended from the left axilla to the right of the sternum, and from the first to the fifth rib, forming a large pea-shaped tumour, which had ruptured over the sternum opposite the third costal cartilage. The wall of this portion was formed by the pectoral muscles and skin. The specimen was taken from a man aged 62, a nailmaker, formerly a soldier. He was admitted into the General Hospital four months ago, under the care of Dr. Bell Fletcher, the aneurism being then not larger than a hen's egg outside the chest. There was never any *bruit* to be heard over the aneurism; and the heart's sounds were normal.

6. Dr. RUSSELL brought forward a case of Factitious Urticaria, and remarked that it had considerable interest in relation to the ordinary forms of urticaria, and supported the general opinion of dermatologists that in its origin the disease was a neurosis. The phenomena of the common forms of urticaria all pointed to this conclusion. The stinging and itching which ordinarily attended the eruption, and the perversion of tactile sensibility when the disease affected the hands and fingers; the febrile prodromata, the vertigo and nausea, the constricted throat and peculiar cough which accompanied severe forms of urticaria febrilis and urticaria *ab ingestis*, all indicated altered innervation. The remarkably fugitive and erratic nature of the wheals, their sudden production, brief duration, and speedy reappearance in some other part, were most satisfactorily explained on the hypothesis of their nervous origin. The usual causes of the eruption indicated direct or reflex irritation of the contractile tissues of the skin. Wilson alleges "irritation of the gastro-pulmonary or genito-urinary mucous membrane as the most common cause; and the peculiar nature of many of the substances which give rise to urticaria, when introduced into the digestive canal," seemed to point to an anomalous state of nerve-function in the particular individual. As to direct irritation, many cases approached closely to the factitious form; the sting of the nettle, the bite of certain insects, the bug, the gnat, certain species of mites in fruit (*Hebra*), even simple scratching—especially when certain other forms of eruption were present—all these acted most probably on nerve-tissue. Mental excitement was pointedly adduced both by *Hebra* and Wilson, and the former spoke of urticaria as being occasionally caused by the ague poison. Opium and belladonna were neurotics, and each might originate an attack of urticaria. Dr. Russell quoted one remarkable case in his own practice, in which a single enema of laudanum was followed by an outbreak of urticaria of such intensity that he was at one time alarmed for the patient's reason. The patient's daughter suffered from protracted urticaria in two successive pregnancies. In conclusion, Dr. Russell commented on the peculiar contradiction exhibited in his case of *contraction* of the fibre-cells of the skin, and *relaxation* of the contractile fibres of the small arteries indicated by the surrounding vascularity; the vascular areola was, however, not a necessary attendant even of the present form of urticaria. His friend, Dr. Denne, mentioned to him a case in which the wheals produced by irritating the skin were free from any areola. He suggested as a subject of some interest to watch the effect of drawing the nail over the healthy skin in different individuals.

7. Dr. MACKEY showed a specimen of Patent Foramen Ovale. A history of the case is published at page 666.

8. Mr. WEST brought forward a specimen of Fracture of the Anatomical Neck of the Scapula which he had removed, together with the upper arm, from a boy aged 17, after amputation at the shoulder-

joint for a machinery accident, which had smashed the humerus and also the radius and ulna. Mr. West remarked on the extreme rarity of the accident, and also mentioned that in this case he ligatured the axillary artery prior to the amputation, with a view of preventing hæmorrhage, as the boy was in a state of great depression from previous loss. The ligature separated on the fourteenth day, and the boy was able to sit up, the greater part of the incision being united.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 28TH, 1871.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

A CASE OF UNILATERAL ATROPHY OF THE TONGUE.

BY WM. FAIRLIE CLARKE, M.A., F.R.C.S.

MRS. H., aged 45, had a malignant tumour removed from her right breast on February 16th, 1870. The wound healed slowly, but satisfactorily. On April 15th she complained of cough and slight dyspnoea, the latter only noticeable after exercise. Under treatment, the cough soon disappeared, but the dyspnoea continued. On October 3rd, Mr. Hume, of Islington, was called suddenly, and found her suffering from a deep-seated pain on the right side of the head, of a periodic character, returning each night between 1 and 2 o'clock A.M., and rendering her for some hours incoherent and unmanageable. The only thing which gave her relief was morphia in grain doses. At this date, atrophy of the tongue was first noticed, though it was not then so marked as it afterwards became. On March 29th, 1871, Mr. Hume was again urgently required to attend, and found the patient suffering from all the old symptoms in an aggravated degree; she had also alarming dysphagia, with paroxysms of suffocation, which recurred about three times in the twenty-four hours. On being asked to protrude the tongue, she always appeared unable to do so at first; and, after a few moments, put it out very slowly. The tongue was puckered and crimped along its whole right side from base to apex, mostly at the anterior two-thirds. An actual loss of substance had taken place, but it was bounded exactly by the median raphe; and the contrast between the plumpness of the left side and the shrivelled aspect of the right was very striking. When it was protruded, there was no deviation to either side. Articulation was slow and difficult. There was great pain along the right side of the neck, with a certain fulness and turgescence of the vessels; but no tumour could be felt in any part of the mouth or neck. Together with these symptoms, there were general cachexia and great prostration. From this time the dysphagia and dyspnoea gradually became worse; and on June 7th, in one of the attacks of suffocative cough, the patient died. At no time during her illness had there been any paralysis of the extremities, and her intellectual faculties remained clear throughout.

Unfortunately no necropsy could be obtained; but, looking at all the circumstances of the case, Mr. CLARKE thought there was good reason to believe that the ninth nerve on the right side was involved in a secondary cancerous tumour, such tumour being situated either within the cranium or at the upper part of the neck, and pressing upon the right hypoglossal nerve, and more or less implicating the pneumogastric and glosso-pharyngeal nerves as well.

The writer then proceeded to compare with this case two other instances of well-marked unilateral atrophy of the tongue: the one related by Dupuytren in the *Leçons Orales* (lecture on Hydatid Tumours); the other by Sir James Paget, in the third volume of the *Transactions of the Clinical Society*. The experience of Romberg and of Bidder was adduced to show that this remarkable condition of the tongue might be produced by a lesion of the ninth nerve; and to establish the same point the author related an experiment that he had made. On October 25th, he divided the right hypoglossal nerve in a rabbit, and took out a piece about a quarter of an inch in length. Immediately after the operation, and during the whole time that the animal was under observation, the tongue was strongly protruded to the right side. On November 27th the rabbit was killed. It was found that the nerve had united by a soft gelatinous and highly vascular substance, of about twice the ordinary calibre of the nerve. The right side of the tongue, along its posterior half, was slightly wasted and flattened.

The preparation was exhibited; and an outline sketch, illustrating the case which had been related, also accompanied the paper.

Dr. JOHN HARLEY agreed that the lesion of the tongue in Mr. Clarke's case was probably due to cancer pressing on the ninth nerve. But lateral deviation of the tongue also took place in some cases of scarlet fever, where the deeply seated glands of the neck were enlarged and pressed on the hypoglossal nerve. He had met with this in a lad

aged 15, who had also occipital pain and vomiting; the tongue deviating to the right when protruded.—Dr. CHARLTON BASTIAN thought it by no means certain that atrophy of the tongue was always produced by paralysis of the hypoglossal nerve. At the Hospital for Paralysis and Epilepsy, he had seen a case where the only nerve that could be found affected was the sixth; the tongue was much wasted, but the deviation was very slight; and when the wasted half was tested by faradisation, decided contraction took place. Dumesnil had a case of general muscular atrophy with paralysis of the tongue and face on one side; there was complete paralysis of the hypoglossal nerve, but no wasting of the tongue. The anterior roots of many of the spinal nerves were much atrophied; as were also the roots of the facial and hypoglossal nerves, while those of the fifth pair were healthy. Dr. Jaccoud, in referring to this case, explained it by supposing that the sympathetic or trophic nerve-fibres went to the tongue with the branches of the fifth rather than with those of the motor nerves.—Dr. HABERSHON referred to the case of a woman in Guy's Hospital in whom, while she was suffering from cancer of the breast, the right side of the tongue became flaccid and wrinkled, the organ being turned to the right. Speech and the sensation of the organ were unimpaired. The right sternohyoid muscle was paralysed; the posterior belly of the omo-hyoid contracted on each side. The patient had pain at the back of the head, and pain and tenderness down the spine. After death (which took place from wasting), numerous soft cancerous tubera were found implicating the bones of the skull and the dura mater; and one of them crept up from the foramen magnum to the internal auditory meatus, involving the eighth and ninth nerves. The proximity of the disease to the meatus explained a slight affection of the facial nerve which had been noticed during life. The affection of the tongue was evidently due to the interference with its nerves by the medullary cancerous growths.—Dr. HUGHLINGS JACKSON thought Mr. Clarke's case a very rare one. In no instance had he seen palsy of the tongue, either on one side or on both sides, without palsies of other parts. Thus in a case of syphilitic disease there was palsy of the left portio dura and eighth nerves, as well as of the left ninth nerve. In a case of tumour of the medulla oblongata and pons Varolii, there was palsy of the fifth, sixth, seventh, and eighth nerves, as well as of the ninth, on the left side, and paralysis of the right arm and leg. He mentioned a case of a man who found out one morning that he was hoarse, and that his tongue was turned to one side "like a hook." There was palsy, with wasting, of the right side of the tongue, paresis of the right side of the palate, and palsy of the right vocal cord. As the man was past fifty years of age, as he had albuminuria, and as symptoms came on in one night, the probability was that they were the result of clot. In one case of sudden palsy of the tongue, palate, and orbicularis oris which he had seen, Dr. Lockhart Clarke discovered relics of effusion of blood in the medulla. Dr. Lockhart Clarke's researches, showing the close relations of the lingual and spinal accessory nuclei, gave the explanation of cases of lesions in the medulla producing palsies of the several factors concerned in articulation, deglutition, and voice. Dr. Hughlings Jackson had never seen wasting of the tongue from paralysis of the fifth nerve, although the temporal and masseter muscles wasted.—Dr. WILLIAM OGLE referred to a case related by Dr. Hyde Salter in his article on the Tongue in the *Cyclopædia of Anatomy*, in which paralysis and atrophy of the tongue were produced by a wound of the neck injuring the hypoglossal nerve. He had often divided the hypoglossal nerve in animals, and had found that the tongue did not always deviate towards the side of the lesion; sometimes it was protruded straight, sometimes it was even turned a little to the opposite side. This last occurrence was difficult to explain; it might occur in cases of disease of brain, where the lesion was double; or possibly the observation might be made when the tongue was partially withdrawn after protrusion, and when, from a reversal of the muscular action, it would appear somewhat pushed to the other side. Section of the hypoglossal nerve caused the tongue to be as it were turned up, the paralysed side being the higher. He asked if this had been noticed in disease.—Dr. HILTON FAGGE had seen a case of unilateral atrophy of the tongue in a boy aged $5\frac{1}{2}$ years. A piece of the odontoid process was found sticking up through the dura mater.—Mr. THOMAS SMITH thought the action of the genio-hyo-glossus muscle sufficient to draw the tongue over to the paralysed side. This muscle protruded the organ; which, when outside the mouth, was moved by the styloglossus muscle; and this, or the lingualis, might draw the tongue towards the sound side.—Mr. HENRY POWER said that the theory of the existence of trophic nerves was almost entirely based on observations of the effect of injury of the fifth nerve on the eye. He thought, however, that little if anything was known regarding trophic nerves. In Mr. Clarke's case, he thought the lesion was not connected with the fifth nerve, but with the hypoglossal. In the case of the eye, he believed that the increased liability to inflammation after injury of the fifth nerve

arose from the organ being more exposed to injurious influences acting from without.—Mr. SOELBERG WELLS referred to some experiments of Meissner, in which sloughing of the cornea did not occur after experiments on the fifth nerve unless the innermost fibres were divided.—Mr. R. B. CARTER said that, in patients who had died with herpes zoster, Bärensprung and Charcot had found signs of disease in the spinal ganglion. He had seen herpes followed by sloughing of the cornea, without other changes in the eye. Might there not be some change in the Gasserian ganglion?—Mr. BARWELL thought that Mr. Fairlie Clarke's case could scarcely be regarded as one of recurrence of cancer after operation.—Mr. HOLTHOUSE briefly related a case of unilateral atrophy of the tongue in a syphilitic subject.

INTERMENSTRUAL OR INTERMEDIATE DYSMENORRHOEA.

BY W. O. PRIESTLEY, M.D.

The author pointed out that, although much had been written concerning dysmenorrhœa, and several forms of it had been described in accordance with the pathological views taken of its causes, the description of the several varieties was ordinarily limited to the time of the catamenial period, with the two or three days additional which might precede and follow the menstrual flow. From time to time, however, cases of a more obscure kind presented themselves, in which the chief suffering was remote from the actual menstrual period, but came on, nevertheless, with the same punctuality, and was probably dependent on organic changes associated with the production of the catamenia. Probably other practitioners had observed like instances, as they were not unfrequent, but the author had met with no description of them.

In all the cases detailed severe pain was experienced by the patients midway in the menstrual interval. The pain commonly came on about fourteen days after a catamenial period, and, after lasting a variable number of days, ceased before the supervention of the next expected period. In one case, the pain, beginning midway in the interval, ran into the following monthly period, and was relieved by its flow. The suffering was constantly referred to one or other ovarian region, and, in three cases out of four, marked tumour, or thickening from old adhesions, was found in that locality.

The reason for the occurrence of pain in the intermenstrual period, and with such regularity, was not, in the present condition of our knowledge, perfectly obvious. A study of the physiological and pathological conditions left little doubt, however, that it was due to perturbations in the function of "spontaneous ovulation" habitually going on in the ovary. Hypertrophy of the structure of the ovary, or thickening of its indusium, would lead to undue vascular excitement, and impede the advance of ova to the surface in their attempts to attain maturity. It was not unreasonable to suppose, from all known facts of the case, that preparation for an approaching period began in the ovary ten or fourteen days before the occurrence of the monthly uterine discharge; and if the initial steps in the process of ovulation were opposed by certain pathological conditions, pain would ensue. Nay, in the absence of distinct organic change, it might readily be imagined how special irritability in the ovary would cause an unusual amount of disturbance whenever there was occasion for the exercise of fresh activity in the organ. This latter class of cases would partake more or less of a neuralgic character.

The treatment would depend on the pathological condition as ascertained by examination. The pain being only a symptom, it would be needful to inquire into the cause; and if there were tumour, or thickening depending on former inflammation, absorbent remedies would be indicated. If no organic change of structure could be detected, anti-neuralgic remedies, such as quinine, iron, and arsenic, would best answer the purpose of cure.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 24TH, 1871.

G. OWEN REES, M.D., F.R.S., Vice-President, in the Chair.

Intracranial Disease cured by Iodide of Potassium.—A young man, aged 21, was admitted into Guy's Hospital, under Dr. MOXON's care, having been ill six months. The illness came on with severe headache; in about three months, ptosis and ocular paralysis of the left side commenced, and, as it went on, the left fifth nerve also became involved, and the right hand grew partially numb. When admitted, the patient had agonizing pain in the head. The left eye was intensely red, and its cornea ulcerated; it was almost immovable, and the lid was dropped. He could not feel moderate touches on the left side of the face, nor taste salt on the left side of the tongue, nor use the left masticating muscles. He had two slight seizures of a doubtful kind on the first two days after admission. Iodide of potassium was

given in three-grain doses thrice daily, and the dose increased to a scruple. The pain left him very soon, the other symptoms more gradually. He was in attendance at the Society's rooms, and the state of the left side of his face and of his left eye was practically normal again. This was the third case of syphilitic disease about the sella Turcica Dr. Moxon had met with. This he connected with the growth of the sphenoidal sinuses there, bringing in illustration the occurrence of exostoses very frequently about the frontal sinuses and of exostoses on the long bones at the region of the epiphysal cartilage; all these facts going to prove that the seats of late development were unusually liable to disease. Dr. Moxon believed that it was incumbent on every one who had a case of local intracranial disease come under his care, to treat it at once with iodide of potassium, without waiting to make out its nature. He had not seen any serious ill effects from the iodide when taken to the extent of a drachm in the day for long periods. Slight salivation, a red rash, and catarrh were not common, though they occasionally occurred; and they were by no means to be compared with local intracranial disease as alternatives. As to absorption of the testes, he had never seen it. The iodism of old authors was probably to be referred to the poisoning of the blood by the absorption into it of broken-down matter of goitres during their cure.

Dr. ANSTIE read the further and concluding history of a case of which the earlier notes were read last session. It was an example of neuralgia of all three branches of the fifth nerve, immediately excited by constitutional syphilitic infection, and which was of recent date. The case was one of a remarkable character. The nerve had been *predisposed* to neuralgic pain; many years before the syphilitic infection it had been the seat of an ordinary typical *migraine*, of great severity; and at present it was very noteworthy that the painful and tender points were distributed, not according to the type of tertiary syphilis, but according to that of ordinary neuralgia. Moreover, a number of secondary lesions (unilateral facial anæsthesia, unilateral loss of taste in the tongue, unilateral spasm of muscles, etc.) were distributed exactly as such secondary affections were in severe neuralgias where there was no question of syphilis. Besides these curious phenomena, there were a series of paralyses of the ocular muscles, quite of the ordinary syphilitic type. Thirty grains of iodide of potassium daily completely cured the neuralgia, the anæsthesia, the loss of smell and taste, and the muscular spasms, in little more than a fortnight. The ocular paralysis proved exceedingly obstinate; but the prolonged use of iodide in larger daily doses (forty-five and then sixty grains) at last completely removed it. It was a singular fact that, during the full progress of the muscles towards recovery, unmistakeable symptoms of iritis made their appearance; they were checked by a short course of mercury. Such a case as this was sure to be marked, in the future, by the repeated recurrence of tertiary syphilitic nerve-lesions.—Dr. HUGHLINGS JACKSON thought there could be no reasonable doubt as to the correctness of the diagnosis of syphilitic disease, since several cranial nerves were paralysed on but one side. Moreover, the palsies had passed off under antisymphilitic treatment. Dr. Moxon's remark, that patients cured of syphilitic affections of the nervous system were liable to suffer again, was of great practical importance. He (Dr. Jackson) thought unfavourably of cases of syphilitic affections of the nervous system, even after the symptoms had been promptly removed by drugs. The author's observation on the indirect way in which nervous centres suffered from syphilis by plugging of syphilitic arteries, was very important. Although patients would recover from hemiplegia the result of any kind of pathological change, provided the lesion were very limited, he did not think that the iodide was of value in removing hemiplegia the result of plugging of a syphilitic vessel, any more than in removing hemiplegia the result of embolism from heart-disease. He asked if the patient had had a blow on the head, as he had frequently seen cases in which syphilitic affections of the nervous system followed severe blows on the head. In illustration, he mentioned the case of a woman whose history he had related two years ago at this Society, who, after a severe blow on the left side of her head, had double optic atrophy (the sequel of neuritis), and convulsions beginning in the right hand. At the necropsy there was found syphilitic disease of the surface of the left hemisphere, and also of the liver and spleen.—Mr. BRUDENELL CARTER was of opinion, from the condition of the optic discs, that the disease was consequent on inflammation, and not on a tumour. He considered it going too far to say that iodide of potassium should be given, as a rule, in local intracranial disease; and believed that in some cases it was better to give mercury. The results obtained from iodide of potassium were, he thought, more satisfactory when the drug was given in fine division, as in a large quantity of barley-water. In patients who were susceptible to small doses, the effects of the drug might be still obtained by diminishing the quantity.—Dr. BROADBENT had seen purpura produced by small doses of iodide of potassium, and had not met with much

catarrh. He always prescribed ammonia with the potassium, and found that the remedy was borne better after a meal. He gave ten-grain doses of the iodide to begin with, as a rule; and had given drachm doses every four hours without effect.—Dr. BUZZARD said that many of the cases of cranial paralysis presented no history of syphilis at all; and it would be interesting to know how far iodide of potassium could remove effusion in such cases. Might there not be, in some of these cases of cranial nerve paralysis, meningitis dependent on other causes—as, for example, rheumatism? Iodide of potassium, he had found, could be used as easily as bromide of potassium.—Dr. ALTHAUS remarked that large doses of iodide of potassium were often borne better than small, and that liquor arsenicalis was a good corrective. He alluded to a case of rheumatic meningitis with hemiplegia, cured by iodide of potassium. He wondered that Dr. Anstie, in his case, had not applied electricity, which has much influence in local paralyses.—Mr. HOLTHOUSE alluded to a case in which petechiæ were produced by the use of iodide of potassium. He had always looked upon the cases in which this drug did good as syphilitic; but it was often impossible to get a syphilitic history.—Mr. LAWSON remarked that it was not frequent, as in Dr. Moxon's case, for the eyes to become bloodshot in ptosis. It was generally in the reverse condition that ulceration of the cornea took place.—Dr. ANSTIE, on the other hand, observed that it was not necessary to have the eyelid open to have ulceration; while Mr. BRUDENELL CARTER pointed out that Schiff and others had shown that, if the inner part of the fifth have been paralysed, the cornea becomes ulcerated.

Uncomplicated Aphasia.—Dr. GLOVER described a case of aphasia in a patient under his care at the Holloway and North Islington Dispensary. G. P., aged 63, an intelligent workman in a varnish and colour manufactory, came under treatment in the beginning of September with a very imperfect power of expressing himself, a furred tongue, high-coloured urine, and a weak pulse. The affection of the faculty of language was peculiar. Many words the patient could say quite well, but he was greatly embarrassed for want of the proper words. This appeared in his attempt to answer questions, and especially when asked to say what the names of particular objects were. Dr. Glover gave several curious illustrations. One day, on being shown a book and asked what it was, he said, "good," "house," "butter." On being asked to write the name, he said, "a good"; then he remembered the right word, and said "book." On a watch being shown to him, and being asked for the name of it, he said, "*Tempus fugit*," but could not say the proper word; but, on being asked to write it, he wrote "watch." He called a ring "a knife," and purse "bug," "book," "bug," "a pocket-book." One day, after naming the door and the fire, and being asked the name of the window, he was greatly puzzled, and said, "five," "glass and sash;" he was then quite confused for a few minutes, and being asked to write it, he put "fireaway," "fender," "windway," "windway," "shot," "lock." Ten days later, being asked the same question, he said "windle," and quickly "a window." He seemed to know when he answered wrongly, and was sometimes impatient, and sometimes amused at his errors and his embarrassment. There was no other symptom of cerebral disease, no hemiplegia, and either none or but the slightest difference in the sensation of the two sides. He walked well, wrote fairly, shaved well, and protruded his tongue straight. Dr. Glover remarked that the case was especially interesting for being simple and uncomplicated with any lesion of intelligence or of motion, such as right hemiplegia. There was nothing to indicate any affection of the left hemisphere more than one of the right, as M. Broca's remarkable theory supposed, which localised this disease in some lesion of the third left anterior convolution. Seven or eight months ago, the patient had had a similar attack, which only incapacitated him for work one whole day, by reason of the way in which he put wrong names on the varnish cases. The present attack began about eight o'clock one morning in the water-closet. He seemed to lose himself. He foamed at the mouth, and fell down, but not quite unconsciously, for he tried to save himself. He lost his speech, but spoke a little, cried a little, and seemed inclined to fret. He walked home with the help of a young man, who gave these particulars of the attack, and who thought that at the time the face was drawn to the left side. There was no drawing of the mouth since Dr. Glover attended him, and he saw him the day after the attack. Occasionally, the heart and pulse were irregular. At other times, and generally, they were regular, but weak. There was no abnormal sound. Mr. Carter had kindly examined the eyes, but the existence of lenticular opacity made it impossible to get any help in diagnosis from the state of the fundus. The patient's previous health had been good, excepting yellow fever in 1833 or 1834. He never had rheumatism or syphilis. The treatment at first was chiefly expectant. Latterly, ammonia and a little wine and beef have been its principal features. The aphasia had become rather less,

though still persistent. Dr. Glover thought the symptoms might be attributed to either softening, or embolism, or slight extravasation affecting a very limited portion of the brain, and inclined rather to extravasation, from the persistence of the aphasia and the nature of the attack. The patient was present, and was examined by various members of the Society.—Dr. BÄUMLER said that he had several times seen temporary coma produced by lead; but Dr. GLOVER, in answer to Dr. Bäumlér, remarked that he had examined the patient and his history carefully, and found no evidence of lead-poisoning.—Dr. HUGHLINGS JACKSON thought that, since the patient made mistakes in words, and could not express himself correctly in writing, the author was justified by usage in calling the very interesting case he had reported one of aphasia; but he suggested that this term should be restricted to cases of more or less *loss* of speech. He thought that a term was wanted for the other condition, that of disorder of speech—mistakes in words, for instance. He believed that these two conditions were fundamentally opposite conditions, and that the mental states of the patients were different. For example, in cases of loss of speech, the patient readily understood what was said to him; whereas, in cases where making mistakes in words is the chief phenomenon, it frequently happens that the patient did not readily understand what is said to him. He supposed that disorder of speech was more frequently the result of plugging of vessels, in young people especially, than of other pathological lesions, such as clot; but could not speak so confidently on this point as he had formerly done. The absence of hemiplegia in cases of affections of speech was very uncommon. Occasionally the hemiplegia passed off when even complete loss of speech remained; but it was very rare for there to be absolutely no one-sided paralytic symptoms at first.—Dr. BROADBENT said the case was one of amnesia, the patient making mistakes in words; and he would, therefore, not look to the third frontal convolution for the disease.—Dr. ANSTIE said that he had seen a case in which this confusion of the name of one object with another occurred during an attack of autumnal diarrhoea.—Dr. MOXON thought that aphasia meant that state in which words were forgotten, and could not be used when repeated.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, NOVEMBER 29TH, 1871.

AQUILLA SMITH, M.D., in the Chair.

Phosphorus in Skin-Diseases.—Dr. JAMES LITTLE read for Dr. EAMES, who was unavoidably absent, a paper on this subject. It commenced with a brief review of the observations of Burgess, Broadbent, and Tilbury Fox on the employment of phosphorus as a substitute for arsenic in the treatment of many cases. Dr. Eames described his method of using the remedy. A solution of ten grains of phosphorus in one ounce of olive oil was prepared, and of this a dose of from five to ten minims was administered three times a day; or capsules might be substituted in cases where the oily solution caused nausea or other unpleasant symptoms. Three sets of capsules, containing one-tenth, one-twentieth, and one-thirtieth of a grain of phosphorus respectively, had been made. The first case treated by Dr. Eames with the remedy was one of severe *acne indurata* of the face, of four years' standing. After six weeks, a cure was effected. In three cases of lupus, similar satisfactory results were obtained. In the first of these, a marked improvement was observed after a fortnight's trial, and the patient continued to take ten-minim doses of the phosphoretted oil for nine months. In the second instance, a five months' course of treatment was followed by cicatrization, and, eighteen months subsequently, there had been no return of the disease. In the third case, the oil was used during nine weeks, but with interruptions, owing to the appearance of grave dyspeptic symptoms. In one case of scrofuloderma, the glandular swellings disappeared in six weeks; in another, a cure was effected in three weeks. Psoriasis also yielded readily. In one instance of this affection, dyspepsia supervened on the administration of phosphorus, which was then temporarily stopped and the mineral acids given. A man, aged 24, with pemphigus, beginning on the abdomen, was quite well in a month. Cases of eczema of the scalp had also been much relieved. Dr. Eames referred to the silvery appearance of the tongue noticed when patients had been taking phosphorus for some time—another point of analogy with arsenic, and to the frequent occurrence of dyspepsia. The latter was to be met by substitution of the mineral acids for a short time.—Dr. QUINLAN had used phosphorus with great advantage in various cases where depression was a marked symptom, especially in pneumonia. He had occasionally used the amorphous or red phosphorus.

The combination of dilute phosphoric acid and cinchona was a most useful tonic.—Dr. H. KENNEDY believed Dr. Eames's paper to be a very valuable contribution. He spoke of two remedies which he had used with success in lupus; namely, the insertion of an issue, and the internal use of elm-bark.—Dr. JENCKEN had made experiments with an alcoholic preparation, which had answered very well.—Dr. GRIMSHAW objected to any comparison being made between dilute phosphoric acid and phosphorus, as the former had nothing in common with the latter. He congratulated Dr. Eames on the clearness of his communication, and for having so thoroughly isolated the treatment by phosphorus in all his cases.—The CHAIRMAN alluded to the largeness of the dose used by Dr. Eames with advantage. He objected to the substitution of the allotropic variety of the metal.

Elephantiasis Græcorum.—Dr. HAWTREY BENSON read an account of an interesting case of elephantiasis Græcorum. The patient, who was in attendance, was a man, 47 years of age, a native of the County Kilkenny. He had served in India for twenty-seven years, but returned to Ireland in 1869. Nine months ago, his health began to fail, and slightly febrile symptoms appeared. He complained of sensations of creeping, itching, and tingling in the backs of the hands, subsequently extending to the face, neck, and shoulders. On coming under the care of Dr. Stearne, of Thomastown, that gentleman found the patient's body to be in places of a dusky, almost coppery hue. In other parts, too, the skin was indurated. Again, in certain situations, elevations were discovered. When he was sent to Dublin, the mouth had become engaged, and, under the tongue, several tubercles had ulcerated. The urine was healthy. No anæsthesia existed. He was treated with arsenic, warm baths, etc.—The CHAIRMAN asked whether there was any history of contagion in the case.—Dr. H. STEWART inquired as to the patient's temperance or otherwise.—Dr. H. KENNEDY asked whether it was satisfactorily established that the leprosy of the Bible was identical with elephantiasis Græcorum.—Dr. JAMES LITTLE thought that the local disease was quite distinct from that brought before the meeting by Dr. Benson. He had seen the affection in Egypt. The loss of the phalanges of the hands and feet was a notable feature in aggravated cases. Laryngeal complications were also common, so that the "leper's cry" was well known to the people of those countries where the disease was endemic.—Dr. ARCHIBALD JACOB suggested that exposure of the parts of the body affected to light or air influenced the degree of development of the disease.—After some remarks from Drs. CROLY and WHARTON, Dr. BENSON replied. He had not been able to obtain any evidence of contagion, but the patient had been rather intemperate. The disease was generally believed to be identical with the Biblical "leprosy", though the latter was the anæsthetic form of the affection, in which large white patches of skin were a distinctive feature. In the same form occurred the loss of the phalanges mentioned by Dr. Little—this being a neuro-paralytic symptom.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 2ND, 1871.

JAMES STANNUS HUGHES, M.D., President, in the Chair.

Aneurism of the Arch of the Aorta.—Dr. MACSWINEY exhibited an aneurismal tumour involving the ascending portion of the arch of the aorta in a woman aged 40. The symptoms first showed themselves two years ago, the most prominent being pain in the chest, occasional palpitation with difficulty of breathing, and cough of a ringing harsh character. The pain complained of was of two kinds. There was a dull, gnawing, constant pain; and to this, at times, was added a sharp paroxysmal one, which ran down the right arm even to the fingers. When admitted to hospital, the patient's face was oedematous, of a livid hue; the veins on the right side of the face and neck were turgid and enlarged. The radial pulse of the right forearm was rather more feeble than that of the left, and its systole was not synchronous with the beat of the latter. On examining the chest, a slight prominence was noticed over the second rib on the right side. This engaged the two neighbouring intercostal spaces also. In the same situation, a secondary centre of pulsation existed, and a double sound was heard on auscultation. Râles were universally audible over the right lung. The patient died early in October last, after a severe paroxysm of orthopnoea. At the necropsy, the right pleura was found to be extensively adherent, the anterior portions of both lungs were emphysematous, and numerous adhesions existed in the pericardium. The heart was in general healthy, but the orifice of the superior vena cava was almost entirely occluded. An aneurism, bilobed, engaged the whole ascending aorta from its origin, and extended to the springing of the left subclavian. The larger

of the lobes was five inches in length by four inches in width. The superior vena cava, both innominate veins, the right subclavian and internal jugular veins, were completely obliterated, while the right external jugular was much dilated. No rupture of the sac had taken place, the cause of death having been apparently orthopnoea, the result of bronchitis.

Large Aneurism of the Left Subclavian.—Mr. TUFNELL presented a cast illustrative of the external changes induced by the increasing dilatation of a remarkable aneurismal tumour, or series of tumours, a drawing of the same, and the bony structures of the left half of the thorax, showing the ravages caused by the pressure on them of the sac. The patient was a soldier in the 46th Regiment, a comparatively young man, and had been for the first six months of his illness under the care of Mr. Longmore at Netley. He had suffered from venereal disease. In March of the present year, pain and stiffness set in in the left shoulder. The hand shortly became numb. He soon noticed a swelling above the collar-bone. When he first came under observation, the left pupil was dilated. A very marked clubbing of the nails on the left hand became developed in the course of some time. Two large tumours, separated by the clavicle, existed on the left side. Regarded as one, these were somewhat pyriform in shape. They were readily emptied by pressure, at least to a large extent, and a blowing sound was extensively audible over them. On raising the arm above the shoulder, they also were largely emptied. In September, the man came under Mr. Tufnell's care. The shoulder was now pushed up to a level with the ear. The poor man suffered terrible pain, which was alone relieved by hypodermic injection of morphia. His daily dose of the alkaloid at last rose to six grains. He died of exhaustion. The skin over the swelling was of a dirty yellow hue, in places very dark. The left clavicle was eroded on its under surface. Three aneurisms of the subclavian were found. Of these, one sprang from the first stage of the vessel, being of the size of a hen's egg; the other two arose from the second stage, one forming the supraclavicular tumour, the other passing downwards, and becoming an axillary aneurism. It was the last that had produced the greatest pathological changes. In consequence of its pressure, the left lung had become completely carnified. The first rib had totally disappeared, the second was more than half absorbed, and the third, fourth, and fifth ribs were thoroughly dissected out. The heart and right lung were quite healthy.

Polypoid Growth of Left Auricle.—Dr. ROBERT M'DONNELL regretted that no history of the specimen which he presented was forthcoming. A polypus as large as a plum, having a pedicle and serous membrane, had grown from the edge of the fossa ovalis into the left auricle of the heart. The tumour dangled close to the auriculo-ventricular opening, probably into the appendix. The growth might originally have been a fibrinous clot, which became organised, or it might have resulted from some inflammatory process, slight traces of which were found elsewhere in the left cardiac chambers.

Rapid Formation of Cancerous Deposits in a Young Man.—Dr. STOKES laid before the Society the thoracic and abdominal viscera of a man, aged 22 or 23, in many of which large depositions of cancerous material had taken place within less than two months. The man had been very intemperate. Ten weeks ago he got a wetting. In about a fortnight, the legs swelled. He soon came into hospital. He was generally anasarous, had shortness of breathing, bronchial râles, and a feeble pulse. There was slight ascites, which did not afterwards increase; a circumstance to which Dr. Stokes drew particular attention, as being characteristic of this symptom when observed in cancerous affections. About twenty nodules were noticed over the surface of the abdomen, most of them of the size of hazel-nuts. A large tumour also projected above the clavicle. Profuse watery diarrhoea occurred. On one occasion twenty-eight stools in one night were passed, and the patient quickly sank. The swellings were all between colloid and true encephaloid in character. The heart, which was small and atrophied, presented many nodules. The pleuræ were affected, and also the mesenteric and other abdominal glands. Of these, some had a melanotic hue. The liver had quite escaped. Not long before his death, the man had suffered excruciating pain in the epigastrium, and here was found a large, evidently recently formed, mass of cancer.

Molluscum Sebaceum.—Dr. W. G. SMITH exhibited a portrait of this affection taken from life from a patient lately under his care in the Adelaide Hospital. The neck, chest, arms, and abdomen were thickly studded with the characteristic growths. The largest was situated over the left rectus abdominis muscle, and its dimensions were 3 by 3½ inches. They were mostly sessile, on a broad base. The parts most usually affected, the face and genitals, were in this instance free from any tumours.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board, on December 6th.

Bodman, Francis Henry, Devizes, Wilts: diploma of membership dated July 28th, 1871.

Harbinson, Alexander, Newry, co. Down: November 17th, 1871.

Hughes, Evan Thomas, Tanyralt, Llanfachraith, Anglesea: July 25th, 1871.

Two other candidates having failed to acquit themselves to the satisfaction of the Board, were referred. At the ensuing preliminary examinations in Arts, etc., for the Diplomas of Fellowship and Membership of the College, commencing on the 19th instant, 72 candidates have entered their names for the first named distinction, and 232 for the latter, making a total of 304 against 337 last December. The examinations will be conducted as heretofore at the Whittington Club, by a staff from the College of Preceptors, under the superintendence of the Rev. Dr. Jacob.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 30th, 1871.

Dickson, Thomas, Preston, Lancashire

Oates, James Pimlott, Stourbridge

The following gentlemen also on the same day passed their first professional examination.

Bevers, Edmund Augustine, Guy's Hospital

Comfield, Thomas, London Hospital

Manser, Robert, Guy's Hospital

Vowell, Charles Martin, King's College

As Assistants in compounding and dispensing medicines.

Pattinson, Dan, Dearham, Cumberland

Simpson, John, Colchester

Williamson, Nicholas, Harrington, Cumberland

MEDICAL VACANCIES.

THE following vacancies are announced:—

ABERDEEN DISPENSARY—Medical Officer.

AMERSHAM UNION—Medical Officer and Public Vaccinator for the Chesham No. 2 District: £70 per annum, and extra fees.

BLYTHING UNION, Suffolk—Medical Officer for District No. 1. Medical Officer and Public Vaccinator for the Wrentham District: £43 per ann., and extra fees.

BRADFORD FEVER HOSPITAL—Resident Medical Superintendent: £120 per annum, and board, first year.

BRIGHTON and HOVE DISPENSARY—Two Surgeons.

CARNARVONSHIRE and ANGLESEY INFIRMARY and DISPENSARY, Bangor—House-Surgeon: £80 per annum, board and lodging.

DENTAL HOSPITAL OF LONDON—Lecturer on Dental Surgery and Pathology.

DEVON and EXETER HOSPITAL—Surgeon.

EARLSWOOD ASYLUM FOR IDIOTS—Assistant Medical Officer: £150 per annum, board and apartments.

EAST RETFORD UNION, Notts—Medical Officer for the Dunham District.

GOREY UNION, co. Wexford—Medical Officer to the Workhouse and Infirmary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street—House-Surgeon.

JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer: £100 per annum, furnished rooms, attendance, coal, and gas.

KILBURN, MAIDA HILL, AND ST. JOHN'S WOOD GENERAL DISPENSARY—Resident Medical Officer: £100 per annum, furnished rooms, £45 per annum for a dispenser and servant, coal and gas.

LIVERPOOL—Public Analyst for.

LIVERPOOL SOUTHERN HOSPITAL—Senior House-Surgeon: £105 per annum, board and lodging.

METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Surgeon.

NORTH MAVINE and DELTING, Shetland—Parochial Medical Officer.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill—House-Physician: £80 per annum, board, furnished apartments, and washing.

NUNEATON UNION—Medical Officer and Public Vaccinator for the Nuneaton District: £55 per annum, and extra fees.

ROYAL INFIRMARY, Manchester—Senior House-Surgeon.

ST. PANCRAS, Middlesex—Medical Officer for the Workhouse and Infirmary.

ST. PANCRAS and NORTHERN DISPENSARY—Resident Medical Officer.

SEAMEN'S HOSPITAL (late *Dreadnought*), Greenwich—House-Physician.

STOCKWELL FEVER HOSPITAL—Resident Medical Superintendent.

TORQUAY, Devon—Medical Officer of Health: £100 per annum.

TOXTETH PARK TOWNSHIP—Medical Officer for District No. 2: £250 per annum.

UNIVERSITY COLLEGE HOSPITAL—Assistant Obstetric Physician.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £70 per annum, board and residence.

WEST OF ENGLAND EYE INFIRMARY, Exeter—Surgeon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*GILLARD, Richard, Esq., appointed Medical Officer to the Hayle's Charity for the District of St. Mark's, Kennington.

*GLYNN, T. R., M.B., late Physician to the Northern Hospital, elected Physician to the Royal Infirmary, Liverpool.

LECTURES

ON THE

EXPERIMENTAL INVESTIGATION OF THE ACTION OF MEDICINES.

BY T. LAUDER BRUNTON, M.D., D.Sc.,

Joint Lecturer on Materia Medica, and Casualty Physician, at St. Bartholomew's Hospital; etc.

IV.—DETERMINATION OF THE EXACT STRUCTURES THROUGH WHICH DRUGS AFFECT THE HEART AND VESSELS.

Comparison of the Effects of Drugs on different Animals in different Doses.—Mode of determining the Exact Cause of Symptoms.—Mode of raising Blood-pressure.—Modes of counting the Beats of the Heart.—Causes of Quickened Pulse.—Direct Stimulation of the Sympathetic.—Stimulation of Cardiac Ganglia.—Paralysis of the Vagus-roots and Fibres, and of its ends in the Heart.—Causes of Slow Pulse.—Irritation of Vagus-roots.—Mode of supplying the Head and Body with different kinds of Blood.—Indirect Irritation of Vagus-roots through the Blood-pressure: mode of lowering and raising it.—Reflex Irritation of Vagus-roots.—Indirect Irritation through the Respiration.—Irritation of Vagus-fibres.—Increased Conducting Power of Fibres.—Stimulation of Vagus-ends.—Paralysis of the Sympathetic.—Paralysis of the Cardiac Ganglia.—Part of the Ganglionic Apparatus Affected.—Nervous System in the Heart.—Motor Ganglia.—Stimulating Ganglia.—Inhibitory Ganglia.—Connecting Apparatus.—Action of Drugs on the Inhibitory Apparatus—Nicotia, Muscaria.—Antagonism of Atropia and Physostigma: bearing of this on Therapeutics.—Paralysis of Co-ordinating Apparatus.—Paralysis of the Muscular Fibres of the Heart.—Blood-pressure: mode of determining whether changes in it are due to alterations in the Heart or Vessels.—Elimination of the Action of the Heart: Division of its Nerves.—Irritation of Vagus.—Ligature of Aorta.—Artificial Circulation; in Mammals, in the Frog.—Observation of Vessels.—Action on Vaso-motor Centre; on Vascular Walls.—Influence of the Action of Parts surrounding the Vessels upon them.—Action of the Pulmonary Circulation on the Blood-pressure.—Use of the Sphygmograph.

IS THE SYMPATHETIC PARALYSED?—This is tested by cutting the vagi and dividing the spinal cord between the first and second cervical vertebrae, so as to exclude the action of those centres in the head which quicken the heart and raise the blood-pressure; the drug is then injected, and the sympathetic irritated by an induced current and the pulse counted. If it be quickened by the irritation, the sympathetic is not paralysed.

ARE THE CARDIAC GANGLIA PARALYSED?—To see whether or not the nervous structures contained in the heart itself are acted on by a drug, we must separate it from all other nerves passing to it from without, and prevent its being acted on by anything other than the drug, such as altered blood-pressure or temperature. This is done in mammals by dividing the vagi, the sympathetic cord, the depressor, and the spinal cord between the first and second cervical vertebrae. The heart is thus separated from the quickening and retarding centres, so that any alteration in its beats must be due to the nerves contained in its walls, or the muscular fibre of these walls themselves; at the same time the vessels are separated from the vaso-motor centre, and the heart is thus protected from the effects of any change in the blood-pressure, except the generally unimportant ones produced by the action of the drug on the vascular walls. The number and amplitude of the heart's contractions are then registered by a needle placed in the ventricle, and the blood-pressure by the manometer; poison is injected into the jugular, and the tracings taken afterwards are compared with those taken before. If we find that the heart-beats have become slower and weaker, while the pressure they have to overcome has not been increased, we may conclude that the motor nerves or the muscular substance of the heart have become paralysed. If the blood-pressure have risen, blood should be allowed to flow from an artery till it falls to its previous level, and then tracings should be taken with the needle for comparison with the previous ones.

The action of drugs on the heart can be studied still better in the frog than in mammals, as the heart of the former can be completely separated from the body, so that the drug can be applied to it alone. After its removal it continues to pulsate just as before, and, consequently, any action of the drug on the rhythm or force of its beats can be very easily noticed. The usual way of making experiments on this subject formerly was to take out the heart and lay it in a solution of the poison, or, what was better, to take two glasses containing solution of

chloride of sodium (half per cent.) and add a little of the drug to one of them. A frog's heart was then laid in each, and the beats of the poisoned compared with those of the unpoisoned one. Both of these plans are inferior to that of Ludwig, who supplies the heart with serum so as to keep it as nearly as possible in a normal condition, and attaches to it a manometer, so that it may itself register the number and form of its beats, and give more exact indications than could be obtained by merely looking at it. The apparatus which he and Cyon first used, and which is figured in his *Arbeiten* for 1866, has been considerably modified by Dr. H. P. Bowditch, and is shown in fig. 10. It

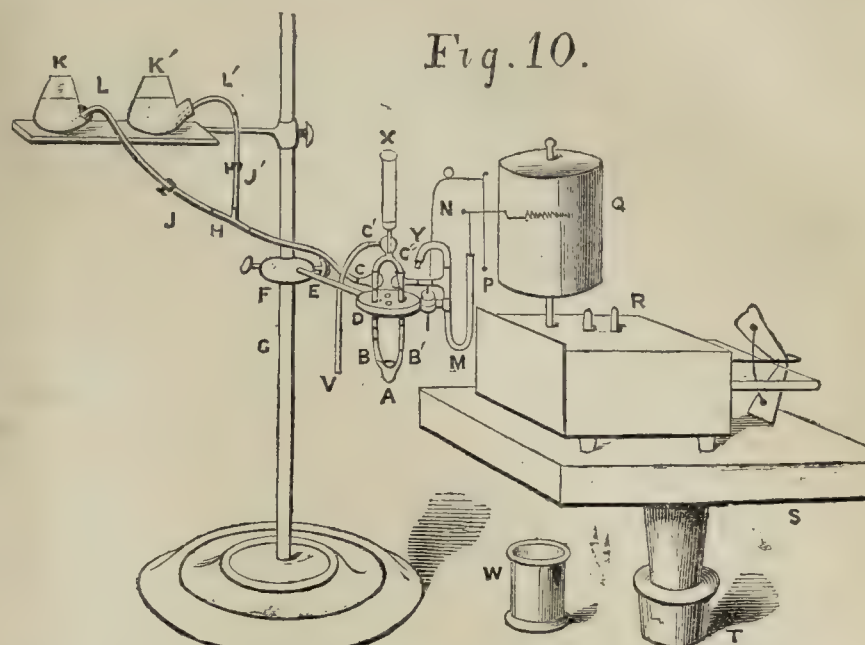


Fig. 10.—Dr. H. P. Bowditch's apparatus for experiments on the heart of the frog. A is the frog's heart. B is a cannula tied into the vena cava, and B' one into the aortic bulb. C, C', and C'' are three glass stopcocks. By C fresh serum is supplied, by C' old serum is let out, and C'' allows the communication between the bent tube B C' B' and the manometer M to be opened or shut at will. D is a glass plate through which the bent tube B C' B' passes. E is a rod ending in a ring into which D is fitted. F is a nut by which the whole apparatus can be moved up and down on the stand G. H is a T-tube. J and J' are two clips to stop the flow of serum from K or K'. K and K' are two fountain-bottles for supplying serum to the heart. K contains pure, and K' poisoned serum. L and L' are bent tubes which convey the serum out of K and K'. M is a small manometer. N is the pen or point which swims on the mercury. The horizontal part is made of glass; the vertical rod of esparto grass, with a small piece of sealing-wax at its lower end. The tracing may be made with ink, or with a dry point on smoked paper. P is a small weight which hangs by a piece of unspun silk from a bent wire, and keeps the pen resting on the paper. Q is the revolving cylinder. R is the clockwork, which is provided with one of Foucault's regulators. S is a table, which can be raised or lowered at pleasure, and fixed at any height by the screw T. V is an India-rubber tube through which the serum is emptied from X. X is a graduated tube into which the serum is allowed to pass after it has circulated some time. Y is an India-rubber tube, which is generally closed by a clip, but is opened when the apparatus is to be filled, or when we wish to let down the mercury to zero, in order to draw an abscissa. W is a glass vessel, which fits tightly to the under side of D, and protects the heart from external irritation. Into the two holes seen in D, tubes may be fitted air-tight, and the heart made to pulsate in an atmosphere of any sort of gas.*

consists of a bent glass tube (C C' C''), which is supported by a glass plate (D). The frog's heart (A) is connected to the ends of this tube by means of India-rubber tubing and two glass cannulae, one of which (B) is tied into the vena cava and the other (B') into the aortic bulb. The tube has three openings, each of which is furnished with a three-way glass stopcock. By means of one of these (C) it can be filled with serum from a reservoir (K or K'), and the stopcock may be so turned as to allow serum to enter the part of the tube above it, the part below it, or both together, or the communication with K may be shut off while the lumen of the tube remains open. By C', the serum which has been already used is allowed to escape, when a fresh supply is given, and C'' allows the tube to communicate with a manometer (M), on the mercury in which a fine pen floats and registers its oscillations on a revolving cylinder (Q). Each time the heart contracts, it drives the serum with which it is filled out of the ventricle, round the tube, and back through the vena cava into the auricle, and at the same time raises the mercurial column in M. The height of the curve traced by the pen depends very much on the amount of serum which the heart contains, being very much higher

* This apparatus is made by Geisler, Blume's Hof, Berlin. Mr. Hawksley, of Blenheim Street, Oxford Street, has adapted a bobbin and rollers to the revolving cylinder figured above, so that it will carry a continuous roll of paper, and may be conveniently used instead of the kymographion shown in Fig. 7. The instruments which I have already described as necessary for experiments, may be obtained from him or from Oswald Hornn, Schiller Strasse, Leipzig.

when the heart is full; and it must, therefore, be equally filled each time, or very different tracings will be obtained. For this purpose I use, as reservoirs for the serum, fountain-bottles, in the mouth of which it always stands at the same level, and, consequently, always fills the heart at the same pressure. One of them (κ) is filled with pure serum, and the other (κ') with serum to which a certain amount of the drug to be tested has been added.

For the purpose of introducing the cannula into the heart, the brain and cord of the frog are destroyed by a piece of wire, and the animal fixed on its back to a board. A v-shaped incision, with its apex at the lower end of the sternum, and its limbs extending upwards and outwards towards the fore-arms, is then made in the skin, and the flap turned back or cut off. The sternum is then removed in a similar way. The pericardium is next opened, the cut being made while the heart is contracted, so as to avoid injuring it. The apex of the heart itself is then turned upwards, and two ligatures are passed underneath a small vein which runs from its posterior surface to the pericardium. The ligatures are tied, and the vein is cut between them. The pericardium must now be removed entirely from the heart, and the vena cava superior and the right branch of the aorta tied. The vena cava inferior is carefully isolated; a ligature is passed under it; a short and wide cannula tied into it, and another into the left branch of the aorta. The heart is then cut away from the body. Both cannulae are filled with serum, and connected by India-rubber tubing to the ends of the tube $c\ c' c''$, care being taken to exclude air-bubbles. The end of the manometer nearest c is filled with serum by opening the clip at y , and allowing all the air and a little serum to escape. The clip is then replaced, and the heart allowed to beat once or twice, with the stopcock c and the clip j freely open, so that it may become full of fresh serum. The stopcock c is then turned so as to cut off the tube $c\ c' c''$ from all communication with κ ; and tracings are then taken, an abscissa or zero-line being drawn under each. The heart is next supplied with poisoned serum from κ' , and the tracings which it gives are compared with the normal ones. By slightly turning the stopcock c , a greater or less resistance may be opposed to the circulation of fluid, and the effects thus imitated which contraction or relaxation of the vessels would produce in the living animal.

Another apparatus has been invented by Ludwig, and used by Coats in his research on the vagus, in which there is no circulation, the serum being simply forced out of the ventricle at each systole, and falling back at each diastole. It gives, however, very good tracings of the number and form of the heart-beats, and is extremely well adapted for observations on the effects of drugs on the vagus. Its consists of a manometer, E , and a reservoir, A , with which the frog's heart is connected by two cannulae, D and D' . The frog's heart is prepared by destroying the brain and spinal cord, removing the sternum and fore legs, but leaving a large flap of skin, s , to cover the heart with, and then introducing a cannula into the vena cava and aorta, as in the former experiment. Instead of then cutting out the heart, the liver and lungs are removed, and the stomach is cut through the middle; and a glass tube, sealed at both ends, and as thick as the oesophagus will admit, is pushed through it till one end projects at the mouth and the other from the cut end of the stomach. The vagus is thus clearly displayed; and, in order to isolate it more perfectly, all other nerves should be cut away, as well as a part of the pharynx, so that no soft parts may touch it from its exit from the bone to the place where it crosses the aorta. From this point to the heart, it should be left untouched; and the jugular vein should not be tied, so as to leave it undisturbed. The glass tube, j , is then fixed firmly in a holder, L , and the cannulae, D and D' , connected with the reservoir, A , and the manometer, E . Instead of the reservoir A shown in the figure, it is perhaps better to use two fountain-bottles. The apparatus is used just like that shown in Fig. 10; and the heart should in this case also be filled so full that a certain tension exists within it even during diastole. The amount of this is shown by the height of the diastolic curve above the zero-line. When the vagus is irritated, the tension during the diastole sinks; but, if its inhibitory fibres be paralysed by atropia, which leaves its quickening ones unhurt, irritation has then the opposite effect, and the tension during the diastole becomes greater and greater till the heart may stand still in firm contraction.

WHAT PART OF THE GANGLIONIC APPARATUS IN THE HEART IS AFFECTED?—In dealing with this part of the subject, we tread on very unstable ground, for here pharmacology has almost run ahead of physiology; and even with our physiological knowledge of the nervous structures of the heart a great deal of speculation is mixed. We know that the heart contains ganglia scattered through its substance, but found in the greatest numbers in the septum between the auricles and in the auriculo-ventricular groove of the frog's heart, in which they have been chiefly investigated. As the heart, long after it has been

separated from the body, or the apex after it has been cut off from the ventricle, will still continue to beat rhythmically, the cause of the contractions must be contained in itself; and we assume the cause in each

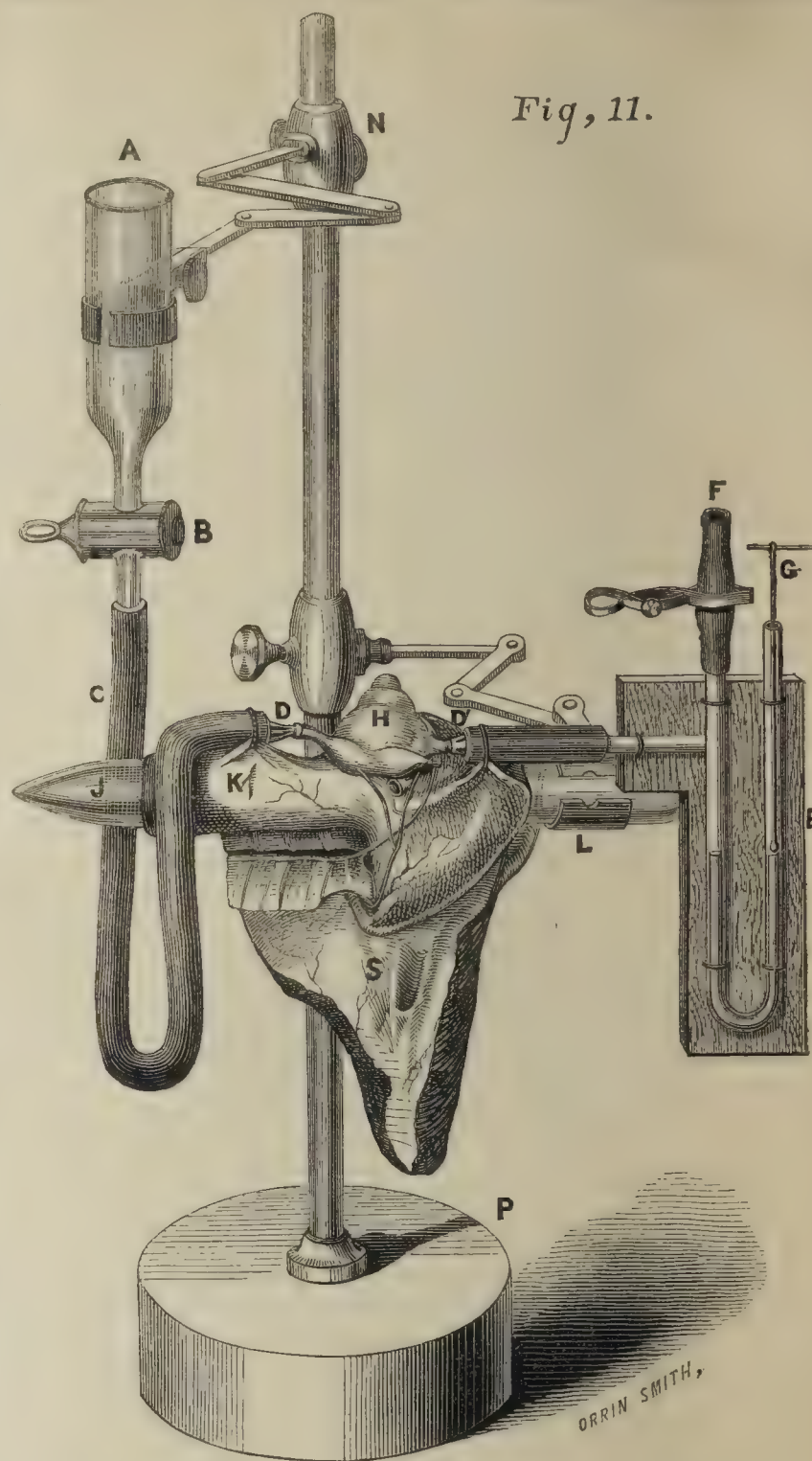


Fig. 11.—Ludwig and Coats' frog-heart apparatus. A is a reservoir for serum. B . A stopcock to regulate the supply to the heart. C . A piece of caoutchouc tubing connecting A and D . D . A glass cannula in the vena cava inferior. D' . Another in the aorta. E . A manometer. F . A piece of tubing closed by a clip, to allow of the escape of serum. G . A fine pen, floating on the mercury in E . H . The frog's heart. J . A sealed glass tube passed through the oesophagus κ , and firmly held by a holder L . M . A nut which allows L to be moved up and down. N . A second holder to support A . P . A stand with upright rod. Q . A flap of skin to cover the heart and prevent drying. v . The vagus.

part to be the cardiac ganglia, and suppose that they are connected by some apparatus which keeps them working harmoniously together, as the different parts of the heart all contract in a definite order so long as it is uninjured. Their action may be rendered slow or quick by nerves passing to them from without, both the retarding and the quickening nerves being contained in the vagus in the frog; while in mammals the retarding ones are found in the vagus, and the quickening ones chiefly in the third branch of the ganglion stellatum (or first dorsal generally joined to the last cervical), although some may also be found in the vagus.

Some physiologists consider that the function of all the ganglia is simply to keep up rhythmical movements in the heart. Others hold that only some of them, found chiefly in the venous sinus and ventricle,

have this function; while others are inhibitory, and restrain the action of the former. These inhibitory ones exist chiefly in the septum between the two auricles. The reason of this supposition is that, when the venous sinus is separated from the rest of the heart, it continues to pulsate; but the auricles and ventricles stand still. When the ventricle is cut off from the auricles, it begins to beat again, but the auricles do not; so that it would seem as if the motor apparatus in the venous sinus and ventricles together could overcome the inhibitory apparatus in the auricles, and keep the heart going; but that this is too strong for the motor ganglia in the ventricle alone, and will not let them go on till they are separated from it, or till it becomes exhausted, which it seems to do after a little, and then both auricles and ventricles begin anew. The physiologists who hold the simpler view, say that this stoppage is only due to the irritation of the vagus-fibres which run along the venous sinus, and that the renewed cardiac contractions are simply due to the irritation passing off. The pharmacologist, however, is not contented even with the more complicated of these mechanisms, but demands a still more elaborate nervous apparatus in order to explain the action of poisons on the heart. The necessity for this has been clearly shown, and a plan of the nerves drawn up, by Professor Schomiedeberg. This apparatus, as it is supposed to be, I have endeavoured to represent in the accompanying diagram. It consists of a ganglion, *M*, which keeps up a rhythmical contraction of those muscular fibres of the heart to which it is connected by the fine nervous filaments, *E*. This ganglion is connected by an intermediate apparatus with an inhibitory ganglion, *I*, which can retard or stop the muscular contractions which *M* produces; and by another apparatus, *C*, with another ganglion, *Q*, which quickens the contractions. *I* is connected by an intermediate apparatus, *A*, with the retarding fibres of the vagus, *V* and *D*, with the quickening nerves, *S*, of the heart.

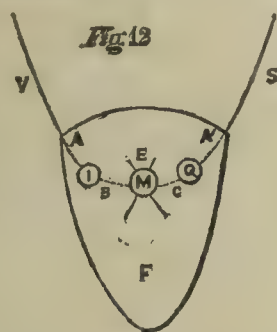


Fig. 12.—Diagram of the hypothetical nervous apparatus in the heart. *M*. Motor ganglion. *I*. Inhibitory ganglion. *Q*. Quickening ganglia. *V*. Inhibitory fibres; and *S*, quickening fibres from the head. *A*, *A'*, *B*, and *C*, intermediate apparatus. *E*. Fibres passing from the motor ganglia *M*, to the muscular substance *F*. For simplicity's sake only, one set of motor ganglia has been represented, but other similar ones are to be supposed to be present in other parts of the heart, and so connected with this set that they all work in unison. It must be remembered that this diagram is purely hypothetical; but if this be carefully borne in mind, the sketch will be found of service in remembering and comparing the action of different poisons on the heart.

INHIBITORY GANGLIA OF HEART.—We have hitherto included under the terms vagus-ends all the inhibitory apparatus in the heart; but, when we begin to experiment with the heart alone, we find that poisons which such experiments as have already been described would lead us to class together, as acting on the vagus-ends, really act on very different parts of the cardiac nervous system. Thus nicotia, when injected into the blood after the vagi and cord have been divided, renders the pulse slow; but this soon gives way to quickening; or, if the dose be large, quickening may occur at once; and, if we then irritate the vagus, we find that we cannot render the heart beats slow any more than we can after poisoning by atropia. We thus see that, after the irritation which nicotia first occasions in the vagus-ends has passed off, it paralyses them; and we might thus be inclined to think that they acted on the same structures. But, if we give nicotia to a frog, instead of irritating the vagus, we irritate the venous sinus; still-stand of the heart is at once produced; while, if atropia be given, it is not rendered slow at all—showing us that there is some inhibitory apparatus in the venous sinus which has been paralysed by atropia, but left untouched by nicotia. We may substantiate this conclusion by another and extremely useful method of investigation—viz., by administering another poison, and seeing how its action is affected by each of the other two. If we allow a little muscaria to reach a frog's heart, its beats become slower and slower, and at last cease altogether; the ventricles remaining widely distended, just as they would do if the vagus were strongly galvanised. If nicotia be then injected into the frog or mixed with the serum supplying an excised heart, no alteration is observed; and, if nicotia be injected before the muscaria, the latter poison stops the heart just as usual, although the

nicotia may have so paralysed the vagus that no irritation whatever applied to its trunk could act on the heart. But, if atropia be used instead of nicotia, the effect of the muscaria is at once destroyed, and the heart, which was standing quite still, immediately begins to beat. If the atropia be applied first, and muscaria given afterwards, it has no effect. Hence we see that nicotia has paralysed some part of the inhibitory apparatus farther away from the motor ganglia than that on which muscaria acts, while atropia has acted either the same part as muscaria, or some other one which lies between it and the motor ganglia.

Now, as the inhibitory effect produced by muscaria is not developed all at once, but goes on slowly increasing till it makes the heart stand still in diastole, it seems probable that its stimulating action is exerted on a ganglion, rather than on a nerve-fibre; and we therefore suppose that it acts on the inhibitory ganglion *I*. As the action of nicotia is exerted on something farther from the heart than *I*, our first idea is, that it must be the nerve-fibres *V*. But, on applying nicotia to the trunk of the vagus, after fixing the heart in Coats' apparatus, we find, on irritating the nerve above the point, that it still conducts impressions and causes stoppage of the heart; and so we are led to suppose the existence of an intermediate apparatus on which it acts; but, whether or not this intermediate part simply consist of nerve-fibres less protected from the poison than those in the trunk, we cannot say. As atropia destroys the action of muscaria, it may also act on *I*; but the fact that muscaria does not destroy that of atropia would lead me to refer the latter to a part between *I* and *M*, which is represented by *B*. Of what nature this part is, we know nothing; but that such a part exists, is rendered all the more probable by the mutual antagonism of atropia and physostigma. Although this latter poison renders the vagus very sensitive, so that the power of any irritation applied to its trunk to stop the heart is immensely increased, yet it has not the extraordinary power of producing stillstand of the heart possessed by muscaria. Unlike muscaria, however, it has the power of removing the paralysis of the vagus produced by atropia; and, though an additional dose of atropia will again cause paralysis, a second dose of physostigma will again remove it. This difference of action between muscaria and physostigma seems to show that they act on different nervous structures; while the mutual power that atropia and physostigma possess to neutralise each other's effects, indicates that atropia acts on the same structure as physostigma, and consequently on a different one from muscaria.

ANTAGONISM OF ATROPIA AND PHYSOSTIGMA.—Atropia and physostigma are thus physiological antidotes to each other; and Fraser has shown that a dose of physostigma large enough to kill an animal may be given to it with impunity, if atropia be administered along with it; and that the animal may be afterwards destroyed by a small dose given alone. It is true, they do not completely counteract each other's action, each one seeming to produce several effects, some of which, and these the most deadly, are neutralised by those of the other drug, while others are not so neutralised; and, if enormous doses be administered, those active effects which are not neutralised may become so powerful as to cause death, although they are comparatively unimportant when the dose is small.

IMPORTANCE OF THIS IN THERAPEUTICS.—Nevertheless, within certain limits these poisons do antagonise each other most successfully; and this observation seems to me to have a most important bearing on the treatment of such diseases as have their origin in morbid matter introduced into the system, for it shows that it is not always necessary to eliminate a poison in order to remove its effects, but that it may be neutralised and rendered innocuous while still present in the organism; and seems to indicate that, for the treatment of zymotic diseases, we should seek to discover such remedies as will counteract the effects of the poisons on which they depend, and not merely endeavour to quicken their elimination.

ACTION OF VARIOUS DRUGS ON THE INHIBITORY APPARATUS.—From experiments which he has made on the excised hearts of frogs with Ludwig and Coats' apparatus, Boehm has come to the conclusion that conia paralyses the terminal filaments of the vagus; nicotia the intermediate structure between them and the inhibitory ganglia; and that others, such as atropia, hyoscyamia, datura, physostigma, aconitia, delphinia, and veratria, diminish or destroy the irritability of the inhibitory ganglia themselves. It is rather extraordinary to find physostigma in this list; and it would thus seem that the pure alkaloid which Boehm used had a different action from the tincture used by Von Bēzold, unless it be that the result depends simply on a difference in the amount of the poison used.

[To be continued.]

ON HYSTERIA AND ITS INTERPRETERS.*

By EDWARD JOHN TILT, M.D., M.R.C.P.

THE multitudinous writers on hysteria may be divided into two groups: a comparatively small number of authors consider the word hysteria to be the miserable misnomer of a nervous affection that has no more to do with the womb than with the liver. This group is chiefly composed of more or less eminent men who have never been in the habit of examining women, and therefore know little about the diseases to which they are subject; who, indeed, freely say so, when we meet them in consultation or elsewhere, and who, nevertheless, with singular want of logic, deny that hysteria often depends on diseases of which they profess to be ignorant. On the other side, an imposing majority of writers do not think the old Hippocratic denomination so bad a name, provided it be well understood that the womb only acts by the power which it derives from the ovaries. These writers admit that hysteria is a nervous affection, but they also hold it to be generally caused by some kind of sexual stimulus, either physiological or morbid. This imposing majority comprises almost all those who have made diseases of women the study of their lives—the obstetric authorities of all countries and of all doctrines; and I think it is a very strong presumption in favour of a doctrine when it is held by two men so utterly opposed to each other on many points of uterine pathology as Dr. Robert Lee and myself. The same view is entertained by a host of men accepted as authorities on diseases of women, and who do not practise midwifery.

It is worth while examining what medical students are now taught by men who own they know nothing about diseases of women; and I will give a few samples from the writings of three writers in deservedly high repute.

For Dr. King Chambers, (*Lectures*, 3rd edition), hysteria is another word for "defective volition"; he tells his pupils that hysteria has no more to do with the organ of reproduction than with any other part of the human body; and that it is no truer to say that women are hysterical because they have wombs, than that men are gouty because they have beards."

Dr. Russell Reynolds, quoting from the best work on hysteria, owns that its author, Landouzy, found marked disease of the generative apparatus in fifty-eight out of sixty-seven cases of hysteria, and that in nineteen cases hysteria subsided so soon as the uterine disease was cured; and Dr. Reynolds adds: "but, so far as my experience extends, it is the exception, and not the rule, to find any definite malady, or, indeed, definite complaint in that direction; while in a vast number of cases, there has been absolute health in all particulars relating to the reproductive organs." (Article Hysteria, *System of Medicine*.) He admits, of course, that a disease of the womb may coincide with hysteria, just as disease of the liver may; but he believes it to be more commonly the effect of hysteria than its cause. I am at a loss to understand what this means, unless it be that the womb can be enlarged and ulcerated by hysteria—a position requiring explanation.

Dr. Handfield Jones (*On Functional Nervous Disorders*) teaches that hysteria is characterised by two factors—(1) mobility and excitability of the nervous system; (2) temper; but, in his chapter on hysteria, and in many parts of his valuable book, the complaint is evidently looked upon as the surrender of the patient's will to temper and deception; and he probably gives us his true opinion in a note at page 669, when he says: "A patient I call hysterical who magnifies her ailments; courts sympathy unduly; is selfish, absorbed in her own fancies and troubles; is unreliable or actually deceitful; and has undergone no serious bodily or mental shock or suffering that might occasion nerve-disorder." It seems to me this definition applies more to insanity than to hysteria, whereas the diseases are distinct, though the two may combine. It is surely wrong to teach medical students that hysteria is usually a more or less elaborate process of deception, to be cured when the patient likes by an effort of volition.

If I rightly understand Mr. De Berdt Hovell, who has paid great attention to the subject, he also considers hysteria to be a form of insanity independent of ovario-uterine causation. My experience has taught me differently; but I quite agree with him when he says that we must not "mistake the helplessness of nervous disease for moral guiltiness, and inflict sufferings on patients we were asked to cure." (*Journal of Mental Science*, vol. xiv, 1869.)

It is due to Dr. Russell Reynolds to state that no one has more forcibly insisted than he has recently done, in the columns of our

JOURNAL, on the present injudicious tendency to depreciate the value of the symptoms that can only be learnt from the record of a patient's inner consciousness, and to only attach importance to objective symptoms. It is, indeed, obvious that to found diagnosis exclusively on objective symptoms, is to treat human beings as if they were dumb animals, and to degrade medicine to the level of veterinary surgery. Could the advance of medicine require this, we should have no right to do so; for the art of healing must ever be partly built on faith, as are all arts that are founded on the relation of human beings one with the other. We must still continue to believe hysterical patients, unless we have strong proof that they are deceiving us or themselves; and when this is not the case, to let the relatives know that we do not believe an hysterical patient, is to sour her temper, damage her character, and perhaps irretrievably blight her future.

Such is the teaching of three of our foremost pathologists; and as a first fruit of their little acquaintance with diseases of women, I beg to remark that they seem ignorant of what is admitted by all gynaecologists, that menstrual disorders have a most potent influence to bring on hysteria. They neither deny nor admit this influence; they simply ignore it, as well as own belief in it. The state of menstruation is scarcely ever mentioned in the numerous cases they give, and they do not even seem aware that, by being able to note it as healthy, they would strongly substantiate their own hypothesis.

Neither do these pathologists notice the physiological basis on which rests our belief that diseases of the sexual organs will cause hysteria in women predisposed to it; I allude to the fact that some young women remain healthy until first menstruation; and that although this function be well performed, it brings on an attack of hysteria, because the nervous system is so badly tempered that it is, as it were, poisoned by the healthy stimulus of ovarian influence. They forget that connection has been repeatedly known to cause hysteria in women who had not previously suffered from it; nor do they notice the occurrence of hysteria in young and healthy widows, in whom matrimonial habits have been suddenly suspended, and in prostitutes on their first entering penitentiaries; nor that symptoms similar to the minor forms of hysteria have been noted in men who have given themselves up to masturbation; and also in others who, after having been accustomed to sexual intercourse, have successfully restrained strong desire by a sense of duty during a protracted courtship. They ignore these facts, and seem not aware that, in healthy subjects, the ovaries, like all other viscera, must be fed by their appropriate stimulus, under penalty of disease, sometimes assuming the hysteric type; and as it is thus correct to hold that perfectly healthy ovarian action will evolve hysteria in those predisposed to it, it will be easily conceded that the morbid condition of these organs may likewise do so.

You will ask how it is that some of the best men in the profession should teach such extraordinary pathology; but you will understand it by referring to two long and elaborate clinical lectures on "Hysterical Vomiting," by another most able pathologist, Dr. Hyde Salter, whose death we have now to deplore. In these lectures there was no intimation of the indissoluble connection of vomiting with the physiology and the pathology of the womb, and that vomiting cannot be called hysterical or nervous when it is explained by structural disease of the womb—facts to us so patent, that to attempt to discuss exhaustively hysterical vomiting, and not to mention them, is like omitting the part of Hamlet from the tragedy that bears his name. Nor was it stated that any examination had been made, although the subject of the lectures had many uterine symptoms; and when I wrote to say that this kind of pathology could not bear examination, Dr. Salter admitted, to a certain extent, the correctness of my strictures; and said he had forgotten to mention that he had asked the Physician-Accoucheur of Charing Cross Hospital to examine the patient, omitting to state what kind of examination had been made, for in such a case a digital examination could not be held sufficient.

Here we have a first-rate pathologist seriously at fault, because he lectures on hysteria without knowing anything of uterine pathology; and one of the reasons why he knows nothing of uterine pathology is that, in conformity with the established custom, he asks the obstetric officer of his hospital to examine the patient, instead of examining her himself. It is obvious that, until this form of etiquette is set aside, the men composing the staff of our hospitals have no opportunity of becoming acquainted with diseases of women; and I hope to convince you that this ignorance is a very serious disadvantage to themselves, to their patients, and to the profession.

In the first place, this ignorance of uterine pathology on the part of hospital men in good repute, tends not unfrequently to their misunderstanding the cases they meet with; and I confidently appeal to those who are engaged in consulting practice, whether they do not far too often meet with cases, in which serious uterine disease has been over-

* Read before the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

looked by men in high position, the symptoms being ascribed to hysteria; drugs being given when surgery was wanted; walking recommended when rest was required; and exertion enforced, instead of placid endurance of the inevitable. I shall merely mention a bad case of chronic inflammation of the body of the womb, with spongy softening of the cervix, frequent menorrhagic or purulent discharges, and a host of hysterical symptoms. This case had been attended for three years by several hospital men, who called it hysteria—spinal irritation; and for a well-known orthopaedist, now dead, it was a case of hysterical back; he had repeatedly blistered it, but no examination had ever been made.

It is obviously desirable that lecturers in public schools should be well grounded in knowledge of diseases of women, or they will not be able to interpret rightly the cases they meet with. For instance, Dr. King Chambers, in the work from which I have quoted, thinks he has triumphantly answered those who admit the womb to have part in the induction of hysteria, by stating that he had met with the disease in a woman who had no womb. He does not seem to know what we all admit: that the womb derives its power from the ovaries; that, the womb missing, the ovaries may be present; and that the presence of one of them is quite enough, in our hypothesis, to account for hysteria in anyone predisposed to it.

To be good leaders of our profession, men should certainly be well acquainted with uterine pathology, or they will be unable to correctly estimate the contending views held by gynaecologists. While in France, a Trousseau, a Chomel, and a Nélaton could give as good an opinion on an uterine case as Paul Dubois, I doubt whether any of our leading men would undertake to do so: indeed, with most commendable modesty, they always own to us their ignorance of uterine pathology, when we meet with them in consultation and in friendly intercourse. The public will not, however, believe in their ignorance, and insists on being guided by them. Their patients insist on their deciding respecting the relative merits, in their particular case, of applying leeches, caustics, and pessaries to the womb, or of leaving it without any surgical treatment whatever. Thus our leading men have to direct their patients as to where they can get most of one or the other of these modes of treatment, without sufficiently understanding their value in uterine disease, and without any knowledge of their adaptability to the case in point. Nothing would contribute more to the advance of all that relates to our branch of the profession than a good acquaintance with its pathology by our leading men; standing on neutral ground as umpires between us, they would exert a healthy control over extreme views, and put an early extinguisher on crotchets that menace to become too rapidly offensive.

Another great evil of hospital men observing the etiquette to which I have alluded, is that, by their example, they teach medical students that it is not possible or proper that the same man should know uterine affections as well as other diseases; and thus it happens that the men who sometimes preach most eloquently against specialism, teach the innocent students confided to their care that it will be impossible for them to embrace the whole range of medical science.

Without in the least undervaluing the part that we accoucheurs have taken in raising that already imposing structure that we now call gynaecology for want of a better name, we must remember that it was founded some fifty years ago by Paris hospital men unconnected with midwifery, of which Gendrin is now the only surviving link between the illustrious dead and a new generation of hospital men, who, like Huguier, Richet, Nonat, Bernutz, and many others, have never confined a woman since they were medical students. Such being the case in a neighbouring country, we may well look forward to the time when, in our own, hospital men will have a thorough knowledge of diseases of women, although they may not practise midwifery.

Is it not absurd that Mr. Jonathan Hutchinson, writing on Surgical Diseases of Women in Holmes's *System of Surgery*, should feel bound by etiquette to omit all that relates to cervical stricture, uterine ulceration, and a host of purely surgical diseases, upon which the judgment of a neutral and an accomplished surgeon, viewing them in the full light of comparative surgery, would have been invaluable? He might have imitated the late Dr. Addison, who wrote an excellent paper on Uterine Irritation; and who was led, by the study of uterine disease, to recognise it as the cause of hysteria. In a late number of our valuable JOURNAL will be found a striking instance of the advantage it is to an alienist to be well up in uterine pathology; for, in a lecture on Hysterical Mania, Dr. Crichton Browne does not hesitate to say: "As the result of large experience, I am satisfied that it is, without exception, preceded or accompanied by some derangement of the reproductive system, the existence of which is most frequently indicated by alteration and obstruction of the menses." (BRITISH MEDICAL JOURNAL, July 29th, 1871.)

Whatever may be the outcome of these suggestions, I trust, at all

events, it will be admitted that, no matter how deservedly eminent pathologists may be in other ways, if they claim ignorance of diseases of women, they are thereby placed out of court in all that relates to hysteria; and when they tell us that the disease does not more frequently coincide with uterine affections than with diseases of any other part of the body, the assertion has not the value of the paper on which it is written.

Turning now from pathologists who write of hysteria in ignorance of diseases of women, to those who are acknowledged to know them well and likewise diseases of the nervous system, I find certain interpretations of hysterical phenomena from which I decidedly dissent. For instance, there are men for whom hysteria is equivalent to lust. They lose sight of the twofold action of the sexual organs on the system. One mode of action, that begins at puberty to end with the ménopause, is incessantly progressing, although it may be modified by disease, as in chlorosis; whereas the mode of ovarian action productive of erotic desire is intermittent, and depends on many incidental influences. I have already admitted that the denial of their legitimate satisfaction to organs ripe for action in healthy women is a well known cause of hysteria for those who understand the nature of woman. Still hysteria is often observed when sexual desires are moderate; and I have met with it in women who loathe connexion, and in girls before sexual instinct had awoke.

Again, I have met in consultation men who call hysterical the actual symptoms of ovario-uterine affections, whereas every form and degree of these affections may be made apparent by their own specific symptoms, without ever bringing on hysteria, and can never do so without a special predisposition on the part of the nervous system.

Lastly, there are others who go on the principle of *omne ignotum pro hystérico*, and who call hysterical all symptoms and pain met with in women, when they cannot be accounted for by some definite local lesion. I think the term should be restricted to cases in which neuralgia or unaccountable phenomena coexist with, or intermit with, evident signs of hysteria, such as extreme nervous excitability, rapid or motiveless passage from tears to laughter and globus hystericus—the best single sign of the hysterical state.

After doling out criticism, right and left, pretty freely, it is fair that I should allow my friends like opportunity; so I will mention in a few words my views of hysteria. I think it requires two factors for its production—1. A predisposing nervous state; 2. The stimulus of some determining cause.

Of the predisposing cause, we may safely say that it must depend on that modification of the nervous system which makes the nervous system of woman more prone to emotion than her mate; otherwise how is it that the disease is in the main feminine, and only met with in men whose nervous systems are built on the feminine type? We moreover know that, although a disease of every climate and social condition, hysteria is most frequent in women of the upper classes of the civilised races, in whom emotionalism is intensified, at the expense of reason and self-control, by injudicious training in childhood, and the subsequent pampering that ill fits them for the trials of life. We can go no further than say that this undue action of the brain is the predisposing cause of hysteria. It may be that, in severe cases, this predisposition may be so strong as to be of itself sufficient to bring on the disease. At all events, we know that there are various degrees of intensity in this predisposition, and that the slightest determining cause will make some women hysterical. In a family with which I am intimate there are ten healthy children, whose parents are not in the least nervous; but a paternal uncle is insane; two maternal uncles died of delirium tremens; one brother has been epileptic from childhood; and a sister died of meningitis. Out of these ten children, two little girls—one seven, the other eight years old—burst into tears if they are looked at, if they are not placed as they like at table, and are not helped in their right turn. They pass rapidly from laughter to tears, which will flow for hours and very abundantly. They have sometimes globus hystericus. These symptoms have been repeatedly quelled by preparations of iron; but they occasionally return, and must be taken as evidences of the hysterical state, very likely to be followed by the worst manifestations of the disease on slight provocation.

With regard to the determining causes of hysteria, I must first mention those that intensify all nervous affections—debilitating influences like loss of blood, diseases, physical shocks, mental and emotional shocks, prolonged worry, and want of sleep. Neither should I omit the contagion of one hysterical nervous system on another predisposed to become so.

Coming to the most important causes of hysteria—those originating in the viscera—I will first remark that, as with our mental acts, so with our emotions, they are conceived in the brain; and that old physiology and the poetry of all times have erred in placing the actual

origin of our passions in our abdominal organs. Still universal consent shows how strongly they are acted on by emotion—that, in fact, in the viscera are the reflex centres of emotion that stimulate the nervous system to emotional acts.

If I have, therefore, been correct in ascribing hysteria to undue action of the brain as an organ of emotion, a potent cause of hysteria must be found in undue action of one or other of our viscera. It is, no doubt, wonderful that bodies shared by us with the lower animals should not only support the bodily structure, but, by their healthy action on the brain, give lucidity to the mind and warmth to the feelings, making genius more admirable and charity more godlike. This sounds like poetry, but becomes plain matter of fact when we remember how often anger has caused jaundice, and how frequently a host of distressing mental and emotional sensations are due to that state of liver and stomach derangement that we call biliousness, and which doubtless acts by deranging the functions of the neighbouring great ganglia. I have likewise seen repeated attacks of hysteria brought on by biliousness, and their recurrence prevented by such measures as are best calculated to prevent biliary derangement. Such cases are, however, very rare, when compared with those in which the determining cause of hysteria is an ovarian or uterine ailment. The statistics of Landouzy, Brierre de Boismont, and Dubois d'Amiens, as well as the recent assertions of Dr. Crichton Browne, show this to be the case; and those who deny it must bring forward similar masses of equally well digested facts.

What, then, are the diseases of the sexual system that cause hysteria? Not those in which the structure of the ovary and womb are almost destroyed—acutely, as in abscess of the ovary, slowly, as in ovarian tumours and uterine cancer—but, as a rule, the mildest forms of anæmic ovarian uterine disease; showing that it is not the intensity of the disease that causes hysteria, but the fact of its coincidence with a nervous system prone to become hysterical. Thus hysteria is most frequently caused by those limited ovarian lesions that I have described as sub-acute ovaritis, lesions depending on morbid ovulation, and that frequently pass unrecognised under the disguise of diseases of menstruation. Of uterine affections, it is chiefly the milder sort—that are mucous membrane deep—which cause hysteria; and sometimes, by applying nitrate of silver to an ulcerated cervix, we most unwittingly bring on an attack of hysteria, in patients who presented no signs of its being likely to come on, and thus experimentally prove that the two complaints may stand in relation as cause and effect. On one occasion, I thus brought on an attack in a lady, who had never before had one.

How is the brain, laden with emotion, to be brought into contact with the viscera, the reflex centres of our emotions? The late Dr. Todd thought that hysterical delirium and other hysterical phenomena might be explained by toxæmia resulting from retained menstrual blood; but hysterical phenomena frequently arise before there is any menstrual blood to be retained; and Dr. Handfield Jones agrees with me, that with hysteria, as with other neuroses, there is no blood-poisoning. The distance between the brain and the viscera, between mind and appetite, is bridged by the ganglionic nervous system, which unites the viscera by a federal bond of union, and places this federation in intimate connection with the cerebro-spinal system. When the ganglionic nerves transmit healthy impressions to the brain, they pass unnoticed; but a hysterical fit shows how differently nerves and ganglia act when visceral action is more or less diseased.

In many hysterical fits, after a period of incubation, in which the system seems to become more and more charged with excitement, the attack begins by pain in the womb and ovaries. Soon the hysterical aura passes to the epigastric ganglia, and, concentrating there, gives rise to the suffocation and distress characteristic of the disease. Ascending still higher, the hysterical aura reaches the cervical ganglia, producing the sense of strangulation; it then attacks the brain, deranging its functions in ways too numerous to be mentioned, and, at the same time, deranging more or less the functions of the spinal cord, according to the degree of tension of the hysterical aura. For a time pain will thus concentrate—sometimes in the brain, sometimes in the visceral ganglia—and the patient collapses into prostration when the system has been sufficiently relieved by convulsions and by critical discharges. It has been possible, in cases published by Romberg and Schulzenberger, to produce the succession of phenomena just described by simply pressing on the ovaries; and I have repeatedly brought on unconsciousness in a nervous patient of mine by pressing the left ovary.

It seems to me I have shown the following points in this paper. 1. To be efficient leaders of the profession and lecturers in our public schools, our hospital men should be thoroughly acquainted with diseases of women. 2. Whenever a patient is hysterical, the state of menstruation should be carefully ascertained, and the sexual organs should be

accurately examined if they present signs of disease. 3. The best way for neurologists to disperse the clouds that still overhang our knowledge of hysteria and its allies, catalepsy and epilepsy, is for them to study the diseases of the ganglionic nervous system.

ON A NEW FORM OF ELEVATOR FOR DEPRESSED CRANIUM IN CHILDHOOD.

BY FREDERICK WATERHOUSE, L.R.C.P. Lond., and
M.R.C.S. Eng., Bolton.

It is a fact well known to us all that, in childhood, irritation of the nerve-centres, proceeding merely from the periphery, often incites severe functional disturbance, whereas direct traumatic violence to the brain may be sustained without much perceptible derangement. To this pathological paradox our treatment of cranial injuries by non-interference is chiefly owing. Except in punctured fractures, we seldom proceed to operative measures, unless the most urgent symptoms demand them; and although there seems to be a gradual reaction setting in, after the period of non-intervention, brought about by the vigorous opposition of John Bell, Abernethy, Liston, and others, to the absurd system of perpetual trepanning, the injury which we inflict by the use of our present instruments often renders our interference unjustifiable.

In reference to the effects of injuries of the head, one fact seems to thrust itself prominently forward, as claiming more consideration from us, as surgeons, than it appears to have hitherto received. We cannot look over a work on psychological medicine without being struck with the number of cases, where the cause of various cerebral disorders, from epilepsy to insanity, is referred to cranial injury received at a period often long antecedent. Mr. Solly, twenty years ago, delivered a very instructive lecture on this subject at St. Thomas's Hospital. An interesting paper, read by Mr. Anthony Bell at the meeting of the Association in Newcastle, bears upon this point. Bucknill and Tuke, and Forbes Winslow, all recognise the gravity of these injuries in their ultimate effects. Indeed the latter, at page 563 of his work on *Obscure Diseases of the Brain and Mind*, says:—"Do we estimate in a manner commensurate with its grave and vital importance, the necessity of watching, with the most scrupulous care, the cerebral symptoms that follow all mechanical injuries of the head? I am satisfied that a vast amount of organic, chronic, incurable disease of the brain and disorder of the mind, can be directly traced to this cause." And again, he says that, after an injury to the head, "the patient recovers without any apparent inconveniences from the injury; but subsequently, head-symptoms exhibit themselves, clearly the consequence of the injury which the brain has sustained many years previously. I am satisfied that the importance of this subject cannot be exaggerated. Repeatedly have I had under my care, cases of epilepsy bidding defiance to all treatment, tumours, abscesses, cancer, softening of the brain, as well as insanity in its most formidable types, whose origin could unquestionably be traced back for varying periods of one, two, five, eight, ten, fifteen, and even twenty years, to damage done to the delicate structure of the brain by injuries inflicted mechanically upon the head."

The character of these injuries, then, being much more grave than we as surgeons are led to suppose, their method of treatment claims proportionate consideration at our hands. Let us briefly take in review—

1. The various forms of depression to which the cranium is liable; and

2. The different instruments which we possess for their remedy.

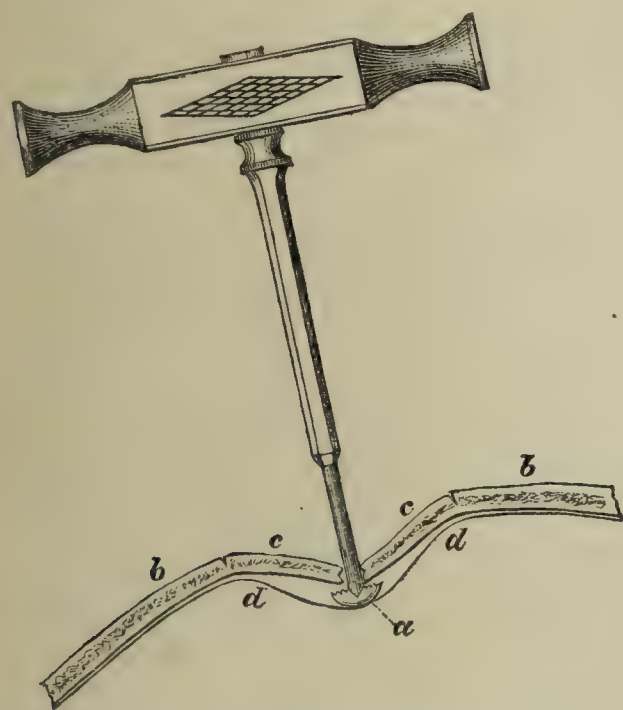
Depression of any part of the vault of the skull may occur at all ages, but there are peculiar features or conditions which can be presented only at certain periods. 1. In early childhood we often meet with depression without fracture, or the skull is simply bent in. 2. As age proceeds, the bending in cannot occur without fracture; the bone is not detached, but fissured or fractured, depressed or curved in. 3. At maturity there can be no bending; but, if there be depression, there is detachment of fractured bone.

It is to the character of the depression of the second period in particular that I wish now to draw your attention, as being the period during which injuries of the head are, I believe, not only most common, but during which the class of cases mostly occur to which this instrument is best adapted. It extends from the fourth to the fifteenth year, varying of course in different parts of the skull. The variety of fracture accompanying the depression may range from a mere straight fissure to a stellate fracture, in which each triangular piece of bone is depressed at its apex, and still undetached from the sound bone at its base. Splintering of the inner table, which would doubtless be the re-

sult of such an injury in adult life, seldom happens at this period, on account of the toughness of the osseous structure which also allows of its curving in. The immediate effects are usually overcome without operative measures, and the expectant method of treatment is therefore that generally adopted.*

With respect to the second point—viz., the instruments we have for the treatment of cranial injuries, I may mention that Dr. W. Newman (BRITISH MEDICAL JOURNAL, 1868, vol. i., p. 23), describes those used during the time of the Roman empire; and we do not seem to have much improved upon them. The “modioli” of Celsus and the “cyclici” of Galen were different kinds of trephine. The ancient “terebræ” have representatives in our modern necrosis-case, which is doubtless the best place for them. “Lenticulares” for smoothing the rough border left by the trephine, and “raspatories” for scraping off the pericranium, are still to be met with. In Rees’s *Cyclopædia*,† published fifty years ago, you will find drawings of many surgical instruments; and the great importance which was then attached to the operation of trepanning is shown by the great number devoted to this subject. Trepan and elevators with tripod stands are not the least formidable-looking weapons.

The power of the screw and the lever are both called into requisition, for the purpose of raising the depressed bone. Paré describes saws like the one introduced by the first Hey of Leeds, which is the most valuable addition we have had for some time to this department. These, I believe, are the principal instruments which have been invented. Elevators on the suction principle have been suggested, but would, I think, be ill-adapted, and unwieldy.



The Elevator, half size; Blade and Cranium, full size.

a. The blade serrated on its upper border. b b. Sound cranium.
c c. Depressed cranium. d d. Dura mater.

The instrument‡ here shown is not intended to supersede the ordinary elevator, but to be used in cases where that instrument is inapplicable. For instance, in the second form of depression which I have described, only one side could be raised, unless an amount of calvarium be sawn away, which would doubtless never be replaced. The trephine is of course sometimes necessary in desperate cases; but, like amputation, it is a *dernier ressort*. I do not know what effect on the equilibrium of vital power the shock of removing a circular piece of sound cranium may have: it cannot be *nil*, nor can you consider the operation conservative surgery.

This elevator may be in several forms: one can enter the diploë (if there be any), and thus draw up the bone without entering the cranial cavity at all; the others are inserted between the bone and the dura mater, but do not press upon the brain, if properly made, any more than the ordinary instrument.

When it is to be used, the end is inserted in the fracture (Hey’s saw may sometimes be wanted); by half a turn it is brought at right angles

with the fissure. The bones on each side are drawn up at the same time; the elevator is brought to its original position and withdrawn. Should the edges of the fractured bone tightly embrace the neck of the instrument, it can saw its way out by means of the serrated edge on the shoulders of the blade. This leaves a small aperture, which will afterwards be replaced by bone, whence pus, blood, etc., may issue.

The advantages of this instrument are: 1. Its simplicity of management; 2. It elevates the bone on each side at once; 3. It requires no fulcrum; 4. It can injure no vessels or other structure; 5, and lastly, whilst allowing a sufficient aperture for the escape of fluids which might compress the brain, it takes away none of the natural protecting case of that organ, so that hernia cerebri becomes an impossibility.

In conclusion, if I have succeeded in establishing for the instrument I have designed all the advantages I claim for it, and thereby lessened the risks of operative interference in cranial depression of childhood, I may venture to predict a treatment of these cases, more philosophical and consistent with the dignity of surgery as a science, than that of leaving their cure to Nature alone, with the danger of the future development of many mental and physical disorders, to which so delicate an organism as the brain must ever be liable, when called upon to perform its functions under adverse and abnormal conditions, however much it may have accommodated itself to them. Nature herself, whilst re-establishing continuity in skull-fracture, throws out no provisional callus; but, rather than press upon the brain, leaves it unprotected until the slower process of union by definitive callus can be accomplished. Ought we not, therefore, to take a lesson from her, and use every means in our power, consistent with discretion, to restore the structures to their normal position, and thus hasten repair?

THE USE OF SETONS IN THE TREATMENT OF STRUMOUS DISEASES.*

By EDWARD CROSSMAN, L.R.C.P., Hambrook.

I HOPE I shall not unprofitably occupy a few minutes this evening in directing the attention of this meeting to a class of therapeutic agents which may well claim consideration in virtue of its antiquity. I can probably add nothing to what is well known by all here present, but may hope to stimulate some to place more reliance on a remedy which, though well known, is, according to my observation, but seldom used in the treatment of disease.

I shall not trouble you with the pathology of scrofula, or *struma* (the more euphonious word). It will be sufficient for my purpose to say that struma is a state of constitution characterised by the formation and deposit of a peculiar solid material in various organs and structures of the body; that this material is an excretion from the blood, and is the result of defective or perverted elaboration.

In simple inflammation we use sinapisms, or dry cupping glasses, to draw the accumulated blood from the congested part towards the skin. If depletion be necessary, we raise a blister, by which not only is the blood drawn towards the skin, but a quantity of its serum is evacuated. In these instances a temporary derivation only is required; but in struma a morbid material is slowly and continuously formed in, and deposited from, the blood; and, while we endeavour by remedial measures to check the tendency to reproduction, it is necessary to provide an outlet by which the system may be freed from the excrementitious matter. Such I take to be the simple explanation of the action of setons and issues. They do not belong to the class of counterirritants, but to that of evacuants; and, regarding them in this light, I have used them in a large number of cases with the happiest results.

Few writers on strumous diseases fail to mention setons or issues among the various remedial measures; but mention is made of them in a cursory manner, and without that stress being laid upon their employment which, in my experience, it deserves. Moreover, they are generally described as applicable only to the early stage of these diseases, while in my opinion they are equally serviceable in the climax.

The wife of a farmer—one of an eminently strumous family—had during two years consulted various medical men, and, immediately before consulting me, had received her death-warrant from a leading physician. Her left lung contained a large cavity; the right was universally crepitant; and she had had several attacks of hæmoptysis. I was not consulted with any hope of cure; but, as she had come home to die, I was called in to watch her end. In this case, from the time when I put a seton in her chest, she began to mend. One set of silks having cut their way out, I put in another; and for six months a continuous

* In looking over the cases recorded during the last twenty years, to which I have been able to get access, the greater fatality following injury over the left parietal region, as compared with other parts of the skull, has struck me as being remarkable, especially when remembering the pathology of aphasia.

† In the technical department, it is still the most complete work ever published.

‡ Maw, Son, and Thompson, Aldersgate Street, make these instruments.

* Read before the Bath and Bristol Branch, October 1871.

discharge was kept up from the skin, with so happy a result that, fifteen months later, I attended her in a confinement, and she has lived six years since.

A young woman, aged 19, presented herself to me, with extensive tubercular disease of both lungs, which had been running a constantly progressive course for more than two years. She was extremely emaciated, had profuse perspirations, and her legs were oedematous. Her case was one of advanced tubercular bronchitis. I put a seton of six silks in her chest, and at the end of a fortnight the symptoms began to abate. She wore the seton three months, by which time her cough had nearly ceased, and her expectoration was *nil*. She then pressed me to remove the seton, and, upon inquiring the reason of her urgency, she informed me that her banns had been twice asked, and she intended to be married the following week. She was married to a worthless fellow, who used her very badly; and, after an interval of eighteen months, I was called on to attend her in an attack of acute tubercular pneumonia, under which she soon sank.

I will not weary you with the details of cases. My memoranda supply me with the records of thirty-five cases of confirmed phthisis in various stages, in thirty-two of which marked benefit was derived from the employment of setons, while in three the seton was removed without benefit. In none of these cases had I reason to regret the introduction of the seton: emaciation and debility were not increased by the discharge from the skin, but, on the contrary, their progress was arrested *pari passu* with the diminished discharge from the lungs.

Passing to another variety of strumous disease—*strumous ophthalmia*—an issue or seton in the temple is the most effectual remedy, and often the only means of stopping the progress of the disease. Probably in the present day setons and issues are used more often in the treatment of strumous ophthalmia than in that of any other disease; and I take it that it is so because their remedial power can, in the eye, be actually seen and appreciated.

It is not only in the true strumous ophthalmia, attended with corneal ulceration, that setons are of service—they are equally so in all those minor affections of the eye and its appendages which take their origin in a strumous diathesis.

For the relief of an eye-affection, the seton is usually placed in the temple; but a serious drawback to its use in this situation is the scar which it leaves. I find that, placed in the arm or any convenient part of the body, it has an equally good effect.

Some ten years ago, a girl was under my treatment for many months in consequence of frequently repeated attacks of strumous cornetitis. Having failed to eradicate the constitutional tendency by medicines, I put a seton in each temple. The result was a complete cessation of the disease; but, having to earn her bread as a nursemaid, she was naturally anxious to get rid of a disfigurement which prevented her from taking a situation, and, contrary to my advice, removed the setons at the end of a month. Not many weeks afterwards, exposure to cold wind brought back the disease, which again assumed a remittent character. Being in a situation at a distance, it was only when compelled to return home that she again became my patient. I then introduced a seton of six silks into her arm, and kept it discharging the whole winter, during which time she was entirely free from the eye-affection, and has never had a serious return since.

A young gentleman seldom passed a month or six weeks for several years without an attack of strumous conjunctivitis. Being first at a private school, then at Eton, and latterly in London, he had been subjected to various plans of treatment. The attacks yielded sometimes to leeching, sometimes to blistering, and at other times to sedative applications; but exposure to cold wind or damp air always induced a recurrence. At last I persuaded his friends to allow me to put a seton in his arm. The suppuration was so severe at first that I had great difficulty in inducing him to retain it; he did so, however, and by degrees the fungoid granulations which had sprung up round the points of insertion disappeared, and a healthy suppuration was established. From the time the seton was inserted the ophthalmic attacks ceased; during the three months he wore it they did not once recur; and for three years since he has had but the most trifling threatenings of his old malady.

Two years ago, a younger brother of the same family was threatened with the same affection. I immediately put a seton of one silk in his temple and stopped the disease, and he has had no recurrence.

A third form of strumous disease, in which I have used setons with great advantage, is tubercular meningitis. My attention was first directed to the beneficial effect of a discharging surface in this disease by a case which occurred to me, in company with the late Dr. Symonds, soon after I commenced practice. A child three years of age, apparently in the last stage of hydrocephalus, was accidentally scalded on the chest, and a large suppurating surface was the result. Dr. Symonds

was fully persuaded that the case was hopeless, and was equally convinced, when the child recovered, that the extensive suppuration turned the balance in its favour. Since then I have treated a considerable number of cases of this disease by the introduction of a seton in the poll, and am fully persuaded that, when the attack is sufficiently prolonged, the establishment of a free discharge offers the best hope of cure.

There is yet another form of struma in which I have used setons with advantage—viz., chronic glandular enlargements. I have found obstinate enlargement of the axillary glands yield to a seton in the arm, or below the clavicle. A seton above the clavicle or in the arm will facilitate the removal of enlargement of the cervical glands; and not long since a most obstinate enlargement of the inguinal glands, which for many months resisted all treatment, eventually yielded to a large seton in the arm, kept discharging for eight weeks. Lastly, I may mention chronic strumous ulcers as curable, when other means fail, by a discharge established at a distant part of the body.

I have avoided extending this paper by the narration of cases, and have omitted the mention of any concomitant treatment. I would not have it supposed on this account that I advocate the use of setons to the exclusion of other remedies. I apprehend the part the seton plays is that of evacuant—distilling, as it were, from the blood the morbid material. It remains to check the reproduction of this material by catalytic remedies.

My apology for calling the attention of this meeting to a subject which is probably so familiar to all present, is the very good result which I have experienced in my own practice from its employment.

A SUCCESSFUL METHOD OF TREATING CERTAIN CASES OF DYSMENORRHOEA AND STERILITY.*

By PROTHEROE SMITH, M.D.,

Senior Physician to the Hospital for Women, London.

To treat of the subject of dysmenorrhœa generally, the time to which I am restricted would be insufficient. I shall, therefore, now only speak of that form of the malady which is the result of abnormal constriction of the uterine canal, and which also frequently presents a mechanical obstacle to pregnancy. With this condition, known as obstructive dysmenorrhœa, we are all more or less acquainted, since it is of frequent occurrence amongst the unmarried and the sterile.

The lumbo-abdominal distress, the bearing down and forcing uterine effort immediately preceding the menstrual flux, and the experience of relief when it is established, with the constitutional debility which follows, with consequent neuralgic headaches and pains in the hypogastrium, sufficiently characterise the disease; while chronic and long standing, pains in the *bas ventre*, especially on the left side, continual backache, tenaceous leucorrhœal discharge, with an aggravation of constitutional disturbances, mark the progress of the malady. The diagnosis, however, is complete when, by touch and uterine sound, the constriction of the canal is proved. This condition was described by Dr. Mackintosh, of Edinburgh, in 1844, who proposed as a remedy the use of bougies, so as gradually to effect the dilatation of the straitened passage. This plan of treatment was frequently attended with success, and was, about the same time, modified and improved by the late Sir James Simpson, who used metallic stems two inches and a half long, having a button or bulbous end, by which these "short sounds" were retained and secured. Such means, at times, seemed to answer; but, unless pregnancy soon followed, the constricted parts of the uterine canal resumed their abnormal condition, and called for a repetition of the treatment.

In Dr. Black's excellent edition of the *Selected Obstetrical Works of Sir J. Y. Simpson* (vol. i, p. 679) published this year, is the following paragraph.

"At a meeting of the Edinburgh Obstetrical Society, March 10th, 1847, Dr. Simpson stated that he had now been in the habit for three or four years past of performing the operation of incision of the cervix uteri for obstructive dysmenorrhœa. He first described the operation to the Medico-Chirurgical Society in 1844, and it had latterly been adopted by Dr. Rigby, Dr. Protheroe Smith, Dr. Oldham, and other accoucheurs in London and elsewhere."

The instrument used by Sir James was a kind of *lithotome caché*, by which he divided the strictured part, the incision commencing at the union of the cervix with the body of the uterus, and passing more and more into the substance of the cervix as the instrument was withdrawn, and so dividing its lower edge.

In the year following, I had a double hysterotome constructed in

* Read in the Midwifery Section at the Annual Meeting of the British Medical Association in Plymouth, August 1871.

Paris, with two blades cutting laterally; and Dr. Greenhalgh subsequently contrived a very ingenious instrument of this description, by which he proposed to gauge accurately the extent of the incisions on both sides. Dr. Black, however, observes that—"In consequence of the gratifying results sometimes produced by incision of the cervix uteri in obstructive dysmenorrhœa and sterility, that operation became an extremely favourite one with Simpson. Certain risks connected with it, however, and, in particular, its liability to be followed by pelvic inflammation, inclined him ultimately to a rigorous selection of cases, and to the enjoining of recumbency for several days after the performance of the operation."

Stimulated by Sir J. Simpson's favourable opinion, for some time I followed this mode of treatment; but the results, as regards the removal of dysmenorrhœa and sterility, were not such as to convince me of the advantage of its general adoption. On the contrary, in several instances, severe metrocœlitis occurred, together with considerable hæmorrhage, requiring the plug to control it. In others, the painful menstruation was unrelieved, and the patient remained sterile. My objection, however, to the use of the hysterotome was confirmed by observing that, in several instances, it had aggravated the evil; for not only did the patient continue barren, but the original constriction was increased, and, with this straitened state of the uterine canal, the consequent distress was augmented. The pathological condition I discovered by the use of sea-tangle tents. The first case which yielded this information to me was one in which Sir J. Simpson had performed the operation some years previously. For a time, after recovery from its immediate effects, relief from the distressing symptoms was experienced by the patient; but after a short time the dysmenorrhœal sufferings returned, and, as they gradually increased in severity, she was led to consult me. Finding that the uterine sound could be passed only with extreme difficulty through the os internum uteri, I introduced a small sea-tangle tent, which, on the following day, I had considerable difficulty in withdrawing. It was only after continued traction, kept up steadily for nearly twenty minutes, that this was accomplished. When removed from the grasp of the cervix, its form explained the difficulty. At an inch and a half from its proximate end, the tent was not altered in form from its size before it was introduced; whilst above and below this narrow waist, it had swollen to its utmost extent; from this compressed part ran a narrow groove on each side, evidently showing that, at the constricted os internum, as well as longitudinally on each side, there existed unyielding tissue, not only at the points of the original stricture, but also at lines corresponding with the wounds made by the hysterotome, which led me to the conclusion implied in these remarks—viz., that the deep grooves and the longitudinal furrows were the impression of hard cicatrices, the effects of the previous operation. Seeing that the result of incising the cervix, if successful in enlarging the canal, must be to destroy the perfectness of its structure to the extent of the tissue divided by the hysterotome, or that, if rendered unsuccessful by the healing of the wound, it might leave the patient worse than before, from the hardened cicatrix which might follow the operation, I soon adopted a course which I have pursued for many years with a success which encourages me to hope that its announcement will be acceptable to obstetric practitioners generally.

In my lectures, at the commencement of this year, on Flexions, Torsions, and Displacements of the Uterus, at the Hospital for Women, I observed that, "finding sterility and dysmenorrhœa were often benefited by dilating the cervix uteri by the bougie, after the manner advocated by Dr. Mackintosh, and with a view of improving upon the plan suggested, I got Messrs. Fergusson, instrument-makers to St. Bartholomew's Hospital, to make me in 1841 the instrument I now exhibit, after the model of Heurteloup's lithotrite, by which the extent and direction of the uterine cavity was easily measured, and a constriction in any part of the passage as readily overcome." With this uterine dilator, I conceived it might be practicable to dilate permanently the constricted os internum, and afterwards, when necessary, to give the normal shape to the os tincæ by dividing it laterally at the commissures of the labia uteri *per speculum*. I have now adopted this mode of treatment for more than a quarter of a century; and although, in some instances, I have failed to cure, yet I have succeeded in so many others, that I feel warranted in advocating its adoption in the selected cases in which it is eligible. To diagnose such, it has been my custom to ascertain from the history of each case, as well as by a careful physical examination of the uterus, that it is one simply of stricture of the os internum, and narrowing of the cervical canal and mouth. But should there be any inflammatory condition, whether of the mucous lining or of the deeper tissues of the uterus, or any thickening or induration of these parts, it is essential to success, however tedious the process may be, to remove such morbid conditions before adopting the *extension forcée*, by which the stricture is to be overcome.

The plan which I then pursue is, first to prepare the patient by a purgative dose, and by abstinence from local excitement, and from alcoholic drinks, or much animal food. When hyperæmia exists, I scarify laterally the labia uteri repeatedly at the commissures of the labia, by which the vascularity of the organ is reduced, and the shape of the os tincæ, when constricted, is improved. After accustoming the uterine canal to bear a metal bougie, which should be repeatedly and daily introduced, and increased in size until that of a No. 10 catheter can be borne without any pain, then the uterine dilator may safely be employed. It will be seen that this instrument consists of two short blades, two inches and a half long, the inner being continuous with the sliding shaft, with which it is nearly at a right angle, having at its proximate end a screw worked by a nut so as to mark precisely, by an index on the handle, the extent of dilatation employed. This should be used at first cautiously about every second day, always ceasing to screw as soon as pain is experienced. This is immediately relieved by a turn or two of the screw the reverse way.

It will be found, in a short time, that the uterus becomes accustomed to the dilatation, when it may be employed to a greater extent; and in the course of a few days or weeks, as the case may be, a forced dilatation to the extent of an inch or an inch and a half may be used with impunity. After this it will only be necessary to use the dilator daily for two or three days, and afterwards at longer intervals, to keep the parts open till they permanently heal in the state of distension effected by the operation.

Should any congestion or inflammation result, scarifying at the commissures of the labia will relieve by free bleeding, whilst, at the same time, the os tincæ is made to assume a more open, and, therefore, a more normal shape. I prefer, generally, to effect this by the repeated use of a small scimitar-shaped knife, as I find that by so doing the risk of inflammation is diminished, and it prevents cohesion of the cut sides of the labia uteri, both which accidents occasionally attend the operation when performed at once by a hysteratome. When preternatural shortness of the uterus, from original malformation, exists, the operation is contraindicated; also when stricture depends on endometritis; when, otherwise, metritis or metrocœlitis is present; when there are fibroid tumours causing inflammatory adhesions; when dysmenorrhœa is characterised by deciduous membranes; when there are conical hypertrophy and elongation of the cervix; when there is globular enlargement of the anterior labium uteri, embraced by the posterior lip in the form of a crescentic membrane; and when displacements and dislocations of the organ complicate the case—these and all other organic diseases which may attend this malady should be removed prior to the adoption of forcible extension by the dilator.

Time would fail me, were I to attempt to illustrate these remarks by a review of all the cases in which I have employed this mode of treatment. It must here suffice to remark that, I have seen this practice followed by complete success in many instances, from amongst which I would quote the following extreme, but successful cases of dysmenorrhœa and sterility, treated by forcible extension and incision of the labia uteri.

CASE I.—A lady, aged 41, after sixteen years of married life without pregnancy, has since given birth to two children.

CASE II.—A lady, aged 37, her husband hemiplegic from his youth, married thirteen years without family, and now has a living child.

CASE III.—A patient, aged 39, married twelve years, and barren, became the mother of a living child.

CASE IV.—The wife of a clergyman, aged 28, having been sterile for six years after marriage, was delivered of a living child.

CASE V.—A resident in a distant colony, married fifteen years, and barren, aged 38, became pregnant, but miscarried, in consequence of over-exertion at the second month of utero-gestation.

CASE VI.—A delicate lady, aged 29, married nine years, but never pregnant, became so, and had a living child, followed by a second two years after.

I select these few cases from a large number, because in all there existed more or less dysmenorrhœal symptoms, and three of them were complicated by considerable structural disease, which had first to be removed before the plan of treatment I now advocate was adopted.

In this paper I have endeavoured, as far as possible, to confine my observations to facts capable of demonstration; and I hope the experience of other members of this Association may confirm my own conclusion that forcible distension of the constricted os internum and incision of the os externum only, in the manner described, in cases of obstructive dysmenorrhœa and sterility, is preferable to the operation by the hysterotome. The former is attended with less risk; and, with this impunity, it offers greater success, with the further advantage of leaving the uterine tissue, excepting at its extreme mouth, without lesion.

CASE OF HYDROCEPHALUS IN AN INFANT TEN WEEKS OLD, RESULTING IN RECOVERY.

By J. THOMPSON DICKSON, M.A., M.B.Cantab.,
Physician to the Infirmary for Epilepsy and Paralysis.

THE following case is of interest from two distinct points of view; its aspect in relation to nomenclature, and its appearance in relation to pathology. According to our received nomenclature, the term acute hydrocephalus is synonymous with tubercular meningitis; whilst all other forms of cerebral affection associated with effusion, except sun-stroke, are included under the head of chronic hydrocephalus. "Chronic hydrocephalus", however, would not convey a notion of the acute, but non-inflammatory, affection, the particulars of which I am about to detail; still less would "acute hydrocephalus" express the disorder if a tuberculous disease be thereby understood. I have, therefore, excluded adjectival distinction in giving a name to the case; which, though it did not, perhaps, pass beyond the stage of congestion, yet properly belongs to the group of cases characterised by watery effusion, to which the term "hydrocephalus" is rightly applied.

Whilst on a visit in Scotland lately, I was one day asked to see a female infant, ten weeks old, who, I was told, had been asleep for twenty-four hours—viz., from about 3 P.M. on one day until 3 P.M. the following day. I found her, about an hour afterwards, not only still sleeping, but almost comatose. Her brow, from time to time, was corrugated and contracted, and she was groaning occasionally. Her skin was warm, but not febrile, and her pulse, which was about 100, was rather feeble; her bowels were constipated, though shortly before the sleep commenced she had passed some green stools. Her abdomen was tense, but evidence of pain in it was wanting; and vomiting was absent. The case, in fact, very much resembled spurious hydrocephalus, except that the infant's head was intensely hot, and the fontanelles were bulging and very tense. On inquiry, I learnt that the child had once before had a somewhat similar attack, but of shorter duration; that the mother was exceedingly delicate, and was unable to furnish sufficient breast-milk for the child's support; and that cow's milk was obtained with so much difficulty, that Indian corn-flour had been substituted as part of the infant's diet. So profound was the slumber, that I doubted much whether the child would wake again. The feeble pulse at once contradicted depletion, although the head-symptoms were desperate; and I merely prescribed a grain of subchloride of mercury to be placed on the infant's tongue, with a little white sugar, and cloths dipped in water or spirit and water to be applied to the head. I also ordered that the calomel was to be repeated. After some hours, the bowels were relieved of a dirty green stool; and, after twelve hours, the child woke up, and took some milk, but immediately fell sleep again. A second powder was then administered, and the bowels were afterwards moved twice. In about six hours the child again awoke, and appeared much relieved; the bulging of the fontanelles had disappeared, and the head was no longer inordinately hot; the skin was natural; and, with the exception of a feeble pulse and occasional vomiting, the little patient was convalescent. I of course ordered that all farinaceous food should be discontinued; but the mother's precarious health and the inadequate supply of her breast-milk had to be considered. The mother's means were not sufficient to afford a wet-nurse, and the supply of cow's milk was irregular as to quantity, and only to be obtained in the evening. I therefore restricted the mother's feeding to the daytime, and ordered that the evening and night feedings should consist of cow's milk, diluted with water and sweetened with sugar of milk. The improvement in the child's condition was soon apparent; but, in a week, the symptoms returned. The sleep of the second attack, however, was not so long continued as that of the first, lasting only from one night until the next, and ceasing soon after the bowels had been relieved by calomel. I saw the child in a third attack, the duration of which was less than those preceding, and it yielded to the same treatment as the former. I recommended the mother to use her powders, not sparingly, whenever the bowels became irregular; and I have had the satisfaction of learning that the child has not since had any return of alarming symptoms.

REMARKS.—In infancy, the brain is a rapidly maturing organ, and is, in consequence, very liable to hyperæmia; and this condition may be induced by very slight exciting causes. In this case, the indigestible food which had been given was alone a sufficient exciting cause. The case was clearly not one of arterial congestion; for, with the exception of heat of the head, febrile symptoms were absent. Neither was there tuberculosis; for not only were inflammation, convulsions, and extreme pain in the head absent, but tuberculous history was altogether wanting.

On the other hand, the external veins of the head were full, and the scalp and face were of a dusky blue colour.

It seems more than probable that, whenever the ingesta irritated, intestinal hyperæmia was set up, and with it portal congestion; and these together either directly delayed the general circulation by which the brain and its vessels immediately become over full; or else, from the sympathy between stomach and brain, the moment the former rebelled against the unnatural food put into it, the latter expressed its sympathy by disturbed action, the venous congestion being only a part of a pathology which we are as yet unable to define. The condition of venous congestion is highly favourable to the induction of serous effusion; and such may or may not have occurred in the case of the child. Possibly the stage of engorgement was not perfected; the fluid effused being so small in amount that, save for the liability of recurrence, it did not seriously damage the brain. But I am convinced that, if more or less active measures had not been adopted, the child would either have died from the pressure, or by this time have been confirmedly hydrocephalic, unless meningitis had supervened, as at one time appeared imminent.

A CASE OF PARALYSIS DURING PREGNANCY.

By HENRY M. MADGE, M.D.

CASES of paralysis during pregnancy are rarely met with. Dr. Churchill, after an extensive search in consequence of a case occurring in his own practice, succeeded in finding only thirty-five cases of various forms of paralysis connected with pregnancy; twenty-three having occurred during pregnancy, and twelve soon after delivery. None of them, however, were of that peculiar form of paralysis which attacked my patient. As far as I can learn, I believe her case to be unique.

Mrs. S., aged 36, stout and robust, and of generally good health, had been married several years and had two children. The death of the youngest, when eighteen months old, caused great grief to the mother; and soon afterwards (in September 1867) she presented symptoms of early pregnancy—cessation of menses, morning sickness, and enlarged breasts. The sickness increased; and, in about three months, it generally continued throughout the day. She was naturally very stout, with thick abdominal walls; and it was partly owing to this that neither Dr. Greenhalgh (who was called in) nor myself could satisfy ourselves by examination that pregnancy existed. Shortly after this the patient began to complain of severe pains in the hands and feet, which soon became excessively sensitive and painful. This condition did not extend above the wrists and ankles. After a few weeks this hyperæsthesia ceased, and was succeeded by anæsthesia. There was also entire loss of motion—in fact, complete paralysis of hands and feet. Dr. Radcliffe was now called in, and, after examination, came to the conclusion that the case was one of congestion of the grey matter of the spinal cord, and that the prognosis was unfavourable. He ordered small doses of ergot, which the patient took for several weeks without, however, any perceptible benefit. In the meantime the sickness disappeared, the breasts became smaller, and the general health improved. Throughout the case there was little or no headache, nor tenderness along the spine: counter-irritation, however, was freely used. The pulse and temperature were nearly always normal. The urine was sometimes limpid and abundant, sometimes scanty and thick with urates, but always free from albumen. The patient's mind was often confused, and her memory impaired. Notwithstanding her protracted illness and thoroughly helpless condition, she was generally in tolerably good spirits. Various tonics, nervine and otherwise, were used; but the paralysis continued and seemed likely to become permanent. In May, 1868, no perceptible change having taken place, faradisation was commenced, and applied about a half an hour twice a day; sometimes one pole was held or supported in the left hand and the other applied to the right foot, and *vice versa*; sometimes one was applied to various parts of the spine and the other to the extremities. At first she could not feel the current in the hands or feet, but above the ankles and wrists she could feel it readily, and the contractions and twitchings of the muscles were easily seen. The remedy was perseveringly applied for increasing periods, and sensation began to return in the hands and feet just two months from commencing it. Motion was much slower in returning. The middle finger of the left hand and the second toes of both feet were for a long time helpless: at length, however, she was able to move them, and her recovery now was nearly complete. In August, 1868 (about eleven months from the commencement of the illness), she was able to walk down stairs without assistance. Shortly afterwards, a very unexpected occurrence took place. Towards the end of August she was delivered of a dead foetus, of about

four months, enclosed in its membranes. The liquor amnii was muddy, but not foetid; and the foetus was of the same dark muddy colour. It had to all appearance been retained in the uterus many months, but had been preserved from decomposition by the liquor amnii. There was very little loss of blood; and the patient made a good recovery.

REMARKS.—Were the symptoms caused by the pregnancy? Ollivier has written a work on this particular form of paralysis. He had seen only one case, and that had no connection with pregnancy. He attributes it, like Dr. Radcliffe, to “congestion of the grey matter of the spinal cord.” Might it not, however, be possible for pregnancy to produce this identical congestion and consequent paralysis? Whatever may have been the cause in my case, I feel indebted to Dr. Radcliffe for having pointed out to me its true pathology. It is evident that there was something more than mere hysterical or functional disturbance. Dr. Churchill is disposed to attribute all cases of paralysis during pregnancy to the presence of albuminuria; but that had certainly nothing to do with the case I have related. With regard to treatment, if it had been possible to prove the existence of pregnancy—assuming that condition to be the cause of the paralysis—it seems plausible enough, that it would only be necessary to remove the cause. In several of the cases, however, collected by Dr. Churchill, the paralysis disappeared during pregnancy without interfering with gestation; therefore, in such cases, I do not know that the induction of labour should be too readily adopted; though, in some special cases, no doubt it would become necessary. The ergot was given on account of its supposed contractile effects on the smaller vessels, thus lessening congestion; but it might also have had some effect on the uterus and its contents. Did the case take a favourable turn because of the death of the child? I hardly think so; because, in several of the cases, the patient recovered from the paralysis before delivery, and afterwards gave birth to a living child. Did electricity cure the patient? This question I am unable to answer; but, in a similar case, I should certainly use it again, for, besides its possible therapeutic effects, it serves to occupy the patient's time and attention, and to introduce a gleam of hopefulness when there is much to cause depression and despair.

INVERSION OF THE UTERUS.

By JOHN THOMPSON, M.D., Bideford.

LATE in the autumn of 1848 I was summoned to the wife of a respectable farmer residing some miles from Bideford, who had been for more than forty-eight hours in labour under the management of a midwife. The presentation was, at first, believed by the nurse to be footling; but at length the hand protruded, and then her error was evident. Finding delivery impracticable, she sent for me; and, on my arrival, I found the foetal arm protruded up to the armpit, and discoloured throughout. The uterine action being very powerful, it was clear that there would be much difficulty in turning the child and completing delivery. After explaining the danger to the husband, and sending for a professional friend in case I should need assistance, I bled the patient to about twenty ounces, and gave her a drachm of tincture of opium. Then, lubricating the back of my left arm and hand, I slid them little by little up the vagina and uterus to the feet of the child. Notwithstanding the bleeding and the large dose of opium, the uterus made such resistance that my hand had to sustain pressure, causing cramp and great pain, before I could effect my object. After about an hour delivery was effected, the child being dead; but the mother was uninjured. The placenta came away without difficulty, and, though there was rather free bleeding, neither exhaustion nor other evil consequence ensued. The arm and hand with which I operated were so much injured that several weeks elapsed before full power and normal feeling were restored. Had I known the full value of chloroform at that time, its administration would perhaps have been substituted for bleeding and opium, and have prevented the punishment I personally sustained.

My patient made a good recovery, and in the next year retained me to again attend her. The presentation in this case was natural; but the placenta was retained, and I had to introduce my hand into the womb to remove it. She was subsequently confined in the years 1850, 1852, and 1853, which shows that fecundity had not been impaired by the severity of her confinements. There was some difficulty in each labour, either a faulty presentation or retained placenta, or the birth was premature; but there is no object in giving details of these cases.

Her last labour was in December, 1853. The presentation was natural; she had arrived at her full time, and delivery took place in a few hours. After handing the infant to the nurse, who then retired from the room, I applied my hand to the abdomen of the mother, but, instead of the usual

uterine tumour, there was a vacuity such as I had never before met with. As I had not attempted to withdraw the after-birth, this seemed strange; nevertheless, believing that inversion of the uterus only occurred where traction had been exercised on the funis, it did not strike me that it could have happened here. On examining the vagina, I found the placenta, and at once attempted its removal. In a few seconds it came away with an unusual sort of plunge as if a coagulum had emerged with it, and I tried to remove the mass from under the bedclothes to the ordinary receptacle, but found myself hindered by a band which appeared stouter than the ordinary membrane, and which was, in fact, the inverted vagina. Lifting the bedclothes, I was astonished to observe the after-birth and womb both escaped together, the latter completely inverted, and having the placenta partially attached. There was no bleeding, nor had much blood come away by the vagina. Promptly taking off my coat, and baring my arm, I first peeled off the placenta—this was done with great facility. No blood flowed from the uterine surface. Then, taking the uterus in my right hand, I passed it up the vagina, and, bending my fist, pressed nimbly against the fundus (my left hand meanwhile supporting the abdomen) and in an instant restored its position. My right hand passed into the uterine cavity, where I allowed it to remain till contraction came on, and it was only withdrawn when uterine action became decidedly expulsive. The patient, during this time, experienced no shock in her system; she lost but little blood, and subsequently made as good a recovery as she had done in any former confinement. Since that time she has not been pregnant, though she has had good general health, and looks ruddy, vigorous, and cheerful.

Two practical views derive support from the facts of this case; the first, that inversion may, and sometimes does, take place without interference on the part of the attendant; the second, that reinversion may be readily effected, if the manipulation be prompt and well-directed. Formerly, it seemed to be the opinion of the profession that inversion of the uterus always indicated a faulty interference on the part of the practitioner—perhaps the view now generally held is that this is only the most frequent cause. On this point I may refer to the section on Inversion of the Uterus in Dr. Tyler Smith's *Manual of Obstetrics*, where it is pretty fully discussed. His views are concluded with the remark, that, “Owing to the prevalence of the mechanical idea respecting its origin, obstetricians have often been blamed most unjustly in cases of *post partum* inversion.” The ease with which I restored the displacement was the most remarkable feature in the case; it contrasts strikingly with the distressing failures related in the columns of the different medical journals. The reason for this difference seems to me clearly attributable to the fact of my having acted at once. It is noticeable that in nearly every unsuccessful case the accident has occurred for some time before attempts have been made at reduction—in the majority it could not then be remedied. A reason for delay to procure professional assistance is afforded when, as in the instance I have described, the mouth of the uterus contracted over the course of the uterine vessels and prevents hæmorrhage, but it is to be remembered that this is the very case likely to give the most resistance to reduction if delay be allowed. Dr. S. Merriman, writing in the *Medical Times* of July 12th, 1851, says: “It cannot be too urgently impressed upon the mind that one of two consequences must follow, unless the complete reinversion of the uterus is soon effected—either the profuse hæmorrhage will destroy, or the hæmorrhage will be stayed by the contraction of the uterus in its misplaced condition, and this contraction which prevents the further loss of blood, will also render impossible the reinversion of the womb.” In the operation for reinversion, time seems to be the essence of success. As in my patient procidentia uteri was combined with inversion, the diagnosis was very easy; but had the placenta separated from the womb in the vagina, and left it there inverted, there was nothing about the patient's symptoms that would have indicated so grave an accident. The diagnosis must have rested on the perception of the vacuity in the abdomen, where the uterus is commonly felt. This was so striking that I should, in any future case, instantly have my suspicion on pressing my hand well down on the abdomen. This point derives additional importance from the remembrance that many cases of inversion have escaped detection, and that the question of a vaginal tumour being a polypus or an inverted uterus has, in the chronic condition, puzzled some of our most experienced practitioners. A careful examination through the parietes of the abdomen soon after delivery would probably have decided the matter. It has been stated by Cruveilhier, in opposition to the views of Dr. W. Hunter, that the internal surface of the uterus after delivery is completely denuded of mucous membrane, and left very much in the condition of an amputation-stump. Though this view, coming from so great an anatomist, long obtained credence among a large number of the profession, its truth has of late been questioned; and a paper was read before the Obstetrical Society of London in May 1862, by Dr. Matthews Duncan, in which he contro-

verted the views of Cruveilhier. In the case that I have just detailed, I took notice that the internal surface of the uterus was covered generally by a fine mucous membrane, very smooth, thin, and much resembling in colour an inflamed facial lip. There were sundry spots, in size like finger-points, where mucous membrane was entirely wanting, and the muscular substance looked like the raw muscle of the amputation stump. The edges of these spots were irregular and ragged, and by them I was enabled to see that the mucous tissue was thin and delicate. Looking at the surface generally, it was clean and free from bloody points. Probably the constriction which restrained hæmorrhage also prevented grumous exudation.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

GUY'S HOSPITAL.

OPERATIONS, DECEMBER 8TH, 1871.

Necrosis of the Lower End of the Humerus.—Mr. COOPER FORSTER operated on a girl fourteen years of age, for necrosis of the lower end of the right humerus. About four years ago, she was hit by her brother on the right elbow, and the arm became painful and swollen. A year after the injury, some fistulous openings appeared about the joint, which became stiff; and she was under the necessity of wearing a splint with a cap which allowed the openings to be dressed. There was at the time of operation some slight rotation of the radius; but the arm could not be bent or straightened. Mr. Forster removed two pieces of necrosed bone, each about an inch in diameter; but did not attempt to render the joint movable or of any further service to the girl.

False Ankylosis of the Hip-joint.—Mr. BRYANT made an opening in the neighbourhood of a boy's left hip-joint, and took out a small piece of necrosed bone from behind the head of the femur. The joint appeared perfectly stiff and ankylosed before the administration of chloroform; but the fibrous adhesions were to some extent broken down, and the joint rendered more moveable, under the influence of the anæsthetic. Mr. Bryant quite expected that he would have to take out the head of the femur; but, finding the joint so moveable under chloroform, he thought it only necessary to relieve it by manipulation.

Stricture with Fistulous Urethra.—An interesting case of strictured and fistulous urethra was operated on by perinæal section. J. H., a labourer, aged 37, had suffered fourteen years ago from gonorrhœa, which lasted several months, and for which injections were used. He had congenital scrotal hernia. Three years ago, a lump formed in the under part of the penis, which increased in size and hardness until it reached the size of a hen's egg; and sinuses then formed, from which the most part of his urine flowed on micturition. This lump was removed at Maidstone Hospital, and a part of the urethra was taken away. Mr. BRYANT was unable to pass any sound or probe into the bladder. He could not, therefore, perform Syme's operation for stricture. He was able to pass a grooved probe through the fistula; and, hitting upon the anterior portion of the prostate gland, he cut down upon it through the perinæum, and then cut forward, dividing all the tissues down to the probe (Mr. Cock's operation). He thought that, if this proved successful, a plastic operation might close up the fistula in the urethra.

He next proceeded to examine a case of skin-grafting in an extensively ulcerated leg; but the grafts were all dead, and no good results had been obtained.

KING'S COLLEGE HOSPITAL.

OPERATIONS, DECEMBER 9TH, 1871.

Cancer of the Breast.—Sir W. FERGUSSON amputated the scirrhus part of a woman's left breast. She had been operated on for scirrhus of the same side nine months before; but the disease had returned, although not to any great extent. Sir William Fergusson thought another operation might give further immunity to the patient, and answer the purpose better than caustic or any other application. Up to the present day it is, he said, a vexed question among surgeons whether the whole breast or only the diseased part should be removed. He believed it was always best to take away *only the disease*, and leave as much of the breast as possible to the patient—especially the nipple. In this case he left the nipple.

Amputation of the Middle Finger.—Mr. HENRY SMITH amputated the middle finger, supposed by the patient to have been poisoned with

copper. The three joints being diseased, the whole finger was removed, with the head of the metacarpal bone. He recommended the removal of the head of the metacarpal bone, even though undiseased, whenever the middle finger had to be amputated, but not when any of the other fingers were taken away. The reason he assigned was, that, the other fingers being closely approximated, the hand was rendered more useful.

Varicocele and Hernia.—Mr. WOOD applied his spring tractor for varicocele to one case, and operated for the radical cure of hernia in another—explaining in detail the steps to be taken in such operations. In reference to the latter operation, he mentioned that the patient received the hernia as an inheritance from his mother, and that this was frequently the case. In many cases where hernia itself is not inherited, there is a tendency to it from the inherited patulous and weak state of the rings. He had now operated on two hundred patients, with a bad result in only three—an unprecedented success in the treatment of disease of this kind; but he attributed his success in no small measure to his never attempting the operation on those suffering from any serious organic disease, or in a debilitated state of health.

NATIONAL HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

A CASE OF PARALYSIS AGITANS.

(Under the care of Dr. H. CHARLTON BASTIAN.)

THOMAS S., a tall, thin man, aged 51, a draughtsman, again came under observation on November 28th, having previously been an out-patient under Dr. Bastian's care from April 1868 to March 1869. On first presenting himself, he said that four years ago, whilst on a surveying tour, he was much exposed to cold and wet, and remained in damp clothes for several days. A week afterwards he felt slight twitchings of the left fingers, which gradually increased, and extended to the whole of the left upper extremity, though the parts above the elbow had been only implicated during the last eighteen months. For the last four months he felt twitchings of the left toes, more especially when the weather was damp. He never felt an ache or pain in either limb, in the head, or in the back; and there was no tenderness in the latter situation. The left arm had gradually become weaker. His general health and appetite were good. There was no cardiac bruit; no history of syphilis. The patient exhibited constant twitching movements of the fingers and hands, and occasional movements of the same kind in the fore-arm and arm. When the two arms were compared, there seemed to be no wasting of the left, though the circumference of the largest part of the fore-arm was half an inch less than that of the opposite side. His grasping power, measured by Duchenne's dynamometer, was 11 deg. on the left and 42 deg. on the right. The patient stated, however, that he had always been notable for a great difference in the strength of the two arms; and, as it was found that the left foot and the left arm (more especially the former) were slightly smaller than the right, it seemed most likely that the patient's own notion was correct, as to the existence of a congenital weakness of this side. The smaller size of the fore-arm might, therefore, have been in part due to a deficient development. The electro-sensibility was found to be slightly impaired in the fore-arm, though the electro-mobility seemed to be unaffected. Sensibility was not otherwise impaired. He was ordered eight-grain doses of iodide of potassium in infusion of calumba three times a day, and drachm doses of cod-liver oil night and morning. Two months and a half afterwards he had decidedly improved—sometimes passed a whole day without any shaking (this being in the month of June); whilst the twitching of the toes had ceased. His attendance became irregular soon after this; but when seen in the following December, his grasp, measured by the dynamometer, was 15 deg. on the left and 60 deg. on the right.

On again making his appearance at the hospital, on November 28th, he stated that he had ceased to attend about two years ago, thinking his malady incurable; although he had felt better whilst taking the medicine. He had not followed any occupation since, and had lived very plainly, getting only a very small quantity of animal food at intervals. He came to this hospital again because he had been feeling much worse during the late cold and the wet weather. A similar exaggeration of symptoms had been frequently noticed—cold dry weather not affecting him so much. Eighteen months ago, the right arm began to be affected, and continued to get worse (in the same order as the right). The right arm and hand were now rather worse than the left. The legs shook much less than the arms, and the right leg only when in certain positions. He walked fairly well and steadily; but directly he began to walk the twitchings of both hands and fingers became much more marked. The twitchings were also increased by mental acti-

vity, by surprises, and even whilst replying to any ordinary question. The patient himself remarked that he was always most comfortable when lying on his back, with his mind also at ease. Under these conditions his limbs would continue at rest for thirty minutes at a time; and he was able occasionally even to move and replace them without the occurrence of any twitchings. He was always most easy and quiet for an hour or two in the morning after getting up. He slept "remarkably well". There was still no trace of pain in the head or limbs. His memory "was excellent". There was no emotional weakness. He was still cheerful in disposition. His sight and hearing were good; the pupils were of an equal medium size, but sluggish. Micturition and defecation were not disturbed. On measurement, the left arm was now found to be half an inch less, and the fore-arm one inch less, in circumference than the right. Measured by the dynamometer, his grasp was 14 deg. on the left and only 35 deg. on the right side. He was again ordered eight-grain doses of iodide of potassium three times a day, with two drachms of cod-liver oil night and morning, and directed to lie in the recumbent position as much as possible.

REMARKS.—Although presenting no very unusual symptoms, the case is interesting in many respects—on account of its mode of origin, the slow extension of symptoms, the perfect freedom from pain, and the congenital weakness of the left side, which was first attacked. The exacerbation of symptoms in cold and wet weather is common in this and other allied affections. The great mitigation of symptoms after the power of the nervous system had been restored by rest—their almost complete absence, in fact, for two or three hours in the morning—seemed to point to minute nutritional defects in certain portions of the nerve-tissue, rather than to obvious and permanent degeneration. Dr. Bastian thought that the exaggeration of the twitching movements by simply standing or walking, combined with a like exaggeration by mental action, seemed to point to the pons Varolii as the most probable seat of disordered activity: this being also the region in which structural changes have been chiefly found in more severe cases of paralysis agitans. The progressive diminution of muscular power in the limbs affected is commonly met with, though it is not often associated with actual wasting of muscles, other than what may be accounted for by disuse. The indications were to obtain as much rest as possible in the recumbent position, and more nourishing food. Dr. Bastian had seen much good result in similar cases from the use of cod-liver oil and iodide of potassium.

MIDDLESEX HOSPITAL.

SULPHATE OF IRON IN ERYSIPELAS.

MR. HULKE, at this hospital, has lately tested the great efficacy of iron sulphate in extensive erysipelas. He uses it as a lotion of ten grains to an ounce of water, applied warm on a rag; and believes it acts as a local styptic, astringent, and sedative, as well as a constitutional tonic. In circumscribed erysipelas on small surfaces, he applies the ordinary coating of collodion and castor-oil. He deprecates the application of flour on any part, as a source of dirt, blebs, and maggots. So many cases of erysipelas have lately occurred in and around the hospital, that he thinks it must be caused, in wounded and weak patients, by a deleterious atmospheric influence. What the nature of this influence is, he is unable to say.

REPORTS AND ANALYSES

IN

MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CRAIG'S SOLID PEA-SOUP.

WE have had forwarded to us a specimen of solid pea-soup (Craig's patent), consisting of beef, peas, savoury herbs, and seasoning. It is sold in very convenient packets sufficient for one pint of soup, and requires only half an hour's preparation. It makes a most nourishing and agreeable soup, and our trial of it fully bears out the pretensions advanced on its behalf by the manufacturers, Messrs. Hewitson and Co., Harp Lane. We consider it to be a valuable addition to our articles of diet, and believe that its convenience and portability will be recognised by all who use it.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 16TH, 1871.

THE ILLNESS OF H.R.H. THE PRINCE OF WALES.

THE loyal and profound anxiety with which the nation regards the trying and alarming illness from which the Prince of Wales is suffering has, during the week, overwhelmed all other considerations. It cannot be said that the anxiety is excessive, or that the alarm has been in any degree unfounded.

Typhoid fever of a severe type is, as has throughout been very deeply impressed upon the public mind, a most insidious, treacherous, and threatening disorder; but the Prince's physicians have had to battle with a form of the disease which is not of the ordinary type, but which has presented peculiarities, and is now undergoing a development, of a very unusual kind. They have had to interpret, and it is needless to say how skillfully and cautiously they have done so, one of the most intricate series of problems in disease which can present itself. Aided by a large experience, and by a known clinical sagacity of high order, they have not been at a loss to find the key to a series of phenomena which have before now proved baffling to highly trained intellects. We need hardly recall to our readers the usual regular sequence of events in a severe case of typhoid fulfilling the fourth week of its course. Barring certain complications, which we may dismiss from consideration in discussing the general facts and rules which have relation to the present case, there should at this time occur a subsidence of the true fever-process. The marked characteristic of the enteric poison is the lighting up of a febrile action, which is marked by an elevation of temperature, and which pursues a certain undulating course distinguished by great regularity. The changes of temperature from morning to evening, from week to week, are regulated by a law so commonly observed, that these changes afford an element of certainty in the diagnosis not only of the character of the fever, in the first instance, but of its greater or less severity, its progress from day to day, and the extent to which the local lesions are producing a constitutional impression. The fever-process, during the first three weeks and part at least of the fourth, had pursued a course so regular, and though severe, yet so free from complication, that when it became our duty, on Thursday evening last, to review the course of the disease up to that date, and to draw from the past, and from a discussion of the status at the moment of writing, deductions for anticipating the future, we felt authorised to augur favourably from the fact that only a few days remained during which the fever-process should normally continue, and that after the expiration of those days we might anticipate a restoration to normal temperature and a commencement of convalescence. Before this, it might well have been expected that, except for the fear of relapse during convalescence, the Prince would enter upon a course of uninterrupted convalescence.

The symptoms which appeared on the following day, and which rudely banished these smiling prospects, were developed with great suddenness, and were accompanied by incidents exciting immediate alarm, inasmuch as they gave rise to especial perils, which might at any moment have terminated life by their incidental effects. They have been followed by a rare combina-

tion of symptoms, which have greatly complicated the vital questions at issue. There was, first, an alarming irritation of the bronchi, with an excess of secretion, which was the more distressing that there was little power to clear the air-passages by voluntary or involuntary effort and to expel it. Thus, this suffocative catarrh led to the most severe symptoms of dyspnoea. It was accompanied by extreme irritability of the bronchial mucous membrane, and alarming reflex spasm. There was also great nervous prostration. As these symptoms continued, the alarm which they must necessarily cause increased; and the situation on Friday night and during part of Saturday was desperate: there were alternations of ease and of suffering, due to the supervention or cessation of suffocative dyspnoea. Twice these attacks recurred in their most intense power during the night. It is not our part, in discussing the scientific and clinical facts of this sad illness, to dwell on the pain which such scenes inflict on those nearest and dearest to the patient. But it may not be out of place to suggest, as a topic of consolation, that in truth these attacks involve less acute suffering to the patient than the struggles to which they give rise. By the merciful operation of physiological laws, asphyxiating spasm does, by the very intensity of its action, suspend in a great measure nervous sensibility and the perception of pain. Such struggles are suggestive of agony, and that phrase is often employed, but it represents the objective suggestions which they impress upon the mind of the beholder much more than the subjective sensations of which the pain of the sufferer takes conscious notice. A little reflection, indeed, will remind even the unlearned how much the struggling associated with obstructed respiration is automatic and unconscious. Nothing, for example, is more distressing to behold, or more suggestive of agony, than the struggles of the drowning man, in whom death is produced by suffocative asphyxia by a mechanism physiologically not dissimilar from that of suffocative catarrh; but it is familiarly known that there is none of the pain which the struggle seems to imply, but that, on the contrary, in death by drowning the sensations are far from being those of extreme distress. Those who have been snatched from the jaws of death, after periods of long suspended animation, have even been known to declare that their sensations have been far from disagreeable. They have indeed, as in all cases of suffocative asphyxia, passed through the condition of anæsthesia from accumulation of carbonic acid gas in the blood, which does not differ much from that of anæsthesia artificially produced by nitrous oxide and other agents.

Returning from this, we trust pardonable, digression, we may point out that there are certain clinical questions of great practical importance in connection with this symptom of suffocative catarrh. In the first place, it will remind us of the fact, that the best observers have noted as a pathological fact that, although the ulcerative action on the mucous membrane which characterises the evolution of the enteric poison is manifested distinctively in the glands of the small intestine, and even by preference in the glands of a particular part of the small intestine, yet the tendency to ulcerative action is not confined to those glands, but shews itself in different parts of the system. Thus, the bronchial glands have been observed, by Chomel and Louis, to be occasionally involved. The question then would arise, whether there was bronchial ulceration in the present case. The severe irritation occasioned by the accumulation of the bronchial secretion, and the occasional violent reflex spasm produced by efforts to clear the lung, might favour

such belief. But where there is ulceration, of course the sputum would, under particular circumstances, and at intervals, afford indications of the breach of surface. It is extremely satisfactory to know that there have been no such indications; and, so far as can be at present determined, the condition is one which is accurately described by speaking of it in the terms which we have already used. It is equally satisfactory in such a case to know that there are no physical indications of pneumonia, or of any organic affection of the lung-tissue.

Passing now to another series of conditions which, in judging of such illness, it is necessary to consider as of primary importance, we must pause for a minute to weigh the inferences derivable in any cause from the information afforded by the official bulletins, that there was, at the close of last week, a sudden elevation in temperature, which is, of course, in typhoid, the strict interpretation of the words properly employed in the bulletin to express the clinical fact. This rise in temperature at the period of the fever when it occurred, presents problems the more important that it is usually indicative of grave local complications, such as severe enteric ulceration or affections of the tissue of the lung, etc., which are here happily understood not to be present. In the absence of these, the rise in temperature presents difficulties which require caution in solution. Its persistence is a circumstance which somewhat enlightens the question. In the first place, it will be remembered that the date of commencement of the true fever-process has been assigned to November 13th, on that somewhat uncertain kind of evidence which in such cases is alone available. But the onset of this kind of fever is proverbially insidious, its incubation slow, and its prodromata variable. It is then possible, in this as in every case, that the actual day of commencement of the fever was somewhat antedated; and, let it be observed that physicians, ever seeking to lighten the anxieties and shorten the fears of their patients, are always unconsciously urged by their impulses to date the commencement of typhoid, when summoned to its developed stage and required to fix the date, at the earliest probable day; for this affords the hope that its termination will be the sooner at hand. This difficulty in absolute precision, and even the unconscious mental bias in favour of a leaning to the earliest of probable dates, might have led to the antedating in the Prince's case. In that case, the process would have been prolonged a day or two longer than calculated by all of us. As we watch the reports of its progress with an intensity of anxiety, heightened by every consideration of loyalty and affection, a few days more might yet see the reduction of temperature to a normal standard, a subsidence of fever, and the commencement of convalescence.

Since the above remarks were written, we learn by telegraph from an authentic source, that the turn which the symptoms have taken since Wednesday night and in the course of Thursday, authorises the belief that the exacerbation which took place on Thursday of last week was not the commencement of a new cycle of fever, but a recrudescence, which is now about to decline. The state of the Royal patient's temperature, pulse, and general condition, all afford most favourable indications. We need not say with how deep satisfaction we publish this glad news, derived, as we have already said, from a trustworthy source. We are happy to learn that the boy Blegg, who had been seriously ill in the latter part of last and beginning of the present week, is much improved; and that on Thursday morning Dr. Lowe pronounced him to be going on well. Her Majesty and

the Princess Louise graciously visited the patient on Thursday morning.

Let us only add, that it is known that from first to last the physicians in attendance upon the Prince have been in complete accord in principles and details of treatment, and in the interpretation of symptoms. They would, indeed, have failed to respond to the highest motives of duty and strongest promptings of feeling, if they had not shewn the most complete and untiring devotion. They have not failed; and in their untiring and protracted exertions they have been throughout supported by the gracious confidence and kindness of the royal relatives of the Prince.

THE SANITARY STATE OF SCARBOROUGH.

WE hope that the important statements which have appeared in the pages of the JOURNAL, and in those of our contemporaries, regarding the sanitary condition of Scarborough, will receive the immediate attention which they undoubtedly demand. The outbreak of typhoid fever amongst the members of the royal party naturally at first led to the investigation of the sanitary condition of Londesborough Lodge—a task of considerable difficulty and delicacy, but which has been faithfully carried out by our Commissioner, with what results we last week intimated. Exception has been taken by Mr. Dale and others in the daily papers to some of the statements in our report; but the conditions rendering Londesborough Lodge liable to sewage-infection, nevertheless existed, although, perhaps, in a somewhat less degree than we were at first led to believe. This, together with the fact that several members of the party coming from different parts of the country were struck down by typhoid fever at dates corresponding to the natural term of incubation of the fever, are facts which it is difficult otherwise to account for, than that this disease was contracted at Scarborough. The analyses of the various waters at Londesborough Lodge, which are given in detail elsewhere, fail to account for the outbreak. The results, by means of the zymotic test, of the examination of the Bristol and Scarborough waters by Dr. Ferrier, indicate that they are both of the highest degree of purity, and free from the organisms which he says are continually found in sewage and putrid matter, and in water directly contaminated with such. Dr. Ferrier states—so far as the zymotic test has been elaborated—that there is no likelihood of either of these waters having been the agent in carrying typhoid contagion: and the chemical examination so far bears out his conclusions.

It appears that the pump-water from the kitchen or scullery at the Lodge contains a decidedly larger amount of free ammonia than is commonly met with in good water; and, although this affords reason for suspecting sewage-contamination, it may possibly be due to other causes. On the other hand, this water, we were informed, was used only for washing purposes, and could not by any means have been in any way employed for cooking.

But although it is clear that the condition of Londesborough Lodge was amply sufficient to account for the outbreak of fever, the sanitary condition of Scarborough itself, in the centre of which the Lodge is situated, has, fortunately for the inhabitants, as it happens, become the subject of comment and investigation. We have received a large amount of reliable evidence to show that it is in a most unsatisfactory condition; and, from personal inspection, we are enabled to bear out many of the statements made to us. A great part of the town is altogether undrained—the system of cesspits and privies, and the supply of water in some localities, being such as to lead to the extensive prevalence of zymotic diseases. It is true that this state of matters is chiefly limited to the northern or older part of the town; but the southern portion is by no means altogether free from charges of insanitation.

In a health-resort like Scarborough, it could have been expected that

an efficient system of inspection by a duly qualified medical officer would have been in force; but this, it appears, is not the case. There is no medical officer of health, Dr. Taylor acting for the Local Board merely in reference to infected vessels arriving at the port, and the inspection of diseased meat.

The authorities of Scarborough appear to be anxious to deny the sanitary defects of their town, while many of the leading medical men are satisfied that nothing short of a government investigation will secure efficient sanitary measures for Scarborough. Such an investigation, we earnestly hope, will be made, which will embrace an inquiry not only into the whole circumstances of the outbreak of typhoid fever amongst the members of the royal party, but into the general sanitary condition of the town of Scarborough.

THE ILLNESS OF H.R.H. THE PRINCE OF WALES.

THE following bulletins have been issued during the week up to the time of our going to press, by Sir William Jenner, Dr. Gull, and Dr. Lowe, the physicians in attendance on His Royal Highness the Prince of Wales at Sandringham.

Dec. 7, 9 A.M.—His Royal Highness the Prince of Wales has passed a quiet night. The decline of the symptoms continues regularly.

Dec. 7, 5 P.M.—His Royal Highness the Prince of Wales has passed a quiet day. There is no material change in the symptoms.

Dec. 8, 8 A.M.—His Royal Highness the Prince of Wales has passed a very unquiet night. There is a considerable increase in the febrile symptoms.

Dec. 8, 1 P.M.—His Royal Highness the Prince of Wales has slept at intervals during the morning; but there is no abatement of the graver symptoms.

Dec. 8, 5.30 P.M.—His Royal Highness the Prince of Wales continues in a precarious state. The exacerbation of the symptoms, which began late last evening, has been attended by great prostration of the strength.

Dec. 8, 9.30 P.M.—His Royal Highness the Prince of Wales has slept, but still continues in a prostrate condition.

Dec. 9, 1 A.M.—His Royal Highness the Prince of Wales continues in the same condition as at 9.30 P.M.

Dec. 9, 8 A.M.—His Royal Highness the Prince of Wales has slept; the exhaustion has not increased, and the general conditions are somewhat more favourable.

Dec. 9, 12.15 P.M.—His Royal Highness the Prince of Wales has passed the morning more tranquilly. The febrile paroxysm of yesterday is subsiding; there is no increase of exhaustion.

Dec. 9, 5 P.M.—His Royal Highness the Prince of Wales has passed the afternoon quietly; but there has been no change in the symptoms since noon.

Dec. 9, 10 P.M.—His Royal Highness the Prince of Wales has slept at intervals during the evening. There is no improvement in the symptoms since noon.

Dec. 10, 1 A.M.—His Royal Highness the Prince of Wales has had some sleep since ten o'clock. The symptoms continue unchanged.

Dec. 10, 8 A.M.—His Royal Highness the Prince of Wales has passed a quiet night. Although there is still great prostration, the graver symptoms have not increased.

Dec. 10, Noon.—His Royal Highness the Prince of Wales has passed the morning tranquilly; the general condition is somewhat more satisfactory than yesterday.

Dec. 10, 5.30 P.M.—His Royal Highness the Prince of Wales has passed an unquiet afternoon, with a return of the more urgent symptoms.

Dec. 10, 10.30 P.M.—His Royal Highness the Prince of Wales has been restless during the evening, and there is no abatement of the urgent symptoms.

Dec. 11, 1.30 A.M.—His Royal Highness the Prince of Wales has had a little sleep. The symptoms are unchanged.

Dec. 11, 8.15 A.M.—His Royal Highness the Prince of Wales has passed a restless night, with a further recurrence of the graver symptoms; the state continues precarious.

Dec. 11, Noon.—His Royal Highness the Prince of Wales remains in the same precarious condition. There has been no alteration of the symptoms during the morning.

Dec. 11, 5 P.M.—His Royal Highness the Prince of Wales has passed a very restless afternoon; but the exhaustion does not increase.

Dec. 11, 10 P.M.—His Royal Highness the Prince of Wales has not slept during the evening, but the general state continues unchanged.

Dec. 12, 1.30 P.M.—His Royal Highness the Prince of Wales is passing a very restless night, without signs of improvement.

Dec. 12, 8 A.M.—His Royal Highness the Prince of Wales has passed a very restless night. Though there are no signs of improvement, exhaustion has not increased.

Dec. 12, 12.30 P.M.—His Royal Highness the Prince of Wales has passed a restless morning. In all respects the general condition continues unchanged.

Dec. 12, 5 P.M.—His Royal Highness the Prince of Wales has passed a somewhat less restless afternoon. The general condition remains unchanged.

Dec. 12, 10 P.M.—His Royal Highness the Prince of Wales has passed an unquiet evening, but the prostration does not increase.

Dec. 13, 1 A.M.—His Royal Highness the Prince of Wales's condition is unchanged.

Dec. 13, 8 A.M.—His Royal Highness the Prince of Wales has passed another very restless night. The conditions do not improve.

Dec. 13, Noon.—His Royal Highness the Prince of Wales has passed the morning without change of symptoms.

Dec. 13, 5 P.M.—His Royal Highness the Prince of Wales has passed a very unquiet afternoon. There is no abatement of the gravity of the symptoms.

Dec. 13, 10 P.M.—His Royal Highness the Prince of Wales has passed a less unquiet evening.

Dec. 14, 1 A.M.—His Royal Highness the Prince of Wales continues to be less restless.

Dec. 14, 8 A.M.—His Royal Highness the Prince of Wales has slept quietly at intervals during the night; there is some abatement of the gravity of the symptoms.

Dec. 14, Noon.—His Royal Highness the Prince of Wales has passed a tranquil morning. The gain during the night is maintained.

Dec. 14, 5 P.M.—His Royal Highness the Prince of Wales has passed a quiet afternoon. There is no change of symptoms since the morning.

A COMMISSION has been appointed by the Portuguese Government for the purpose of framing a pharmacopœia for the kingdom.

MR. J. HORNIMAN has presented a donation of £1,000 towards the building fund of the Croydon General Hospital.

AN Italian translation of Dr. Tilt's *Change of Life*, from the pen of Dr. Eugene Rey, will shortly appear at Rome.

THE question whether it was advisable to have a fixed tariff of medical fees, either general or local, was discussed at the recent meeting of the Italian Medical Association. The decision was, by a not very remarkable majority, in the negative in both cases.

AT a meeting of the Northampton Town Council on December 4th, a testimonial from the Royal Humane Society was presented by the Mayor to Mr. J. M. Bryan, jun., a son of our respected associate, Dr. Bryan, on account of the humanity and courage which he had displayed in saving the life of a lad named Thomas Kirk, who had fallen into the canal.

THE Italian Anthropological and Ethnological Society commenced its session on November 23rd. Professor Mantegazza read a letter from Mr. Darwin on sexual selection, and pointed out several objections to the theory of the English naturalist. The improvement in the means of forming an Italian ethnological collection was commented on at the meeting.

A MEETING of the Association of Medical officers of Health will be held at the Scottish Corporation Hall, Crane Court, Fleet Street, to-day (Saturday, December 16th), at 7.30 P.M. The Report of the General Purposes Committee will be read; and Mr. W. H. Michael, Barrister-at-Law, will deliver an address on Future Sanitary Legislation.

TOO MANY GESE.

WE have received a letter from a correspondent at Southampton complaining of a nuisance which, although of a novel character, is highly injurious; and as such calls for an appeal against a recent decision of

the Hants county justices. It appears that a French dealer has for some time past been in the habit of supplying the ocean steamers with geese; and, in order to meet the demand, he keeps at least a thousand geese at one time in a very limited area, and in the heart of a large and populous town. This, especially during the hot weather, caused an intolerable nuisance, which was considered of a nature so injurious to the health of the inhabitants as to necessitate the interference of the local inspector of nuisances. That official accordingly applied for, and obtained, a summons against the proprietor of the geese. The summons was, however, dismissed, in consequence of the imperfect description given of the nuisance complained of. A second summons was subsequently obtained, upon the ground of the "incessant noise of the geese day and night, coupled with the injurious effect on the public health". It was argued in support of the summons that, apart from the noxious effluvia, the incessant gabbling of the geese day and night was prejudicial to the health of those whose slumbers it disturbed. Medical testimony was given to this effect; but the justices for the second time declined to adjudicate in the matter, upon the ground "that the geese did not come within the meaning of the Nuisance Removal Act". In delivering their decision they said: "We cannot seriously discuss the question of a goose's proper place in the scale of creation. We have been accustomed to consider the goose as belonging to the animal kingdom, and must, therefore, be content to deal only with the positive words of the Act." As the bench admit that the goose is an animal, and the eighth section of the Act (as interpreted by the General Board of Health) provides that "any animal so kept as to be a nuisance or injurious to health may be removed", we confess ourselves at a loss to understand why the justices hesitate to remove the nuisance.

TESTIMONIAL TO AN ITALIAN DISTRICT PHYSICIAN.

THE municipality of Castiglion d'Orcia has presented Dr. Comparini, district medical officer of Campiglia, medical works to the value of 140 lire (£5 : 12), in recognition of the zeal and devotion with which he has performed his duties. *L'Imparziale* regards this as a rare instance of public generosity, and hopes that the example may be frequently followed.

PRESENTATION OF A MEDAL TO SKODA.

ON the 7th instant, a deputation of the "Doktoren-Collegium" in Vienna, headed by Dr. Chrastina, Dean of the Faculty of Medicine, visited Dr. Skoda at his residence, and presented him with a medal in commemoration of the ovation which he received on his retirement from professorial duties some time ago. Dr. Chrastina, who wore his robes of office as Dean, delivered an address to Dr. Skoda, concluding with the expression of the hope of himself and his colleagues that Dr. Skoda would long enjoy in health his *otium cum dignitate*. Dr. Skoda, who was evidently much moved, desired the deputation to convey to the college the expression of his gratitude and good feeling.

ALLEGED ASSUMPTION OF A MEDICAL DEGREE.

AT the Shrewsbury County Court on the 4th instant, Thomas Andrews sued F. H. Davies for the sum of £4 : 13 : 6. The bill was made out as follows: "Mr. Frank Harry Davies to Thomas Andrews, M.D. To professional attendance, medicine, etc." The plaintiff stated that he was only a chemist and druggist when the medicine was supplied, and he had charged accordingly: he had since that time passed as a doctor of medicine. In cross-examination, he said that his diploma was a foreign one, obtained from America. He further said that he had two diplomas; but did not state the source of the second. After a persistent endeavour on the part of Andrews's solicitor to have the case settled irrespectively of the question of the medical qualification, the summons was withdrawn on the suggestion of the judge, the plaintiff paying the costs. The Honorary Secretary of the Shropshire Ethical Branch has issued a summons to the members of the Council, to meet in order to consider if any and what steps should be taken to vindicate the honour of the profession in the matter.

DEATH OF M. PAUL DUBOIS.

M. PAUL DUBOIS, formerly Clinical Professor of Midwifery in Paris, and one of the most eminent obstetric authorities in France, died on November 29th, at the age of 76, after a long illness, which had obliged him ten years ago to retire from practice. He was the son of Antoine Dubois, Professor of Midwifery and Chief Surgeon of the Maternité. In 1820, his father had him appointed assistant-surgeon, and gave him the full benefit of the large experience which he had accumulated; and, in 1825, resigned his office to his son. In 1834, the Chair of Clinical Midwifery in the Faculty of Medicine being vacant, a *concours* for a professor took place, in which M. Paul Dubois was successful. He held the professorship twenty-five years. He was the author of numerous highly valuable essays on various obstetric subjects, and did much for the advancement of midwifery, on which subject he is justly regarded as one of the highest authorities.

AN ARTESIAN WELL.

AN Artesian well has been sunk in the courtyard of the naval hospital at Rochefort to a depth of 846 *mètres* (2774 feet). M. Roux, pharmacien of the hospital, reports that the temperature is 41 deg. cent. (about 105 Fahr.) Contrary to what is generally observed in artesian wells, the water contains a large quantity of saline matter—sulphates of sodium and lime, chloride of sodium, iron, manganese, etc. When taken from the well, it is clear, but becomes turbid on exposure to the air, and leaves an ochrey deposit. It is quite unfit for drinking or washing. During the process of boring the well, the instrument used became magnetised; its several portions each forming a magnet with austral and boreal poles, and capable of rendering iron magnetic.

THE HOSPITAL OF ST. JOSEPH IN LISBON

IN an article in the *Correio Medico de Lisboa*, the hospital of S. José in Lisbon is described as having been originally a convent, which, notwithstanding the attempts made for its improvement, it has not yet been possible to render fitted for the purpose to which it is now applied. It is situated at the extremity of the most populous and most unhealthy quarter of the city, and contains 800 beds. In the same neighbourhood are the other civil hospitals; viz., St. Lazaro with 60 beds, Santé Anna with 66, the Desterro Hospital with 200, the Rilhafolles Asylum with 500 insane patients, and a pauper asylum with more than 700 inmates; together with a hospital for children, as yet only half built. In the hospital of S. José, some of the wards open into corridors, but others are so closely connected that the emanations are diffused from one into the other. Hence cases of diarrhoea are frequent; and in some of the surgical wards, at certain times of the year, the most trivial incision is liable to be followed by fatal suppuration or erysipelas; pyæmia figures notably among the causes of death after the more severe operations. In the five years 1866-1870, the number of medical cases was 25,787, with a mortality of 5,341, or 20.7 per cent; of surgical cases, 17,553, with 1,273 deaths, or 7.2 per cent.

VARIATIONS IN THE DIAMETER OF ARTERIES.

DR. BENECKE of Marburg has since 1868 carried on a series of observations with the object of ascertaining the variations in the diameter of the arteries in different diseases. The idea which he holds may be thus expressed. Regarding the etiology of various diseases, hypotheses alone exist; and it is only by assuming the existence of predisposition, that we can at present explain why the same morbid influence should in one person produce pneumonia, in another articular rheumatism, etc. Dr. Benecke believes that the disposition to special forms of disease is to be sought for in some structural peculiarities of the organism, and has set himself to inquire whether there are not variations in the diameter of the arteries which might throw light on the subject. He has examined, in patients dying in the hospital, the diameters of the ascending aorta a centimeter above the valve; of the thoracic aorta twelve centimeters beyond the angle of the left subclavian artery; of the abdominal aorta one or two centimeters above its

termination; of the pulmonary artery a centimeter above the valves. In the bodies of persons 100 centimeters in height, he found the following variations. 1. Ascending aorta: maximum, 54 millimeters; minimum, 32.4 millimeters; difference, 21.6 millimeters. 2. Thoracic aorta: maximum, 36 millimeters; minimum, 23.1 millimeters; difference, 13.1 millimeters. 3. Abdominal aorta: maximum, 26.3 millimeters; minimum, 14.7 millimeters; difference, 11.6 millimeters. 4. Pulmonary artery: maximum, 51.2 millimeters; minimum, 31.3 millimeters; difference, 19.9 millimeters. Age has some influence on the variation; sex very little, if any. The smallest measurements were found in four cases of scrofula and two of chronic brain-disease.

INTEMPERANCE AND THE TREATMENT OF DISEASE BY ALCOHOL.

A CIRCULAR has been issued by Dr. Burrows, President of the Royal College of Physicians, to a number of the leading medical men, calling attention to the tendency to intemperance engendered by the use of alcohol in disease, and asking for their support in guarding against this danger. The object is one likely to gain the sympathy of thoughtful practitioners. It will in due course be published, with the signatures attached, in the medical journals.

THE NORTHAMPTON GUARDIANS AND VACCINATION.

AT the meeting of the guardians of the Northampton Union on the 5th instant, a long discussion on vaccination took place. Dr. Stevens, Inspector of the Local Government Board, was present, and addressed the guardians on the means to be taken in consequence of the threatening aspect of the epidemic of small-pox. He stated that he had found that, of 1933 children born during the year ending September 30th, not 600 had been vaccinated. In the district of St. Giles's, there had been 31 deaths this year from small-pox, 23 of which had occurred in October and November. Most of the deaths had occurred in persons under 14 years of age; and in only one vaccinated individual had the disease proved fatal. In the subdistrict of All Saints, there had been four deaths—one only of them on a vaccinated infant. He plainly told the guardians that he thought "that the state of things was really a scandal." He urged the guardians to appoint at once persons to make a house-to-house visitation, beginning in localities where small-pox was pressing, issuing placards with a clear statement of what was required, showing that adults could be vaccinated or re-vaccinated gratis, and setting forth generally the law on the subject. A long discussion followed, and ultimately it was resolved, by a majority of nine against seven, to "send notices to all parents of children born between January 1871 and July 1872, and who appear from the registrar's returns to be unvaccinated"; and to "take compulsory measures against all such parents unless their children be vaccinated forthwith after the delivery of the notices." The suggestion to establish a house-to-house visitation was therefore not carried out; and, although the measure taken by the guardians is, so far as it goes, a good one, they have overlooked the necessity of providing for the vaccination of children above the age of infancy, notwithstanding that Dr. Stevens clearly pointed out to them that no fewer than fifteen of the deaths had occurred in individuals between 4 and 14 years of age.

THE COLLEGE OF SURGEONS AND MR. WASHINGTON EVANS.

IT will be in the recollection of the readers of the BRITISH MEDICAL JOURNAL that several months ago the attention of the authorities of the Royal College of Surgeons was called by us to the unprofessional pamphlets of Mr. George Washington Evans, of Reading, a member of that College. At the time, little was done in the matter, and the pamphlets were distributed widely, until professional and general feeling was so strongly expressed, that action was taken by the Council of the College, who appointed a committee to investigate and report. Sir James Paget, Bart., as chairman, submitted the following report at a meeting of the Council on the 14th inst.

"Your Committee—appointed on the 8th of June last, to consider and report to the Council upon the letter of the 4th of May last, from

Mr. J. P. Wilton, Honorary Secretary to the Gloucestershire Medical and Surgical Association, and the previous correspondence in relation to the pamphlets issued by Mr. George Washington Evans, of Reading, a Member of the College—have taken the subject into consideration at two meetings, viz., on the 5th of July last and on this date, and have agreed to the following Report; viz., That in the opinion of your Committee the pamphlets issued by Mr. George Washington Evans are, in the words of Clause 2, Section XVII, of the Bye-laws, 'prejudicial to the interest' and 'derogatory to the honour of the College', and 'disgraceful to the profession of surgery.' And that your Committee accordingly recommend that notice should be given to Mr. Evans that such is the opinion of the Council; and that if there be any further distribution of these or similar pamphlets, the Council will proceed to deal with him under Section XVII of the Bye-laws."

The Secretary was directed to furnish Mr. Wilton with a copy of the proceedings, and to acquaint Mr. Evans with the decision of the Council on his conduct, as above expressed.

ST. MARY'S HOSPITAL: PRESENTATION TO DR. SIBSON AND MR. LANE.

ON Wednesday, the 13th instant, a large number of the past and present students of St. Mary's Hospital met in the board-room to present a piece of plate to Dr. Sibson, and a handsome timepiece to Mr. Lane, on their retirement from the respective offices of physician and surgeon, after twenty years of valuable service in the school and hospital. The presentation was made, on behalf of the students, by Mr. Gascoyen, whose observations, together with the replies of Dr. Sibson and Mr. Lane, were received with warm demonstrations from the large number of students whom the occasion had brought together.

MR. EDWARD COCK.

AT a meeting of the Council of the Royal College of Surgeons on Thursday last, a letter from Mr. Cock was read, resigning his seat as a member of the Court of Examiners, to which he was elected in 1867, and requesting that he might not be nominated for re-election. Mr. Cock will be remembered and respected as a generous and impartial examiner. He will continue his connexion with the College as a member of the Dental Board.

SMALL-POX.

THIS disease has prevailed in the town of Gotha to such an extent that, in a population of 20,000, twenty-five cases have occurred daily, with a high percentage of mortality. The Government of Saxe Gotha, after consultation with the medical and magisterial authorities, has ordered a general vaccination of the inhabitants. For this purpose, the town has been divided into districts, each house of which has been visited by a medical man, accompanied by a police officer. More than three hundred persons have already died of small-pox there within the last few months.

INFLUENCE OF LIGHT ON CANE-SUGAR.

M. RAOULT has informed the Academy of Sciences, as the result of some researches which he has made, that cane-sugar becomes transformed into grape-sugar under the prolonged influence of light. Having dissolved 10 grammes of white sugar in 50 grammes of pure water, and boiled the solution for a few minutes, he placed equal portions in two white glass tubes, which were then hermetically closed. One was deposited in a dark place, while the other was exposed to light. Five months afterwards, the tubes were opened, and the contents of that which had been exposed to light gave the reaction of glucose.

SCOTLAND.

DR. JOHN G. M'KENDRICK delivered an excellent lecture on "The Growth and Nutrition of the Human Body," on the 7th instant, to a large attendance in the Museum of Science and Art, Edinburgh.

DR. ANGUS FRASER has been appointed Physician to the Aberdeen Infirmary, to succeed Dr. Harvey, resigned.

IT is stated in the *Scotsman* that twenty-eight ladies have matriculated at the University of Edinburgh, and that ten of them are students of medicine.

THE PROPOSED CONVALESCENT HOSPITAL FOR DUNDEE.

THE *Dundee Advertiser* states that Miss M. A. Baxter, of Balgavies, Ellangowan, has expressed a wish to be associated with her brother, Sir David Baxter, Bart., in the erection of the convalescent hospital for Dundee, and has offered to contribute £5,000 towards the building and its endowment. Attention is being directed to sites near the Balgay Hill and the Baxter Park as suitable for such an hospital.

GLASGOW LYING-IN HOSPITAL.

THE following gentlemen have been elected medical officers for the ensuing year, viz.:—*Consulting-Surgeon*—Dr. George Buchanan, Professor of Anatomy in Anderson's University; *Physicians-Accoucheur*—Dr. J. G. Wilson, Professor of Midwifery in Anderson's University, and Dr. R. D. Tannahill.

IRELAND.

THE Dublin Hospital for Incurables is suffering from lack of funds. Last board day ten patients were admitted, and the month's contributions amounted to the munificent sum of £12 : 5.

PATHOLOGICAL SOCIETY OF DUBLIN.

AT an adjourned general meeting of the Society, held on Saturday, December 9th, 1871, the following were elected office-bearers for the present session. *President*: Jolliffe Tufnell. *Vice-Presidents*: Thomas Beatty, Samuel Gordon, Edward Hamilton, Henry Kennedy, John Thomas Banks, and John Denham. *Council*: Robert Adams, Sir Dominic J. Corrigan, John Hamilton, Thomas Hayden, James S. Hughes, George Kidd, Robert Law, Benjamin G. M'Dowel, Robert M'Donnell, William Moore, George H. Porter, and James H. Wharton. *Honorary Secretary*: William Stokes. *Secretary and Treasurer*: Robert W. Smith. *Secretary for Foreign Correspondence*: Robert D. Lyons.

THE STREETS OF DUBLIN.

STREET-cleansing seems to be a science to the rudiments of which the Corporation of Dublin are only just awakening. As in most things Irish, there seems no half-heartedness in Dublin street-dirt. A local paper says: "Things are as bad in the most fashionable street as in the most backward slum. Everywhere it is sludge and mud, an all-pervading nastiness, which smears and smells and sticks, and can not be avoided, strive how you will. A handful of scavengers, with scrapers and brooms, face the slimy stream—so many Partingtons contending with the ocean." A committee of the Corporation has taken the matter up, and at a meeting this week decided on "prompt and energetic measures." Better late than never; and it is to be hoped that the committee will not relax its efforts till the Augean stable of "dirty Dublin" has been cleansed.

FEVER IN THE COUNTY GALWAY.

FEVER is raging badly in the district of Carrabrowne, county Galway, there being fifteen cases in one small village. The sanitary condition seems very wretched, and great apprehensions exist in the town of Galway, from its filthy state, of the results should the fever gain head there. The chairman of the Galway Union, at a recent meeting, combatted any special efforts in the direction of increased cleanliness by the argument that, as fever was often brought on by fear, he thought they should not become frightened. Nobody gave vent to the comment, that fever was considerably oftener produced through filth.

OUT-DOOR HOSPITAL RELIEF.

A CONFERENCE was held on Tuesday last at the house of the Society of Arts, John Street, Adelphi, under the auspices of the Council of the Charity Organisation Society, "on the best methods of checking the abuses now incidental to out-patient relief, with special reference to the expediency of extending the provident principle." The object of the conference was to discuss the province of the Poor-law, the dispensary, and the hospital, with reference to the sick poor, and to promote concerted and harmonious action among these agencies.

The chair was occupied by Mr. W. H. SMITH, M.P.; and there were present The Right Hon. James Stansfeld, M.P. (President of the new Board of Control), Sir Charles Trevelyan, Mr. Fairlie Clarke, Dr. Guy, Dr. Ford Anderson, Dr. Macfarlane, Dr. Mackenzie, Dr. Aldis, Colonel Fremantle, Mr. Samuel Gurney, Mr. Gurney Hoare, Mr. Charles Hoare, Hon. W. W. Vernon, Lord J. Percy, Rev. Harry Jones, Hon. A. Kinnaid, M.P., Rev. J. F. Kitto, Mr. E. Enfield, Mr. E. W. Holland, Mr. A. H. Hill, Mr. C. F. d'A. Orred, Mr. T. F. Buxton, Mr. G. Cowell, Rev. Harvey Brooks, Mr. T. E. Platten, and Mr. T. Holmes.

Mr. W. H. SMITH, M.P., said the Committee considered that it would have been expedient on some grounds that the discussion should have been postponed, but it was felt that the subject was not one which it was undesirable to consider at a period when men's hearts were filled with sorrow, and when they were, perhaps, more ready to give consideration to those means which should be made use of to alleviate sickness and disease in others than they would be at a period of general and entire prosperity. In 1854, Dr. Guy read a paper in the Statistical Society, in which he drew attention to the magnitude of the work which was going on in connexion with the London hospitals, and to the want of regulation, of system, and of organisation in the administration of charity at the hospitals. Nothing, however, had been done; and it was now felt that some system should be devised by which the wants of those who were sick and suffering should be relieved, while the largely pauperising element mixed up with the present arrangements should be, if possible, removed. Practically, the out-patient wards of the hospitals were open to all comers. No matter how many patients sought relief; no matter whether the sickness was severe or light; no matter whether the means of the applicants were large or small, they appealed to the physician or surgeon, and they were seen in their turn. It was impossible to deny that there were great evils mixed up with this work of charity. Very many persons were brought together, some suffering under severe illness, some slightly indisposed, some suffering from that imaginary malady which many of us were afflicted with from time to time, and which required a little fresh air and exercise. But there could be no question whatever that one great evil existed—that acute sickness was brought into contact with persons who were predisposed to acquire sickness, and that the seeds of disease were spread from the out-wards all over the metropolis. There was another evil existing which was also a very serious one—namely, the absence of check and control of the patients, so as to distinguish between persons who possessed means and who ought to make provision against the time of sickness, and those who were really objects of charity. That state of things was a distinct invitation to pauperism, and injuriously affected the persons who sought relief, and who ought not to obtain it gratuitously. On the other side of the picture, it was impossible not to admit that the position of a person of limited means in London or in the great centres of industry in time of sickness was a sad one, and full of difficulty. He had himself had much experience of the great difficulties with which the most respectable and independent of the working classes of London had to contend in being called upon to pay bills for medical attendance, amounting to £5, £10, and in some cases to £30. It was impossible not to feel that it was very hard for those who earned 30s. or £2 a week to pay such bills. Some system, some organisation or arrangement, was therefore necessary under which an independent working-man in this metropolis or in any part of the country could find for himself and his family, at his own proper cost, without loss of independence or self-respect, provision for the day of sickness. He would not indicate the way in which that provision should be made; but he could not help pointing out that, on the one hand, there did exist a vast amount of evil and danger to health from the present system, and that, on the other hand, there did not exist means by which the working-man—the individual who was not a pauper, but who was not in receipt of a considerable income—could make provision for his necessities in time of sickness. There was no machinery now in existence whereby such provision was made consistently with the self-respect and health of the individual and his family, and the question was one of wide interest and importance to the future welfare of the country.

Letters expressing regret for inability to attend were received from the Earl of Lichfield, the Earl of Derby, the Bishop of London, Sir W. Fergusson, Sir J. Paget, Mr. Corrance, etc.

Mr. FAIRLIE CLARKE, Honorary Secretary of the Medical Committee of the Charity Organisation Society, then read a paper in which it was stated that last year the out-patients at 15 general hospitals were 590,151, at 34 general dispensaries 305,491, at 39 special hospitals and dispensaries 261,374; making a total of 1,157,016, or more than one-fourth of the whole inhabitants of London receiving gratuitous medicine and attendance at the metropolitan hospitals and dispensaries. In addition there were 17 hospitals and dispensaries which made no return, and of those which were assisted by the medical service of the Poor-law. Surely it could not be necessary that one in four of the inhabitants of London should depend upon public charity for medicine and attendance. No doubt a large portion of these persons were well able to pay a private practitioner, and the remainder could surely pay the six or eight shillings a year which was called for by the provident dispensary. The provident principle had already been tried in the metropolis, but had languished in consequence of the competition of the free charities. In the provinces, on the contrary, they had worked well, especially in the manufacturing districts. In Derby there were two, one with 4,000, the other with 1,100 members; so that 1 in 7 were enrolled in provident dispensaries. The same proportions would give in London 450,000 persons enrolled in provident dispensaries, whereas, as a matter of fact, there were only 25,000. The Charity Organisation Society suggested that the existing free dispensaries should at once be converted into provident dispensaries, and be affiliated with the hospitals of the district, so that the members of the provident societies should be eligible when necessary for admission to the hospitals.

Sir C. TREVELYAN moved—"That this conference is of opinion that there exists a great and increasing abuse of the out-door relief at the various hospitals and dispensaries of the metropolis which urgently requires a remedy."—Dr. MEADOWS seconded the resolution, which was adopted after a discussion, in which Mr. Pownall, Dr. Rogers, Dr. Guy, Mr. Holland, Dr. Aldis, and Mr. Kinnaid, M.P., took part.

Dr. ACLAND moved—"That, in the opinion of this conference, the evils inseparable from the system of gratuitous medical relief, administered at the out-door department of hospitals and in free dispensaries, can be in great measure met by the establishment on a large scale of provident dispensaries, not only in the metropolis, but throughout the kingdom, and by improved administration of the Poor-law medical relief."—The resolution was seconded by the Rev. J. F. KITTO.

Mr. HARDY cited the case of the Marylebone Provident Dispensary, as showing that the provident principle did not receive much encouragement in London. The public had subscribed only £50 last year to that institution.

Mr. STANSFELD, M.P., who was called on by the Chairman, after a few remarks, said: I should like to express my general sympathy with the views of those who have called the conference together, and with the purposes of the Charity Organisation Society, to which I have given much and close attention, though only for a period of nine months past. You, sir, and probably every one whom I have the honour to address, have doubtless given a much longer attention to this great and important subject. But what has struck me has been this: the close connexion between the problem of the best administration of national Poor-law and the problem of the best administration of the national voluntary charity of this country. They are both in one sense a charity. The one is the organised, although not always the best organised, charity of the nation collectively. The other is that very complex system which is founded on the generosity and liberality of successive generations, to which this Society seeks to give something like an organisation fitting and suited to the necessities and exigencies of the time. Now, you have felt, and I have felt, this very strongly. The principle of the Poor-law is a very benevolent one; it is one that reflects immense credit on the country and its history; and it is this: that no subject of this realm shall suffer for want of the necessities of life—that if a case of positive necessity is brought home to those who have to administer the Poor-law, that that case, deserving or undeserving, must be relieved. Well, in the administration of that law we have found—as you have found in the administration of charities—that it is open to very great abuse. It is a principle that we cannot abandon, any more than you can interfere with the motives and inducements of those who wish to give to those who want; but it is a principle the carrying out of which must be watched with great patience and care; so much so, indeed, that I believe a great many of those who have given their minds with the closest attention to the question of Poor-law administration, are almost inclined to say to themselves and the public that the main functions of those who have the administration of that law is to take care to do as little harm as possible. Now I know that that is a very great

and difficult function, and it is one which occupies my daily thought. But I am not prepared, and you have shown that you are not prepared, to be content with such a solution of the Poor-law difficulty, or of that of the administration of voluntary charity. To be content with such a solution, so far as the Poor-law is concerned, would be simply to apply the workhouse test, and to refuse out-door relief, no matter how much required or what the exigency of the case, and, in the administration and organisation of voluntary charity, to give the attempt up altogether. I hold such philosophy to be wholly insufficient for the facts with which we have to deal, and with the conditions of mind and belief fortunately of our country. I am fully conscious of the extreme difficulty of the problem. It is a problem, as has been well said, of very great complexity. Our first duty in administering a charitable law, or great voluntary charities, is, as far as possible, to take care that we do not do mischief, and to be actuated by a desire to do good. It is, I say, necessary that we should carry our labours a step farther, and endeavour, by every amount of consideration and effort that may be necessary in devising an organisation, to do something more than minimise the evils of a system which is intended to work positive good. Now, while it is hardly fitting that I should deal with the details of the question, I should like to say I am unable to see how, so far as the administration of the Poor-law is concerned, we can succeed in solving our problem without your assistance. I think there are relations between the administration of the Poor-law of this country and the administration of its voluntary charities which are beginning to dawn upon people's minds, but to which we do not see our way quite clearly as yet. But they will have to be considered, if we would in the future make even the administration of the Poor-law adapted to the conditions and exigencies of the time. And I look with great sympathy upon the establishment and operation of the Charity Organisation Society, because it has set itself to that task. I trust that those who conduct its operations here and elsewhere will endeavour to think out that part of the subject; and I can only assure them, so far as the department with which I have the honour to be connected is concerned, that I shall always be ready, and more than ready—thankful—to discuss with them any practical proposals which may occur to them with that object in view. You must allow me to refer for a moment to the observations which have been made by Dr. Acland. While not accepting the high eulogium which he was pleased to pass upon me, I can say that my thoughts are given with no sparing of time or labour to the question of the administration of the department with which I am occupied just now, and also to the question of future legislation. It is not for me, of course, to undertake to commit my colleagues upon the subject of the legislative measures of next Session, or to anticipate what may be the views of Parliament upon the subject; but I may, perhaps, say to you without indiscretion that, as far as I am myself concerned, I should be much disappointed if an opportunity were not to offer itself to me of putting forward some legislative proposals next Session upon the subject of the sanitary administration of the country; and that I am at this time busily engaged, at any rate, in putting into shape proposals which I hope to submit to my colleagues upon that subject. The relations between the administration of the Poor-law and the administration of what may be called the health of the country are intimate and known to us all, and are evidently well understood by those who took part in the discussion to-day. I was very much struck by the suggestion of Dr. Acland, that it might be well in the organisation of the hospitals and infirmaries, whether belonging to unions, or parishes, or to towns, that provision should be made for the treatment in the same building and under the same management, not only for those who were professedly and acknowledgedly paupers, but also of the great mass of the community who could not afford in their own homes to secure the conveniences and accommodation which might be afforded to them in the hospitals, even if they contributed somewhat to the support of those institutions. That suggestion shall have my careful consideration. I do not propose to continue the discussion. I was desirous simply of accounting for my presence on this occasion, which I believe is not a very usual circumstance; but I may say I almost volunteered to come. I felt strongly the usefulness of this discussion. I was convinced that great good would come of it, and also that I should derive much more benefit from it by being here than by reading any report of the discussion, however full and accurate it might be. I have only to thank you for the kind manner in which you have listened to the few remarks which I have made.

The CHAIRMAN said he was anxious to state, before putting the resolution, that he was not opposed to any extension of the hospital system. What he was anxious for was that those excellent institutions should be made more efficient and more perfect in their administration for the relief of the sick poor than they now were. He had been asked to state that the Charity Organisation Society was ready to assist the managers of the hospitals by making inquiries as to the cases registered

on the books of their out-patient wards. He had taken some trouble some years ago to investigate such cases, and found that twenty per cent. of the cases so registered had given false addresses; so that it was impossible to trace them. The great object they all had in view was to do the greatest amount of good to the greatest number. They desired, so far as they could, to make the poor of the country self-reliant and self-dependent, to place them in a position in which they could depend upon their own wages for their own support; and for that purpose it was necessary to remove from them temptation, and to teach them to rely on their own strong arms and their own providence, so that they might make provision for one of those contingencies of life to which all were exposed, and which it was as necessary to provide against as against fire or any other calamity which was common to all.

The resolution was put and carried, and the proceedings terminated with a cordial vote of thanks to the chairman.

SPECIAL REPORT ON THE SANITARY STATE OF SCARBOROUGH.

[Continued from page 677.]

THE results of the examination of the suspected waters in use at Londesborough Lodge, which are given below, are opposed to the idea that they are contaminated by sewage-matter, or that they are likely to have been the cause of enteric fever in the members of the Scarborough party. The water obtained from the pump contains a larger amount of free ammonia than is found in good water; but it appears to have been used solely for washing purposes, and was not likely to reach the table in any shape. Besides, it is possible that the free ammonia may be otherwise accounted for than by sewage-contamination. Irrespectively of the special interest in the results of the examination of these waters, the following report of Dr. Ferrier, who has had large experience in the application of the zymotic test, will be found of value.

I have been requested (says Dr. Ferrier) to examine, chiefly in regard to its zymotic properties, the so-called Bristol water, such as was in use as the ordinary drinking-water in the household of Lord Londesborough during the visit of H.R.H. the Prince of Wales. The water is said to be obtained from the Hot Wells at Clifton, and is put into bottles while hot, in which it is stated to remain perfectly clear and good for many years.

The sample sent me was remarkably clear and free from sediment, and without odour or taste. Microscopical examination failed to detect any indications of the presence of organic matter or organisms. It was tested as to its zymotic or septic power, after the method described in the Thirteenth Report of the Medical Officer of the Privy Council. With regard to the theory and significance of this physiological test of the purity of water, it will be necessary to explain the principles on which it is founded, and the method of carrying it out.

It consists in the addition of a few drops of the water under investigation to a relatively large quantity of an organic fluid particularly prone to decomposition (but which, without this addition, will remain perfectly unchanged for an indefinite period), and in observing the comparative rapidity with which the liquid becomes altered, and the amount of development of zymotic organisms which the water is capable of effecting. Reasons were given in Dr. Sanderson's report for regarding the organisms (chiefly bacteria), whose existence is thus manifested as the pioneers, if not the active agents, in the putrefaction of nitrogenous substances. My own subsequent investigations have convinced me that putrefaction is entirely due to these organisms. My experiments have shown, in direct contradiction to the recent experiments of Hoppe-Seyler and others, that such putrescible fluids as hydrocele fluid, when collected in such a manner as to avoid contamination with septic germs, may be subjected to the prolonged action of heat which is stated of itself to be able to induce putrefaction, and yet remain after the full period in which such changes are said to take place entirely unaltered, and as free from signs of putrefaction as when collected; whereas the same fluid, when the same precautions against contamination are not observed, becomes putrid in the course of a week. The natural vehicle for the distribution of these septic germs, apart from direct contact, is water. Their existence in water cannot be demonstrated by any other method than the zymotic test, and so great is the delicacy of the test that but very few waters can stand it successfully.

So great, however, are the differences in the zymotic property of different waters, as the results given below will illustrate, that, when equal quantities of the test-liquid are impregnated with an exactly

equal amount of the suspected waters, and placed under the same conditions, the evolution of organisms and the changes in the test-liquids effected by the different waters will, in a given time, vary from absolute barrenness and crystalline clearness of the test-liquid, to a dense milky-white opacity and thick bacteria scum.

I may say that from numerous experiments I have found that the zymotic properties of water stand in close quantitative relation to the degree of contamination with sewage and decomposing organic matter generally. The zymotic test, therefore, taken along with chemical analysis, will indicate not merely the amount of contamination with septic products, but also the amount of activity of such water in inducing still further similar changes in organic liquids and tissues. In typhoid stools, at the period at which they are said to be most active, myriads of bacteria are to be seen.

It must not, however, be understood from the remarks made, that there is any causal connexion implied between the amount of bacteria in water and disease. All that can be as yet definitely stated is that, if water be contaminated with sewage and typhoid dejections, it must also contain these organisms in large amount. And if perchance such diseases as typhoid fever be disseminated through the agency of specific germs in water contaminated with the dejections, we may yet be able to detect them in the myriads of organisms developed by the method above described.

I have selected, as a standard of comparison, water obtained by the fusion of a clear block of Wenham Lake ice. In the first set of experiments, I compared the Bristol water with this and with a specimen of water supplied by one of the metropolitan water-companies. Three charged eprouvettes, containing five cubic *centimètres* of Pasteur's solution (containing sugar, tartrate of ammonia, and yeast-ash), were impregnated on December 8th with five drops, from a capillary pipette, of Wenham Lake ice-water, Bristol water, and London water. They were placed in an incubator standing at an uniform temperature of 100 deg. F. They were examined on December 11th, with the following result.

1. Eprouvette impregnated with Wenham Lake ice-water: Perfectly clear, and of crystalline purity, without any indication of organisms.

2. Eprouvette with Bristol water: Also clear; but, when carefully compared with the Wenham Lake ice eprouvette, a *very* slight diminution of the transparency could be detected.

3. Eprouvette with water of London water-company: Test-liquid quite opalescent, and covered with a thick bacteria-scum.

The results obtained were very striking, and indicate that the Bristol water is a water of remarkable purity, approaching very nearly the standard of Wenham Lake ice-water. These results, in my opinion, leave no ground for attributing any noxious effects to the Bristol water, and entirely discountenance the idea of sewage-contamination.

I also received for examination samples (1) of water from a pump in the kitchen at Londesborough Lodge, (2) Scarborough town water from the supply-pipes at Londesborough Lodge, and (3) the same water from the supply-pipes at Mr. Dale's house.

The pump-water had a slightly turbid appearance. It had no appreciable odour or taste. Microscopical examination revealed the presence of a considerable quantity of suspended particles of granular matter, but no organisms. The Scarborough town water was clear; but in both specimens a considerable quantity of deposit was observed. In the deposit—particularly in that from Mr. Dale's house—I detected specimens of *anguillula fluviatilis*, one or two *entomostraca*, numerous *diatoms* and *mycelium filaments*, together with a considerable quantity of organic *débris*.

The zymotic test was applied in the manner above described, and a comparison instituted between the Bristol water, the Scarborough waters, and a specimen of distilled water slightly contaminated with water supplied by the — London Water Company. At the end of 72 hours, as in the former case, after cultivation at a temperature of 100 deg. Fahr., the results were as follows.

Eprouvette with Bristol water.

„ „ Scarborough water from Lon. Lodge.

„ „ „ „ Mr. Dale's house.

„ „ water from pump at Londes. Lodge.

„ „ contaminated distilled water.

} Test liquid in
all quite clear,
and without
any apprecia-
ble difference
between them.
} Distinct zy-
motic haze.

These results show that the Scarborough water, though open to considerable improvement in regard to its filtration, comes quite up to the highest standard of purity, and leaves little or nothing to be desired in regard to its freedom from zymotic germs.

As in the case of the Bristol water, I have no hesitation in saying that it appears to me thoroughly vindicated from all suspicion of sewage-

contamination, and that there is no reason for considering the water at Londesborough Lodge inferior to the water supplied to the rest of the town.

DAVID FERRIER, M.D.

Chemical analyses have been specially made for us of—

1. Bristol water from Londesborough Lodge;
2. Water from the pump at Londesborough Lodge;
3. Town water from the pipes at Londesborough Lodge;
4. Town water from the pipes at Mr. Dale's house.

The following are the results in grains per gallon.

| No. | Solid Contents. | | | Free Ammonia. | Organic Nitrogen. |
|----------|-----------------|-----------|--------|---------------|-------------------|
| | Fixed. | Volatile. | Total. | | |
| No. 1... | 56 | 22.4 | 78.4 | .0007 | .0017 |
| No. 2... | 7 | 5.6 | 12.6 | .0224 | .0086 |
| No. 3... | 15.4 | 14 | 29.4 | .0007 | .0017 |
| No. 4... | 16.8 | 12.6 | 29.4 | .0007 | .0017 |

These results show that the samples Nos. 1, 3, and 4, are of excellent quality; but the amount of free ammonia in the sample No. 2 suggests the probability of contamination with drainage from a cesspool, or some similar receptacle of domestic refuse. This water is, moreover, decidedly turbid.

The proportions are also stated below as parts in 100,000, conformably with the official reports of the Rivers Pollution Commissioners.

| No. | Solid Contents. | | | Free Ammonia. | Organic Nitrogen. |
|----------|-----------------|-----------|--------|---------------|-------------------|
| | Fixed. | Volatile. | Total. | | |
| No. 1... | 80 | 32 | 112 | .001 | .002 |
| No. 2... | 10 | 8 | 18 | .032 | .010 |
| No. 3... | 22 | 20 | 42 | .001 | .002 |
| No. 4... | 24 | 26 | 42 | .001 | .002 |

We select the following account from amongst the numerous communications which have been received by us on the subject of the sanitary condition of Scarborough. Our correspondent, who, from his connexion with public medical practice at Scarborough down to a recent period, is entitled to attention, gives the results of his experience during three and a half years' continuous observation of the sanitary state of the town.

He says that this favourite watering-place is in need of many improvements, and that enteric fever is always to be found there to a greater or less extent. He qualifies the statement by avowing that his professional acquaintance with facts has been almost entirely confined to the northern part, and that he is therefore unable to say anything definite concerning the south side, which is the newer and more fashionable part of the town, although he has heard more than once that its drainage system and other sanitary arrangements are anything but perfect. The district which is most fertile in disease is to the north side of Westborough, Newborough, and Eastborough, together with yards running off the south side of Newborough and Eastborough, and the parts of the town called Landside and Quay Street. Falsgrave, a suburb of Scarborough, about a mile to the west of the Bar, also furnishes many cases.

The drains are not kept in proper order in many of the worst parts of the old town, nuisances and all sorts of organic matters being allowed frequently to block up for a long time the iron gratings at the points where the street-gutters lead into the underground drains; and this, in hot weather, gives rise to most disgusting effluvia. The blocking of the drains, says our informant, has been most common in the streets that are steep, and where water and other fluids have carried the solid matters before them in greater quantity than in those streets which are more level. The organic matters very frequently consisted of fish and the material used to bait the fishermen's lines. The drains at the gratings often give issue to very offensive odours, independent of the organic matters collected on them; and our correspondent says he has frequently noticed, on the sands of the south side, near the Grand Hotel, sewage running across the sands into the sea, caused either by the exit-drainage being leaky, or the drains not being carried far enough out. Offensive smells from the drains in the yards and closes are also frequently noticeable, the cause being an infrequency and insufficiency of flushing. The water-supply is obtained from a distance of three miles; but in the old town it appears that many of the houses must depend on their supply from neighbouring pumps, which are sometimes found to be in the immediate vicinity of privies and pigstyes. Privies are often built quite close to the houses, and, in the yards, are common to different dwellings. They are not, as a rule, in a good condition; and often give rise to very unpleasant effluvia.

The better parts of the old town, consisting of streets chiefly in-

habited by the more respectable members of the working and artisan class, are of recent construction, and are built on a tract of ground running east and west, at the north part of the old town. This part is still called the common, owing to its having been one for many years. On remarking the unusual preponderance of zymotic disease in this quarter, our correspondent was informed, by one who knew Scarborough well, that, up to a few years back, rubbish of various kinds had been carted on to this land and left there, and that the houses had been built without the deposit having been perfectly removed. If this be true, it is quite easy to see how hot weather would cause emanations of a very unhealthy character to arise through the flooring of the houses, supposing the deposit became damp in the wet seasons of the year; and these houses had no cellar, the wooden floors being merely a few inches above the soil. The worst cases of enteric and scarlet fever occurred in this quarter.

Our correspondent next points out a state of things which must exercise an unfavourable effect on the neighbouring inhabitants. The open ash-pits and middens in the worst parts of the old town exist in considerable numbers, and often make known that existence by the emission of most offensive smells. In these receptacles, refuse of all kinds is put, including in many cases faecal matter. The contents of these uncovered ash-pits, when exposed to the action of the sun in hot weather, are frequently found to be most offensive. Piggeries exist in several parts of the old town, and, in more than one instance, in the middle of a thickly populated part. On two or three occasions our correspondent has brought these evils under the notice of the Inspector of Nuisances, but nothing, as far as he has seen, was ever done to remedy them, except in a temporary way. With regard to the stench often emitted from the drains, our correspondent attributes this in a certain degree to the action of the tide forcing the gases back; and expresses an opinion that, perhaps, this could not be altogether provided against. But, in addition to this, he has been led from his own observation to believe that many of the drains are insufficiently flushed. The water-supply from Cayton, which, as already observed, is two miles and a half from the centre of the old town, is good; but it is not laid on to the houses in some districts, and the supply is obtained from pumps, where the hard water of the wells is liable to contamination by sewage. In 1868, our correspondent attended about thirty cases of typhoid fever; and, in 1869, scarlatina was unusually prevalent, assuming in many cases quite a malignant type, inasmuch as three deaths from this disease have been known to occur in a house within a few days of each other. The part of Scarborough already alluded to as the common, was more afflicted with scarlatina than any other district of a similar size; and typhoid fever was also, our correspondent thinks, in preponderance in this quarter. A plan of Scarborough will show that the streets where these diseases obtained greater sway lie close together; and this is the part where the refuse is said to have been deposited, and not to have been properly cleared away when the ground was built upon. These streets are Upper and Lower Hoxton Road, Upper and Lower Nelson Street, Cambridge Street, Bow Street, Brook Square, Brook Street, Albion Street, and Barwick Street, and, a few hundred yards west of these streets, Roscoe Street, where some very bad and fatal cases of scarlatina were attended by our correspondent. But, indeed, cases both of typhoid and scarlatina occurred in every street of the old town during his residence there, although many more of the latter than of the former disease. I do not believe, the writer says, that during my time in Scarborough a single close or yard in the place failed to furnish cases of scarlatina; and in most of them, if not in all, fatal cases of this affection occurred. Our correspondent is not able to speak from experience of Londesborough Lodge or its vicinity; neither does he profess to know much professionally of the neighbouring villages, excepting Falsgrave, which was comparatively healthy. There is no medical officer of health in Scarborough; and recent events, our correspondent suggests, will have demonstrated the need of what this town should have possessed years ago.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEDICAL MEETINGS.

THE next meeting of the above Society will be held at the Greyhound Hotel, Croydon, on Thursday, December 21st. Dr. COLES will take the Chair at 4 P.M.

The dinner will take place at 6 P.M.

Papers, etc., are promised by Mr. S. Lee Rymer, Dr. Jeaffreson, the Chairman, etc.

HENRY T. LANCHESTER, M.D., *Honorary Secretary.*

Croydon, December 6th, 1871.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Poor-Law Medical Officers and Private Practice.—The Vacant Physicianship at the Great Northern Hospital.

A QUESTION of much interest to Poor-law medical officers has recently been under discussion by the Board of Guardians for the Toxteth Park Union. The district officers in that parish were originally appointed under the usual conditions—viz., a fixed salary, with liberty to engage in private practice. A few years ago, however, the guardians resolved to pay a larger salary, with the understanding that the medical officers should devote their entire services to the parish, excluding any other professional engagements. There appears to have been a difference of opinion as to the comparative merits of the two plans; and, at their last meeting, a majority of the Board decided that for the future the original system of allowing private practice should be adopted. In the parish of Liverpool, which may be considered not only one of the largest, but also one of the best regulated unions in the kingdom, especially as regards the medical department, each of the two plans has been tried for several years respectively. The result has been to satisfy the Select Vestry that, on the whole, the plan of allowing their medical officers to carry on private practice is the more satisfactory. The appointments are sought for by a class of practitioners of longer standing, and such as are more likely to retain the office somewhat permanently. Their position as established practitioners is considered to be a guarantee for their professional efficiency, and for a deeper feeling of responsibility than may be felt by young beginners, who perhaps “are here to-day and gone to-morrow,” and who frequently take the appointment as a temporary expedient only.

The election of Dr. Glynn as Physician to the Royal Infirmary has created another vacancy at the Northern Hospital. The existing laws of this institution render any candidate ineligible who has not been in actual practice for three years, or who has within six months of the date of appointment practised midwifery or pharmacy. The stringency of this regulation has proved so deterrent to applicants, that, on the last occasion when a vacancy was advertised, not a single candidate offered himself. To remedy this, it was in contemplation to remove all restrictions whatever beyond the possession of a physician's diploma, and thus to throw open the appointment to all grades of the profession. This proposal, however, was disapproved of by the profession of the town, as calculated to lower the status of the office and the *prestige* of the institution; and the trustees, in deference, no doubt, to an expression of opinion at a recent meeting of the Medical Institution, have given notice of a modification of the laws, which reduces the requirement as to previous practice from three years to two, and removes altogether the restriction as to midwifery and pharmacy prior to the appointment—retaining, however, the requirement that these branches of practice shall be relinquished by the successful candidate from the time of his election. Under this more reasonable arrangement, there is little reason to fear that eligible candidates will not be forthcoming.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

St. Mary's Hospital and the Royal Infirmary.—Ovariectomy.

I SPOKE in my last letter of the proposed amalgamation of St. Mary's Hospital and the Royal Infirmary. I have since personally inspected St. Mary's Hospital, and feel that one or two of my former statements require qualification. In the first place, St. Mary's Hospital is not practically a maternity hospital at all, for, the number of beds being inadequate to the demand, there is no room for lying-in women; and, in the second place, the sanitary aspect and construction of the hospital are so bad as to render it absolutely necessary that it should be moved to more suitable premises. This will doubtless be carried out, and the more readily as they possess property to the amount of £40,000; and, if the amalgamation with the Infirmary do not take place, they will unquestionably build elsewhere. Indeed, the vicinity of Stevenson's Square has been talked of for the purpose.

As a sample of the work done at this hospital, I may mention that there were six operations last Wednesday, including excision of the hip, vaginal lithotomy, excision of the elbow, and vesico-vaginal fistula. Mr. Whitehead, who performed the resection, makes little use of splints, simply placing the limb in a convenient position, and using

sandbags to keep the muscles quiet. In the case of excision of the hip, which was performed upon a little girl six years of age, he secured the feet by a crossbar attached to the foot-rail of the bed, so as to ensure equal length in the two limbs, leaving the leg otherwise quite free.

It is certainly remarkable that, with such bad sanitary surroundings (their nearest neighbour is a choked up *cul-de-sac* of a pestilent canal), the surgeons of this hospital should have had such success with ovariotomy. Thus they have had six successful cases this year, out of a total of seven—a result which Dr. Lloyd Roberts and his colleagues largely attribute to seeking favourable meteorological conditions for the operation. At the present moment, we learn, there are seven cases at the hospital waiting to be operated upon, the present season not being considered suitable.

VIENNA.

[FROM OUR OWN CORRESPONDENT.]

The General Hospital.—Rare Form of Cardiac Hypertrophy.—Extra-uterine Foetation.

IT is now extremely cold for so early a part of the winter, and the cold already equals the most intense of last winter in England. Under this trial, however, the wards and lecture-rooms in the General Hospital are warm and comfortable, but not stuffy, and there is a total absence of hospital odour. Considering that one hundred and fifty years have elapsed since this hospital was built, its construction reflects the greatest credit on the enlightened architect. Whether this excellence is due solely to the plan of spreading the building and dividing it into separate divisions, or not, it is difficult to say, but no doubt it is largely due to it. The double windows, too, enable the ventilation to be carried on excellently. One of the outer upper divisions is inclined inwards, and admits the air into the space betwixt the two windows, while one of the upper divisions of the inner window consists of a metal rose. Thus anything like a direct draught is avoided—one of the objections to the open-window system most strenuously urged. That there is no draught down on the patients' heads here, I can testify from repeated observations. The air, too, is warmed by being first admitted into the space betwixt the outer and inner window, and again by the metal rose, which is, of course, of the temperature of the ward. In the clinical medicine lecture-room, the patients are wheeled directly from the adjoining ward in their beds, without disturbance or exposure to the draught of a passage or corridor. This plan, too, enables the patient to be seen by all the class; and with such large classes as are here, no other plan could achieve this; while the Professor (Duchek) lectures and draws the outline of the internal organs on the skin with a black crayon. How far all these advantages are neutralised, or even more than counterbalanced by the prolonged exposure—of a rheumatic fever patient with pericarditis, etc., for instance—is highly questionable. But a great deal of the advantage of Vienna lies in its material, as seen very well in the laryngoscopic class. What an advantage it must be to have a large *clientèle* of patients all well trained to hold themselves steady under examination, must be obvious even to a mind of the most unimaginative character. When the patients are being examined, twelve or fourteen at a time, and putting their vocal cords on the stretch by a prolonged A, which sounds extremely like the bleat of a sheep, it is almost difficult to persuade oneself that there is not a flock of ewes and lambs in the neighbourhood.

A very rare form of cardiac hypertrophy presented itself in the dead-house lately. It was that single variety which is found without obstruction to the flow of blood in one form or another, and is alone entitled to be considered as a disease *per se*. Niemeyer describes it as being found in commercial travellers who eat and drink a great deal; and Oppolzer attributes it to more active and more frequent contraction of the heart from the action of alcohol, while at the same time he mentions its extreme rarity. The patient was a man of unusual corpulence, and died from a rupture of the middle left cerebral artery. There was no atheroma of the vessels; the kidneys were merely slightly infiltrated with fat, but very little; there was no obstruction in the aorta; there was no valvular disease, and yet the heart was at least twice the ordinary size; the walls of the left ventricle were massive and perfect in their structural integrity. It was obvious that the hypertrophied heart had been too powerful for the cerebral vessels, and thus led directly to the patient's death. On inquiring as to the causation of this singular hypertrophy, the answer given was that the man had been a great eater and drinker, and that it was an instance of the form of hypertrophy described by Niemeyer under that head. The great rarity of hypertrophy of the heart as a disease itself is now universally admitted. Flint, in his work on Heart-Disease, gives a case of this form of hypertrophy; and the oozing of blood in the agony mentioned by him was also found in the

case here, as well as the effusion of blood on opening the calvarium. In Flint's case, the patient was a young man of active, and apparently of regular habits; and the disease is even more unaccountable than in the case here.

A case of extra-uterine foetation was recently admitted into the Vienna Hospital. When the patient was dying, it was determined to make an effort to save the child. The Cæsarean operation was performed, and the child gasped once or twice, but did not show further signs of life. The child was found quite free in the peritoneal cavity, and the *post mortem* examination revealed the fact that the impregnated ovum had dropped into the fold of Douglas, and attached itself to the peritoneum. The umbilical cord was found surrounding the uterus in several coils, while it is supposed that the child escaped from the membranes two or three months ago. The Fallopian tube was so much spread out as to be undistinguishable as to its distal termination. The parts will be subjected to a careful examination, in order to see how the placenta became formed, and the vascular supply acquired from parts not originally destined for the purpose. As evidencing the innate power of self-support and growth in the impregnated ovum, without the aid of the organ specially furnished for its reception and growth, the case is one of no ordinary interest.

REPORTS OF SOCIETIES.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, DECEMBER 8TH, 1871.

JAMES H. WHARTON, M.D., President, in the Chair.

President's Address.—The PRESIDENT delivered an address inaugural to the present session. He commenced by a reference to the good work done by the Society even thirty years ago, enumerating the most important communications made at that time by the leading surgeons of Ireland. Yet, notwithstanding what had been already achieved, he believed there was still abundant opportunity for the Surgical Society, and kindred associations, to aid in the advancement of medical science. Among those topics to which the attention of the members might most usefully be directed, the President particularised the subjects of the treatment of cancer; the modes of arresting hæmorrhage, especially that of torsion; the section of the neck of the femur in cases of bony ankylosis of the hip-joint; the treatment of croup by tracheotomy, as advocated by the illustrious Trousseau; and the great subject of hygiene, in all its bearings. Dr. Wharton's address concluded with some general remarks as to the method of working to be pursued in the coming session, and with an expression of his sense of the honour done him in being selected to fill the presidential chair of the Society.

Rectal Polypi.—Mr. CROLY presented two polypi of the rectum which he had recently removed from a very young girl. Repeated hæmorrhages had attracted her mother's attention. The larger of the two tumours was highly vascular, and was attached to the mucous membrane by a long pedicle.

Mammary Tumour.—An example of chronic mammary tumour was also shown by Mr. CROLY. He had removed the growth from the left breast of a woman, aged 35. That the case deserved the name of "chronic", appeared from the affection having been of two years' standing. A smaller tumour of the same kind had lately commenced to grow in the right mamma.

Disease of the Tibia, etc.—Mr. CROLY exhibited a section of the tibia and fibula of a young man, in whose case he had performed amputation through the lower third of the femur for disease of the tibia. The morbid process had extended to the knee-joint, for its cartilages were found to be ulcerated.

Radical Cure of Hernia, etc.—Mr. JOLLIFFE TUFNELL described a case illustrative of Syme's modification of Wutzer's operation for the radical cure of hernia. The patient, a butler, was 37 years of age, but he had experienced laxity of the abdominal rings from early childhood. Some time ago, a hernia came down on the left side; this was afterwards increased by the occurrence of long-continued bronchitis, and finally became irreducible. In 1869, Mr. Tufnell for the first time saw the case. There was now a large scrotal entero-epiplocele on the left side. In accordance with the patient's express wish, an operation for the radical cure was performed under chloroform on the 18th of May last. The steps of the operation were identical with the procedure recommended by Mr. Syme. On June 20th, convalescence was completed. Mr. Tufnell examined the parts again on December 5th, and at that date no trace of hernial protrusion could be detected on the left side. On the opposite side, however, an increasing tendency to relaxation was noticed, and the hernia there had become almost scrotal. In

concluding the history of this interesting case, Mr. Tufnell briefly summed up the advantages of the operation, and referred to Dr. Porter's case, published in the *Dublin Quarterly Journal* for 1863.—Dr. PORTER had found the operation as modified by Mr. Syme a most satisfactory one. Its simplicity was a leading point in its favour. He believed that even in cases where a radical cure was not effected by its means, the patient was placed in a better condition for treatment by trusses.—Dr. BUTCHER would observe caution in extending operative action as far as the internal ring, and so wounding the peritoneum proper. The portion of this serous membrane that had become invaginated in the canal, in his opinion, lost its character as a delicate structure, and might therefore bear injury without much risk of peritonitis being incurred.—Mr. CROLY alluded to the small mortality after Wutzer's or Syme's operation, and urged the more frequent adoption of the radical cure by Irish surgeons. He thought the peritoneum escaped wounding in the process, the invagination of the skin of the scrotum being effected with the lining membrane of the canal.—Mr. L'ESTRANGE asserted that radical cures had been attained, without any operative interference whatever, by the continued wearing of suitable trusses.—Dr. WALSH mentioned a successful case treated by a truss adapted by Mr. L'Estrange.—Dr. FLEMING said that it was almost impossible to fairly return a hernial sac which had remained in the scrotum for a lengthened period, and had been much pressed on by different trusses. In such cases, a certain pathological condition became established, for the sac gradually underwent attenuation. Under these circumstances, the contents of the sac, though not the sac itself, remained returnable.—Mr. EDWARD HAMILTON believed that the sac of a hernia of old standing which had been long down, could not be reduced. It had lost its anatomical peculiarities.—Mr. STAPLETON agreed with the opinions expressed by Dr. Fleming and Mr. Hamilton; but, though the sac of an old hernia became adherent, it might still be pushed up and invaginated.

Before the meeting adjourned, three patients, on whom Mr. Croly had performed tenotomy for contraction of the knee-joint, were examined by the members and visitors present. Owing to the late hour, a communication on the subject was deferred to the next meeting of the Society.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 8TH, 1871.

J. BURDON SANDERSON, M.D., F.R.S., Vice-President, in the Chair.

Tumour in Left Half of Floor of Fourth Ventricle, with Tumour in Cerebellum.—The patient, a child two years of age, came under Dr. BROADBENT'S care amongst the out-patients of St. Mary's Hospital on March 14th, 1870. Three weeks previously, the child had begun to have what the mother called "screaming fits", which only came to an end when it was utterly exhausted. She slept well, ate ravenously, drank much; the bowels were confined; and every morning there was vomiting before any food had been taken. On examination, the left side of the face was found to be paralysed; and the left eye was not closed, either voluntarily or in winking, or when the cornea was touched. There was no marked strabismus; but this eye could not pass the median plane of the orbit outwards. The right hand was clenched and agitated while the child cried, and was continually in motion when it was quiet. The left hand was quiet, or moved naturally. Both legs were continually in motion; the right most. There was little change during the five weeks in which the patient was under observation. The paralysis of the sixth nerve and of the portio dura of the seventh became more marked, and the loss of power in the right hand more evident, the rigidity and agitation continuing. The screaming, vomiting, and constipation were little affected by the treatment, which consisted in the application of a leech behind the left ear, and in the administration of an aperient powder, and first of chloral in ten-grain doses every four hours, later, of belladonna in full doses. The child died on August 20th. A tumour was found to occupy the left half of the floor of the fourth ventricle, involving, as was anticipated, the common nucleus of the sixth and portio dura of the seventh nerves, shown by Stilling and Lockhart Clarke to be situated in the fasciculus teres; and in a less degree the already decussated motor tract from the right half of the body. Another small tumour was found in the left hemisphere of the cerebellum; but, as all the symptoms were explained by the tumour in the floor of the fourth ventricle, it had probably not given rise to any characteristic symptoms. Both tumours were gliomatous in structure.—Mr. BRUDENELL CARTER asked if any ophthalmoscopic examination had been made. He had had under his own care a case of paralysis of the portio dura, in which the only symptom was epiphora. His assistant thought it due to obstruction of the nasal duct, when he noticed that lacrymation took place on one side of the

face only.—Dr. BROADBENT replied that circumstances prevented an ophthalmoscopic examination from being made. In answer to Dr. C. T. WILLIAMS, he said that he had not thought there was a tumour of the cerebellum, because all the symptoms were explained by that on the floor of the fourth ventricle.

Heart-Disease.—Dr. HABERSHON narrated two cases of disease of the heart. The first instance was that of a young man aged 30, who had been accustomed to great muscular exertion, and in whom the aortic valves were rendered imperfect by continued strain. Hypertrophy and dilatation of the left ventricle ensued; and the physical signs of aortic obstruction and regurgitation were accompanied by urgent dyspnoea and by paroxysms of angina pectoris. The mitral valve at length became so stretched that it ceased to act as a valve, and the indications of pulmonary and abdominal congestion became apparent. At this time a triple sound was audible at the apex of the heart, and continued for several weeks—till, in fact, the right ventricle became accustomed to the additional strain thrown upon it, and beat in unison with the left ventricle. After a time a systolic *bruit* at the apex replaced the triple sound. The triple sound was explained by the want of synchronous action between the two ventricles. It had been noticed in rupture of the mitral valve, and also in cases of contraction of that valve; and in this instance it occurred for a short period in connection with an overstrained mitral valve. The patient became slowly exhausted by the increased embarrassment of the heart and by dropsy.—Dr. ALTHAUS said that he had had a similar case under his care in which opium was followed by anasarca of the legs and total suppression of the urine. Acupuncture was had recourse to, but it was followed by gangrene of the part and death.—The PRESIDENT remarked that the diagnostic interest of the case lay in the diagnosis between triple sound and thinned mitral valve, as the cases in which the triple sound had been previously mentioned were those of small mitral valve. He should like to know if the condition of this valve had lasted long.—Dr. C. J. B. WILLIAMS believed that the aggravation in the first case was due to the fresh complication of aortic disease. Mercury was very valuable in heart-disease with visceral congestion, and especially in combination with digitalis. Opium did much more harm than good, and also chloral, as the physical condition of the heart prevented sleep. Digitalis fortified the weak and dilated heart.—Dr. BROADBENT thought that there was more than one condition leading to reduplication of the first sound. A want of synchronism between two ventricles might explain it, and could be demonstrated by the double stethoscope. He believed in the utility of mercury alone or combined. He had seen marked benefit resulting from its use.—Dr. LANGDON DOWN believed that reduplication of the first sound resulted from want of synchronism in the heart's contraction.—Mr. LAWSON asked in what position the patient was tapped, as it might have accounted for the syncope occurring in consequence of the operation.—Dr. HABERSHON, in reply, said he agreed that the results of opium in such cases as his was not satisfactory, but it was given in the present instance for angina. It, however, aggravated the general symptoms. Mercury had been given with benefit in the form of the black oxide. Especially in mitral disease mercury was most useful, and especially in combination with squills and digitalis. The mitral valve apparently began to yield when the pulmonary and other visceral congestion took place. He did not think that irregular contraction of the chordæ tendinæ would produce the triple murmur. He did not know in what position the patient was tapped, as he was not present at the operation.

The second instance was that of a child aged 11, in whom severe cardiac disease, affecting the mitral valve, followed an attack of rheumatism. Three years previously he had the first attack, and had been ill for a fortnight before his admission into Guy's Hospital on Feb. 22nd, 1871. There was pain in the limbs; and, in the plane of the mitral, a loud systolic *bruit*, and a less distinct presystolic one, were audible. He improved in health till about the middle of April (12th), when the presystolic *bruit* became more distinct; and this indication of fresh disease was shortly followed by severe brain symptoms; vomiting and delirium, with hemiplegia on the left side, suddenly supervened; symptoms of great prostration followed, with convulsive movements of the right side; and, when consciousness was regained, he cried out and complained of pain in the head and in the spine. On the third day he began to rally, and in ten days the paralysis began to lessen, but the hand and arm recovered before the foot and leg. The presystolic *bruit* also ceased, and the systolic mitral *bruit* alone remained audible. He left the hospital relieved on June 24th. The presystolic *bruit* was probably due to deposit upon the mitral and consequent obstruction, and increased deposit led to augmentation of the sound. The cerebral symptoms were traced to embolism; and soon after the onset of these symptoms the presystolic *bruit* was diminished in intensity, as if the mitral, relieved of a portion of fibrinous deposit, acted more freely.

The retrocession of the hemiplegic symptoms was in the inverse order from ordinary hemiplegia, from apoplexy; namely, that the arm recovered before the leg and the hand, and the feet before the shoulders and the hips. Very little medical treatment was permitted in this case, and it illustrated in a remarkable manner the natural subsidence of the symptoms of disease as the circulation of the brain accommodated itself to the temporary obstruction.

CORRESPONDENCE.

BRITISH MEDICAL BENEVOLENT FUND.

SIR,—Will you kindly permit me to make a Christmas appeal to your readers on behalf of the British Medical Benevolent Fund, a charity which I venture to say has a strong claim on the sympathies of all our brethren.

Help *promptly* given, help *quietly* given, is, I may say, a distinguishing feature of this Benevolent Fund, and I might add help *carefully* given, and help *inexpensively* given; for I can assure you, that I know of no society whose meetings are more regularly or better attended than the monthly committee meetings at 11, New Burlington Street, while the only paid official is the collector. The cases relieved by grants during the past eleven months are one hundred and two; but inasmuch as some of these cases represent large families of children, the number assisted is really much greater. The sum of £834 has been thus expended, and to meet the cases which arise this month (one of the heaviest in the year), our Treasurer had at its commencement a balance remaining of about £20 only.

If it were not for fear of trespassing on your space too largely, I should like to give the details of a few cases, as specimens of the want and misery your readers are asked to assist in alleviating—want and misery all the more bitterly felt, as in most instances the sufferers have been at some time or other in comfortable, if not in affluent, circumstances. Donations or subscriptions, however small, will be most thankfully received by the Treasurer, Dr. Hare, 57, Brook Street, the Honorary Financial Secretary, C. S. Webber, Esq., Upper Berkeley Street West, or by Yours, etc.,

STAMFORD FELCE, *Honorary Secretary.*

12, Chippenham Road, Paddington, W., Dec. 12th, 1871.

P.S.—Articles of clothing for men, women, or children, I am always glad to receive for our applicants.

THE COMING RACE.

SIR,—The letter of Mr. Berkeley Hill, in the BRITISH MEDICAL JOURNAL of November 25th, giving an account of the shortcomings of the candidates for the diploma at an examination of the Royal College of Surgeons, induces me to bring under your notice the serious complaints made by two intelligent and anxious students at Guy's Hospital. As I am the medical attendant of their families, they naturally speak to me on the subject. Certainly there does appear just reason for their observations on the manner of conducting the lectures on anatomy. Their complaints run thus. For the first two or three weeks, Mr. — gave lectures on the formation of bone, etc., so minutely as apparently to delay the more important instruction—at least to beginners. Mr. — followed, and has gone over the bones of the upper and lower extremities, lingering long on many individual bones and minute points, with frequent repetition; thus making the lectures extremely tedious to intelligent students, as most of the points must necessarily come again under observation with the muscles, etc. A whole lecture of one hour was given on the clavicle (the account of which might be read over in any dozen books treating upon it in that space of time), and an equal time upon other small bones; thus rendering the lectures dull and tiresome, and inducing indifference. This long delay has brought to an abrupt close this part—the very groundwork of anatomical knowledge—leaving the difficult bones of the head and face, the vertebræ, the walls of the chest and pelvis, to be feebly mastered or altogether passed over. This will, doubtless, prove a serious and permanent detriment, as they may appear to be advancing in their studies when the groundwork is wholly unsound; and, should the whole course proceed in the same manner, the result must be most unsatisfactory. Piecemeal anatomy cannot be correct. The neglect of weekly examination is another serious drawback; for the observation of the mistakes of others their correction affords a more general insight into the subject, induces attention, and enables the lecturer to ascertain the advance of the student, and practises the latter in a correct and ready manner of answering questions. The very ex-

tensive scope of the present examinations at the various boards, and their practical nature, render necessary great exertion on the part of the teachers, and a correct method, so that the students may obtain a fair and continuous outline of the subjects which they have to master. Should the present staff not be sufficient, there are many ambitious young men who might be obtained, whose post should be to direct and to ascertain the progress of the students.

I think that lecturers will be indebted to the first year's students a course of lectures on the bones, which ought to be given next summer session, when some comparative anatomy might be fairly brought on to make up for the present loss. I have advised that the students should ascertain that some more continuous plan will be carried out, otherwise I shall deem it my duty to advise that they enter at some other hospital.

A copy of this has been forwarded to the Treasurer and to the BRITISH MEDICAL JOURNAL, suggesting that a reporter be appointed to visit the various schools, and state in what manner the instructions were given, and report to the profession.

I am, etc.,

London, Dec. 1st, 1871.

THOS. JOHNSON.

SEWAGE AND ENTOZOA.

SIR,—In answer to Dr. Cobbold, I wish to state that I have nothing to do with angry feelings, and that abuse is not argument. I stated three facts; viz., 1. That Dr. Cobbold did not know Croydon, or he would not have fallen into the strange error he had done in calling it swampy and low-lying. 2. That his prophetic utterances regarding the spread of entozoa by irrigation received no support from the experience derived from the continuance of sewage-irrigation on the farms of the Croydon Local Board, one of which has now been in operation for more than eleven years. 3. That the health of the inhabitants living in the district which is irrigated is undeniably good, as evidenced by returns from the Registrar, which show ten deaths to twenty-seven births during the half year ending Michaelmas last.

Dr. Cobbold cannot dispute one of these points, but adduces the theoretical and fanciful evidence which was given before committees of the House of Commons. The evidence was totally disproved at the time, and shown to be either unnecessary or improbable. The evidence then adduced had no weight with the judges, and their verdict proves the opinion of six distinct committees in Lords and Commons to be against Dr. Cobbold's witnesses. Dr. Cobbold puts forward their evidence as if it had not been completely disproved. Dr. Letheby's idea that "irrigated land is always a fetid, swampy morass" is an offspring of his imagination.

If Dr. Cobbold will visit our fields (unsatisfactory though they be), I shall be glad to show him that there are two sides to a question—a fanciful and a real one—and that those most engaged in the work will be the best judges, unless they are determined to be deceived, which I am not.

In conclusion, allow me to say that I never supposed that Dr. Cobbold had anything to do with patents in this matter.

I am, etc.

ALFRED CARPENTER, M.D.

Croydon, December 4th, 1871.

OBITUARY.

THOMAS S. BARRY, Esq.

MR. THOMAS STAWELL BARRY, Staff-Surgeon in Her Majesty's Army, died in London on November 21st. He was educated in Ireland, and was a pupil of St. George's Hospital Medical School. He entered the service in 1855, and had his promotion as Staff-Surgeon in 1869. He was seized with jaundice two months since, when on sick leave; and succumbed to this, complicated with an attack of pneumonia. He went through the Crimean campaign, and served in India and in New Zealand.

THOMAS SCARD, M.R.C.S. ENG.

MR. SCARD died at Balmain, near Sydney, New South Wales, aged 35. He left this country a few years since as surgeon to an emigrant ship; and finding a good opening for his profession at Sydney, he settled there, and had obtained considerable practice. He was obliged to undergo a painful operation, for which chloroform was administered, and he died suddenly under its influence. It is thought there might have been latent disease of the heart. When the last Australian mail left, a coroner's inquest was in progress, and a *post mortem* examination ordered.

ROBERT SMITH, ESQ., ABERDEEN.

MR. ROBERT SMITH, of Aberdeen, was born August 12th, 1800. In 1818, he began the study of medicine in Aberdeen, under Dr. Skene, Professor of Medicine in the Marischal College and University. In 1819, he discontinued his medical studies, and followed for a time a mercantile life. In 1828, he resumed his professional studies; and in 1833 became a Member of the Royal College of Surgeons of London. He commenced to practise in Aberdeen in 1834. In 1841, Mr. Smith was elected a Medical Officer of the Aberdeen Dispensary. From 1841 to 1871, he was occupied in the active duties of professional practice. His last illness began suddenly, while he was writing a medical prescription in the house of a dispensary patient. Consciousness never returned after the apoplectic attack; and on November 18th, he died, at the age of 71. Mr. Smith, during many years, was Curator of the Museum of the Aberdeen Medico-Chirurgical Society.

JOHN DAVIDSON, M.B., C.M.

IT is with the deepest regret that we have to record the death, on the 5th inst., from typhoid fever, of Mr. John Davidson, M.B. and C.M., one of the resident physicians'-assistants at the Middlesex Hospital. Mr. Davidson was a native of Aberdeen, where he received his preliminary education at the Grammar School and University. He commenced the study of his profession in 1866 in the University and at the Royal Infirmary. Here he soon became highly esteemed both by the professors and members of the hospital staff and by his fellow-students, among whom he occupied a high position, from his theoretical and practical professional knowledge, and constantly took the leading part in movements affecting the privileges or the recreations of the students. Many men of his time will remember him as one of the most active leaders in the hard-fought struggle which ended in the election of the present Lord Rector of the Aberdeen University; as one who was ever at the head of any social diversion that might happen to be made to lighten the labour of the long Scotch winter session; and as the man who was better able, perhaps, than any other to maintain the reputation of the University on the field or on the river. After completing the usual four years' study at Aberdeen, during which time he carried off many of the highest prizes, he graduated in medicine and surgery with the highest honours in 1870. Soon afterwards he went to Vienna, where he studied clinical medicine and surgery for a short time; and on his return was appointed Junior House-Surgeon at the Middlesex Hospital. This post he held for six months, after which he was for the same length of time Senior House-Surgeon, and subsequently one of the Resident Physicians'-Assistants. While attending assiduously to his duties in the last-named capacity he was seized with typhoid fever; the attack being pronounced and severe from the first, but still not alarmingly so until about the twenty-first day, when grave congestion of the lungs supervened, and carried him off two days afterwards on the forenoon of the 5th inst.

In John Davidson, the Middlesex Hospital lost a man whose name will long be remembered within its walls with the profoundest respect and the most sincere regret. As a member of the resident staff, he is said to have been one of the best house-surgeons there for many years; intelligent, energetic, and obliging, he was extremely popular with all, from the surgeons and physicians down to the patients—a straightforward honest man. By those who knew him most intimately, he was held in especial estimation for the strength of his affection, his extreme unselfishness, and his strong abhorrence of everything mean or ungentlemanly.

It was his intention, we believe, to undertake a London career as a surgeon. Had he been spared to do so, we are confident that his future would have been very successful, if not brilliant.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Second M.B. Examination, 1871. Pass Examination.

First Division.

Allchin, William Henry, University College
Ball, James Barry, University College
Carr, William Ward, University College
Carter, Alfred Henry, University College
Elkington, Ernest Alfred, General Hospital, Birmingham
Humphreys, J. Henry, General Hospital Birmingham, and University College
Lucas, Richard Clement, Guy's Hospital
Lyll, Robert Wishart, King's College
Southee, Henry Edward, Guy's Hospital

Second Division.

Burn, William Barnett, B.Sc., St. Bartholomew's Hospital

Cumberbatch, Alphonso Elkin, St. Bartholomew's Hospital
Durham, Frederic, Guy's Hospital
Harding, Alfred William, B.A., University College
Ingoldby, Joseph Theodore, Guy's Hospital
Martin, Henry Newell, B.Sc., University College
Paget, William Smith, Liverpool School, and University College
Read, Charles, University College
Wall, Alfred John, St. Mary's Hospital
Westcott, William Wynn, University College

Examination for Honours.—Medicine.

First Class.

Allchin, William Henry (Scholarship and Gold Medal), University College
Southee, Henry Edward (Gold Medal), Guy's Hospital

Second Class.

Lyell, Robert Wishart, King's College
Elkington, Ernest Alfred, General Hospital, Birmingham

Third Class.

Carr, William Ward, University College
Carter, Alfred Henry, University College } equal.
Lucas, Richard Clement, Guy's Hospital

Obstetric Medicine.

First Class.

Lucas, Richard Clement (Gold Medal), Guy's Hospital
Southee, Henry Edward, Guy's Hospital

Second Class.

Humphreys, John H., General Hospital, Birmingham, and University College
Lyll, Robert Wishart, King's College

Third Class.

Carter, Alfred Henry, University College
Elkington, Ernest Alfred, General Hospital, Birmingham
Allchin, William Henry, University College

Forensic Medicine.

First Class.

Elkington, Ernest Alfred (Gold Medal), General Hospital, Birmingham

Third Class.

Lyell, Robert Wishart, King's College
Southee, Henry Edward, Guy's Hospital

M.D. Examination.

Black, John Gordon, University of Durham College of Medicine
Carter, Charles Henry, B.A., University College
Curnow, John (Gold Medal), King's College
Haynes, Frederic Harry, St. Bartholomew's Hospital
Irvine, James Pearson, B.A., B.Sc., University College
Pollard, Frederick, St. Thomas's Hospital
Poore, George Vivian, University College
Richards, William Alsept, King's College
Seaton, Edward, St. Thomas's Hospital
Snow, Herbert Lumley, University College, and Queen's College, Birmingham
Tayler, George Christopher, St. Bartholomew's Hospital
Thomas, John Davies, University College

Logic and Moral Philosophy only.

Alford, Henry James, University College
Barnes, Edgar George, St. George's Hospital
Hall, Francis de Havilland, St. Bartholomew's Hospital

B.S. Examination.

Second Division.

Aveling, Charles Taylor, St. Thomas's Hospital
Carr, William Ward, University College

ROYAL COLLEGE OF SURGEONS.—The following members of the College, having undergone the necessary examinations for the Fellowship on the 22nd, 23rd, and 24th ultimo, were reported to have acquitted themselves to the satisfaction of the Court of Examiners; and, at a meeting of the Council, on Thursday, the 14th instant, were admitted Fellows of the College.

Butlin, Henry Trentham, Camborne, Cornwall: diploma of membership dated November 12, 1867.

Hardwicke, Junius, Rotherham: June 3, 1844.

Higgins, Charles, Hambledon, Hants: April 21, 1868.

Oldham, Charles James, Brighton: January 26, 1870.

Page, Herbert William, Carlisle: November 16, 1869.

Partridge, Samuel Bowen, Her Majesty's Indian Army: August 5, 1851.

Rendle, Richard, Forest Hill: April 22, 1868.

Wyman, William Sanderson, Putney: April 25, 1862.

Four candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months.

At a special meeting of the Dental Board, on Tuesday, the 12th instant, Mr. Samuel Hamilton Cartwright, of Old Burlington Street, having undergone the necessary examination, was admitted a Licentiate in Dental Surgery; his diploma of membership bearing date May 7th, 1867.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, December 7th, 1871.

Kilner, Walter John, Bury St. Edmunds

The following gentlemen also on the same day passed their first professional examination.

Collier, Nicholas C., King's College
Edwards, John Ellis, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

- BALLINROBE UNION**, co. Mayo—Medical Officer for the Ballinrobe Dispensary District; £100 per annum.
BRIGHTON and HOVE DISPENSARY—Two Surgeons.
CARNARVONSHIRE and ANGLESEY INFIRMARY and DISPENSARY, Bangor—House-Surgeon: £80 per annum, board and lodging.
CORK UNION—Medical Officer for the Blackrock Subdistrict of the Cork Dispensary District: £100 per annum.
EARLSWOOD ASYLUM FOR IDIOTS—Assistant Medical Officer: £150 per annum, board and apartments.
EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN—Physician.
EAST RETFORD UNION, Notts—Medical Officer for the Dunham District.
EAST SUSSEX, HASTINGS, and ST. LEONARD'S INFIRMARY—Physician; Assistant-Physician.
EXETER LYING-IN CHARITY—Two Surgeons.
GOREY UNION, co. Wexford—Medical Officer to the Workhouse, Infirmary, and Fever Hospital: £100 per annum.
JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer: £100 per annum, furnished rooms, attendance, coal, and gas.
KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY—Resident Medical Officer: £100 per annum, furnished rooms, £45 per annum for a dispenser and servant, coal and gas.
LIVERPOOL—Public Analyst for.
MANCHESTER, Township of—Medical Officer for St. Michael's District: £170 per annum.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Surgeon.
MIDDLESEX HOSPITAL—House-Physician.
MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Medical Superintendent of the Female Department.
NORTH STAFFORDSHIRE INFIRMARY, Hartshill—House-Physician: £80 per annum, board, furnished apartments, and washing.
NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £80 per annum to commence, rooms, board, and washing.
NUNEATON UNION—Medical Officer and Public Vaccinator for the Nuneaton District: £55 per annum, and extra fees.
OLDHAM UNION, Lancashire—Medical Officer for Workhouse: £65 per ann.
PENISTONE UNION, Yorkshire—Medical Officer for the Workhouse: £30 per annum, and extra fees. Medical Officer for the Penistone District: £21 per annum, and extra fees.
POCKLINGTON UNION, Yorkshire—Medical Officer for the Market Weighton No. 2 District.
ROYAL INFIRMARY, Manchester—Senior House-Surgeon: £84 per annum, board, etc.
ROYAL SOUTH LONDON DISPENSARY—Honorary District Surgeon.
ST. MARYLEBONE, Parish of—Medical Officer for St. John's Registration District: £120 per annum.
ST. PANCRAS and NORTHERN DISPENSARY—Resident Medical Officer: £100 per annum, and allowance for coal, servants, etc.
SOUTHAMPTON—Medical Officer of Health.
SOUTH STAFFORDSHIRE AND WOLVERHAMPTON HOSPITAL—Secretary.
STOCKWELL FEVER HOSPITAL—Resident Medical Superintendent: £400 per annum, unfurnished residence, coal, and gas.
SUFFOLK GENERAL HOSPITAL—Physician.
TOXTETH PARK TOWNSHIP—Medical Officer for District No. 2: £250 per annum.
UNIVERSITY COLLEGE HOSPITAL—Assistant Obstetric Physician.
WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £70 per annum, board and residence.
YEATMAN HOSPITAL, Sherborne—Dispenser: £50 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

- ***BEACH**, Fletcher, Esq., appointed House-Surgeon to the Hospital for Sick Children, Great Ormond Street, *vice* Wm. Sankey, Esq., resigned.
CANTON, G. Anderson, Esq., appointed Surgeon-Dentist to the Royal Portsmouth, Portsea, and Gosport Hospital.
CARTER, Alfred H., M.B., appointed Medical Registrar and Pathologist to the General Hospital, Wolverhampton, *vice* *A. Bottle, M.D., resigned.
CLARKE, Arnold, Esq., appointed Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Raferagh Dispensary District of the Carrickmacross Union.
DE MERIC, Henry Eugene, Esq., appointed Junior House-Surgeon to the Royal Free Hospital.
FERGUSON, A., L.R.C.P. Edin., appointed Parochial Medical Officer for Peebles, Stobo, and Manor.
***LINDSAY**, J. Murray, M.D., Medical Superintendent of the Female Department of the Middlesex Lunatic Asylum, Hanwell, appointed Medical Superintendent of the Derby County Lunatic Asylum.
McEWAN, William, M.B. and C.M., appointed Medical Officer for the Tenth District of the City Parish of Glasgow.
MACKELLAR, John, M.D., appointed Parochial Medical Officer for North Uist, Inverness-shire.
MACNICOL, Hugh, L.F.P.S. Glasg., appointed Medical Officer and Public Vaccinator for the New Pitsligo District of the Parish of Tyre, Aberdeenshire.
***MATTERSON**, William, M.D., appointed Consulting Physician to the York Lunatic Asylum, in the room of *Caleb Williams, M.D.
O'BRIEN, Daniel, M.D., appointed Medical Officer to the Workhouse of the Ennistymon Union, co. Clare.
RYAN, Laurence Joseph, L.R.C.P. Edin., appointed Medical Officer and Public Vaccinator for the Oulart Dispensary District of the Enniscorthy Union, co. Wexford, *vice* Michael Joseph Sheridan, M.D., appointed to the Wexford Dispensary District of the Wexford Union.

- ***SHIPMAN**, George, Esq., appointed Medical Officer to the District of the Grantham Union, *vice* Charles Ferneley, M.D., resigned.
SLATER, John S., Esq., appointed House-Physician to St. Thomas's Hospital, *vice* E. Cox, Esq., resigned.
SMITH, J. Priestley, Esq., appointed House-Surgeon to the Birmingham and Midland Eye Hospital, *vice* F. H. Hodges, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

- CAMPBELL**, Peter, M.D., Bridge of Allan, N.B., to Phebe, daughter of the late Peter Rainford Rigby, Esq., Liverpool, at St. Paul's Presbyterian Church, Westbourne Grove, London, on November 28th.

DEATHS.

- BOXWELL**, Richard, M.B., late H.E.I.C.S., of Abbeyliex, Queen's County, on November 28th.
COLLINGS, Adolphus, M.D., formerly Surgeon 40th Regiment, at Guernsey, aged 56, on December 1st.
GREENHEAD, Charles E., M.D., at Watford, aged 90, on November 24th.
WILLIAMS.—On December 8th. aged 31, Caroline Anne, wife of *John Williams, M.D., of Sudbury, Suffolk.

DONATIONS, BEQUESTS, ETC.—"W. X." has given £1000 to the National Hospital for the Paralysed and Epileptic.—"W. S. N." has given a third annual £1000 to the Charing Cross Hospital.—Mr. T. Edmett has bequeathed £3000 to the West Kent Infirmary and Dispensary; and £1000 to the Kent County Ophthalmic Hospital.—Mr. J. H. Beattie, of Surbiton, has bequeathed £500 to the Hospital for Incurables.—Captain Jillard, of Frome, has bequeathed £500 to the Shepton Mallet Hospital.—Mr. W. Welch has bequeathed £300 to the General Hospital, Birmingham.—Mr. John Palmer has bequeathed £100 to the Queen's Hospital, and £100 to the General Hospital, Birmingham.—"E." has given £50 to St. Thomas's Hospital.—The General Hospital, Birmingham, has received £100 under the will of Mr. Benjamin Chandler.—Miss Gibson, of the Lower Close, Norwich, has transferred £100, new Three Per Cents., to the Trustees of the Norfolk and Norwich Hospital.—Mr. Emmanuel Mocatta has bequeathed £500 each to Beth Holim Hospital, the Jews Hospital at Lower Norwood, the Cancer Hospital, the Hospital for Consumption, University College Hospital, and several non-medical charities.—St. Leonard's Hospital, Sudbury, has received £100 under the will of Mr. Townsend of Bures.

BOOKS, ETC., RECEIVED.

- The Clinical Thermometer: its Lessons and Teachings tentatively expressed in Numbers. By L. C. McElroy, M.D. New York: 1871.
Elementary Treatise on Physics, experimental and applied. For the use of Colleges and Schools. Translated and edited from "Ganot's Eléments de Physique" (with the author's sanction), by E. Atkinson, Ph.D., F.C.S. Fifth Edition, revised and enlarged. Illustrated by a Coloured Plate and 726 Woodcuts. London: 1872.
Statistical Report on the Health of the Navy for the year 1869.
General Representation on a Complete Readjustment and Modification of Mr. Hare's Plan. By Archibald E. Dobbs, M.A. London: 1871.
Inaugural Address delivered at the Opening of the Twenty-second Annual Meeting of the America Medical Association, held at San Francisco, California, May 1871. By Alfred Stille, M.D. Philadelphia: 1871.
On Clinical Education: the Introductory Address to the Clinical Session, 1871-72, at the Queen's Hospital, Birmingham. By Furneaux Jordan, F.R.C.S. London: 1871.
A National Technical University for Great Britain and her Colonies; or, how to Utilize Greenwich Hospital and the Obsolete Charities. A Letter to the Right Hon. W. E. Gladstone, M.P., from the Executive Committee of the proposed National University for Technical and Industrial Training. London: 1871.
National Disease. Remarks upon the Prevailing Epidemic of Small-pox, its Cause and Prevention: with Notes on Public Health, Eruptive Diseases, etc. (amongst mankind and the animal world). London and Newcastle-upon-Tyne: 1871.
Physiology as a branch of General Education. A Graduation Address delivered on August 1st, 1871. By John Hughes Bennett, M.D. Edinburgh: 1871.
Report on the Sanitary Condition of the Whitechapel District, for the quarter ending 30th September 1871. By John Liddle. London: 1871.
First Report of the Medical Committee of the Charity Organisation Society; with Rules for Provident Dispensaries. London: 1871.
The Second Annual Report of the Committee appointed to establish a "Hospital Sunday", for the benefit of the principal Medical Charities connected with Cumberland and Westmorland. Carlisle: 1871.
Instructions to the Inhabitants of the Borough of Bury as to Means to Preventing the Spread of Small-pox and Scarlet Fever. By Thomas B. Bott, M.D.
What the People say about the Children, and what the Children say about Canada. By Maria S. Rye. London: 1871.
Preliminary Notice on the Treatment of Emphysema of the Lungs by Artificial Expiration. By J. B. Berkart, M.D. London: 1871.
The Bombay Health Officers' Report for the Third Quarter of 1871.
Transactions of the Fourth Annual Meeting of the American Otological Society.
Observations on the Therapeutic Value of Chloral. By Alexander Edward M'Rae, C.M., M.B. Edinburgh: 1871.
Association of Certifying Medical Officers of Great Britain and Ireland. 1871.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Thomas Bryant will exhibit some Drawings and make some Remarks Illustrating the Process of Cell-Growth in the Operation of Skin-grafting; Dr. Ogle (Derby), "Preventive Medicine or Medical Reform: not Parliamentary, but Particular and Individual."

TUESDAY.—Pathological Society of London, 8 P.M. The following specimens will be exhibited:—Mr. Lawson: Case of Blood Cyst. Mr. Spencer Watson: Ulcer of Eyelid, removed by Dr. Swift Walker. Mr. A. Norton: Ulceration of Trachea. Dr. Thorowgood: Large Salivary Calculus removed by Operation. Dr. Southey: Caseous Degenerative Disease of Suprarenal Capsules. Dr. Peacock: Plugging of Middle Cerebral Artery. Dr. Payne: Hæmatoma of Muscle. Mr. Goodhart: Casts from the Intestine.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FOR replies to questions concerning Poor-law medical questions, see Poor law Medical Department, under charge of Mr. Benson Baker, London, and Dr. Maunsell, Dublin.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

SECRETARY.—It certainly does not seem fair to those practitioners who hold the degree of M.D. from Universities, that the title of "Dr." should be used by others. Still, in the case of members of Colleges of Physicians, custom and courtesy have so far sanctioned the misuse of the title, that a return to its strict limitation would be a very difficult matter.

DR. A. W. EDIS (London).—The matter shall receive our attention.

EXTRACTS FROM A DOCTOR'S DIARY.

IV.—Reading in the papers about flogging at Newgate, recalls the good old times when, for disgraceful conduct, soldiers received fifty lashes, until philanthropic civilians, who had equal conception of the magnitude of the crime and the light nature of the punishment, interfered. Having attended many parades, and treated the culprits afterwards, I remember no instance of undeserved torture or of erysipelas. A few days' rest and water-dressing comprised all required. Excepting by the craven scoundrel, the typical cruel garrotter, pain as a rule would unflinchingly be endured.

V.—One regrets that the practice of marking with the letters B, C, and D, has been abandoned. Possibly the same recruit who faints on revaccination (a frequent occurrence) would wince at the simple operation; but beyond the tell-tale letters, nothing appeared objectionable, notwithstanding the outcry against infamous branding. If all officers and men on joining were tattooed on the wrist, in the one instance it would be a proud mark of distinction; in the other, desertion and re-enlistment would be checked.

VI.—What a pity it is that well-intentioned ladies and others should interfere with sanitary measures which have been most carefully and practically considered by eminent statesmen, philanthropists, and medical men. We do not attempt to teach the clergyman, the lawyer, or the philosopher; it would be the height of impertinence, neglecting our own difficult studies, to go out of our way to obstruct theirs. The leopard cannot change his spots, nor man his nature. Punish us betrayers by all means; trounce the adulterers; but, above all, lend your aid to

prevent the daughter from sneaking out after dark from a comfortable home to join the ranks of the "unfortunates", either for pleasure or for gain. None can deny the ability of the Contagious Diseases Acts to do this, as well as to check the spread of disease, and to help and succour many poor girls, the majority of whom have been driven to degradation and shame through poverty, seduction, and early training. Paramount reigns home-influence: and when you meet fast girls in society or elsewhere, read a history of the want of a mother's care, or of innate vicious tendency. How quiet the barracks are now compared to former years. When the wind whistles cold, the rain beats against the window, and we shiver over the winter fire, the sound of the poor girls' feet wearily pacing up and down the parade is comparatively seldom heard. Years ago, sometimes young officers joined with a young lady in black silk and a gold chain; and on one occasion, a girl, in a fit of jealousy, tried to hang herself in the quarters; but such events and delirium tremens are things of the past. Many ladies, several over the climacteric, or hard and without children, unsympathetic, indirectly increase syphilis, and punish innocent children with an inheritance of scrofula, hydrocephalus, cancer, and insanity. With honest virtuous mothers, as well as with the pariahs who, in preference to starvation, pursue a calling often to them repulsive, this delicate difficult subject has been talked over; and, taking all in all, my candid opinion, after long and laborious investigation, is that the Contagious Diseases Acts, when properly understood and judiciously carried out, will improve both the health and the morality of England.

OLD MORTALITY.—On the south side of the altar in Kensington Church were tablets stating that David Middleton, Serjeant Surgeon to George III, died December 29th, 1785, aged 85; his wife died at the age of 89. Dr. John Ash, for some time an eminent physician at Birmingham, who subsequently resided in London, and was well known in literary circles, was also buried here. Dr. Matthew Baillie was buried at Duntisbourn, Gloucestershire. Cheselden at Chelsea Hospital. Hunter at St. Martin's-in-the-Fields; re-interred in Westminster Abbey, where also Sir Theodore Mayerne is interred. Francis Glisson, who discovered the capsula communis, born in 1597, was buried on the west side of Fleet Market, now Farringdon Street.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

STOPPING TEETH.

SIR,—In answer to your correspondent Dr. Evans, I beg to say that to prepare and stop a tooth properly with gold—the only reliable stopping—takes a far longer time to learn, is much more tedious, and requires greater manipulative skill, in many instances, than any other operation in surgery. If, however, Dr. Evans is anxious to try his hand at tooth-stopping, the best amalgam for general purposes may be obtained at Messrs. Ash and Sons, 8, Broad Street, Golden Square, London. For further information, I would refer him to Tomes's *Dental Surgery*, pp. 302-488.

I am, etc., CHARLES GAINES, M.R.C.S.,
Dental Surgeon to the Royal United Hospital, Bath.

Bath, December 13th, 1871.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Daily Post, Dec. 5th; The Northampton Herald, Dec. 9th; The Liverpool Weekly Albion, Dec. 9th; The Shield, Dec. 9th; The Scarborough Gazette, Dec. 7th; The Birmingham Daily Post, Dec. 8th; The Salopian, Dec. 9th; The Brighton Daily News, Dec. 11th; The North British Daily Mail, Dec. 13th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

The Earl of Lonsborough, London; Dr. Broadbent, London; Dr. Lombe Athill, Dublin; Dr. Cornelius B. Fox, Scarborough; Dr. Bishop, Paris; Mr. W. Stuart, London; Dr. Aitkin, Woolston; Dr. Wolfe, Glasgow; Mr. W. A. Collings, Guernsey; Mr. Dale, Scarborough; Mr. Jessop, Leeds; Our Berlin Correspondent; Dr. Ferrier, London; Dr. A. T. H. Waters, Liverpool; Our Vienna Correspondent; Dr. J. G. Swayne, Clifton, Bristol; Dr. Patrick Heron Watson, Edinburgh; Mr. George Street, London; The Rev. T. Scard, Bishops Waltham; Mr. Peter Robertson, Glasgow; Mr. A. Smith, Northampton; Dr. Williams, Sudbury; Mr. H. Spencer Smith, London; Mr. Gascoyen, London; A Member; Mr. Annandale, Edinburgh; Mr. W. A. Dunken, Brockton, Shrewsbury; Dr. B. Hunt, Birmingham; Mr. Henry Greenway, Plymouth; Our Dublin Correspondent; Dr. C. B. Brearey, Scarborough; Dr. P. Frank, Cannes; The Secretary of the Clinical Society; Dr. Alex. Ogston, Aberdeen; Dr. Protheroe Smith, London; Dr. T. L. Brunton, London; Dr. Wilks, London; Mr. Richard Hunter, Dartford; U. P., Tring; Mr. James E. Adams, London; The Secretary of the Pathological Society; The Secretary of the Birmingham and Midland Eye Hospital; Dr. Hermann Beigel, Vienna; Mr. H. Phelps, Bristol; Mr. William Sharp, Great Grimsby; Mr. Wm. Grant, Wolverhampton; Dr. Andrew Clark, London; Dr. Carpenter, Croydon; Dr. A. W. Edis, London; Dr. Paul, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Holthouse, London; The Secretaries of the Association of the Medical Officers of Health; Dr. Savage, Birmingham; Mr. M. C. Soutter, London; Dr. Cheadle, London; Dr. Johnson, London; Mr. Francis Mason, London; Mr. Heckstall Smith, St. Mary's Cray; Dr. Stamford Felce, London; Mr. C. Jeaffreson, Newcastle-upon-Tyne; Dr. Priestley, London; The Rev. S. Allen, Shone; Mr. E. Murray, Dublin; Dr. Julius Pollock, London; The Editor of the "Lynn News and County Press"; Mr. Sidney Jones, London; An Associate; The Editor of the "Manchester Courier"; Dr. J. M. Bruce, London; Dr. Murchison, London; Dr. Edward Lawford, Leighton Buzzard; Mr. George Shipman, Grantham; Mr. Fairlie Clarke, London; Dr. Sanders, Edinburgh; Mr. Jonathan Hutchinson, London; Mr. S. Nalty, Dublin; Mr. C. Gaine, Bath; Mr. J. F. Evans, Sheffield; The Registrar of St. Mary's Hospital Medical School; C. R. C. V.; A Subscriber; Dr. Fitzgerald, London; Mr. Peacock, Scarborough; Dr. Woodman, London; etc.

REMARKS

ON

THE INSTRUMENTS DESIGNED FOR EXPLORING
GUN-SHOT WOUNDS,WITH A VIEW TO DETECT BULLETS OR OTHER FOREIGN
BODIES SUSPECTED TO BE LODGED IN THEM.

By T. LONGMORE, Esq., C.B.,

Professor of Military Surgery at the Army Medical School, Netley.

THERE are two distinct surgical operations which have to be adopted in proceeding to treat cases of suspected lodgment of foreign bodies in gun-shot wounds, as well recent as chronic wounds. The first is that of *exploration* of the wound, or the operation of determining with certainty that the supposed foreign body is lodged in it, as well as its exact situation; the second is that of *extraction*, or the operation of removal of the foreign body, after the fact and site of its lodgment have been established. The means of exploring for a foreign body, and of extracting it, are often combined in one and the same instrument. Nearly all bullet-extractors admit of being used for purposes of exploration; but, on the other hand, various instruments have been devised as explorators which do not answer the purposes of extractors. These latter instruments have been designed to meet the special requirements of particular cases.

Under ordinary circumstances, whenever a gun-shot wound is large enough to admit of the insertion of the surgeon's finger, this alone should be used for exploring purposes. No artificial instrument can give the same amount of information, or afford information so precise, with regard to the lodgment of foreign bodies and their nature, as the surgeon's finger can give. Should the opening of entrance of the projectile be too contracted to admit of its easy insertion, as will sometimes happen when the wound has been caused by a bullet of small diameter, such as the Chassepôt rifle-bullet or a pistol ball, the surgeon's finger should not be thrust in with undue force, which will be hurtful in many ways, but an incision to the necessary extent should be made at the margin of the wound, extending through the fascia, to facilitate its ingress. When, after insertion, the finger fails to reach sufficiently far, owing to the depth of the wound, the exploration is often assisted by pressing the soft parts, especially if the wound be in one of the extremities, from an opposite direction toward the finger-end.

In making the exploration, the finger should be inserted slowly and steadily towards the deepest part of the wound. During its passage, the surgeon should carefully observe whether any foreign body appears to be pushed before it, or to be lying by the side of the track of the bullet, and should note any other peculiarities of the wound. He should also ascertain whether the end of the track is reached; and, if this is found to have been arrived at, a careful circular sweep of the finger-end will then usually settle if any, and what, foreign bodies are lodged. The surgeon should not withdraw his finger until the course the projectile has taken, the injury it has done, the complications of the wound such as the presence of foreign bodies, and, in such a case, their kind and situation, have been decided by him; the exploration will then be completed by one operation, and a second insertion of the finger for the purpose, which is always irritating to a patient, will be avoided. Nothing can be simpler than the exploration of a gun-shot wound by the finger; yet, simple as it is, very different results may follow the operation according to the manner in which it is performed; if done carelessly and impulsively, it will be done roughly, will cause proportionate bruising, pain, and, after all, convey only imperfect information; if done thoughtfully, these hurtful effects will be avoided, while the knowledge conveyed by the manipulation to the surgeon will be definite, and generally of special utility in determining the proceedings to be afterwards adopted.

If the finger be not sufficiently long to reach the bottom of the wound, even when the soft parts have been approximated by pressure from an opposite direction, and when the lodgment of a projectile is still suspected, or some other point of doubt remains to be solved, such as the direction the projectile has taken in the latter part of its course, we are compelled to make a further exploration by other means. Generally, a long silver probe, that can be bent if required, and that can be guided into a definite direction at the will of the surgeon, will be found to be the best substitute for the finger. The probe should be used with great discretion, for, without care, it may readily be made to inflict injury on

vessels or on other structures which have escaped from direct contact with the ball, but have returned by their elasticity to the situations from which they had been pushed or drawn aside during its passage. It seems hardly necessary to observe that these directions for examining gun-shot wounds apply only to such as penetrate the extremities or extend superficially in other parts of the body; where a missile has entered any of the important cavities, such exploration would obviously be as useless as it would be mischievous.

In the majority of cases of gun-shot wounds there will be no difficulty in detecting the lodgment of foreign bodies, especially heavy ones, as bullets and fragments of shell, when the examination has been made early by the finger in the manner described. Sometimes, when the finger in the wound fails to find a lodged projectile, the particular spot in which it is lying may be detected simply by relaxing the muscular tissues, so as to give a loose and pendulous condition to the parts concerned, and then lightly tossing up the flesh at different points from below with the tips of the fingers. A bullet lodged among the soft parts will occasionally make its presence known, under such an action, by the impulse which its weight communicates to the top of one of the fingers when the parts which have been shaken upwards return to their previous position. Sometimes a gentle kneading pressure in the neighbourhood of the injury, assisted by information derived from the sensation of the patient, will lead to the detection of such a foreign body. Sometimes, as mentioned in the English official history of the Crimean war, when a lodged bullet could not otherwise be discovered, it was found by passing the flat palm of the hand down a limb. Its presence was occasionally detected in this way when the points of the fingers had utterly failed to feel it.

We come now to the cases in which the exploration by the surgeon's finger is altogether impracticable, and in which the use of the probe is attended with so many sources of doubt as to prevent any satisfactory conclusion in respect to the lodgment or absence of foreign bodies from being arrived at. These difficulties sometimes happen with wounds in situations where they might be least expected to be met with, but generally occur in such as have their terminations at or near some of the solid structures of the body. They are every now and then experienced in recent wounds, especially deep and narrow wounds made by small-bore rifle or pistol shot, but are more particularly so in chronic wounds in which foreign bodies are suspected to be lodged; wounds in which the original bullet-tracks have become contracted to narrow sinuses, and in which other changes have taken place rendering the directions of these sinuses tortuous or otherwise intricate. The finger may not be able to penetrate the small and constricted passage of such a wound; and the probe, even if it be enabled to traverse it, and happen to reach a hard substance, may fail to give the desired information as to its nature—whether it is striking against bone or the foreign body which is suspected to be lodged.

It may be readily ascertained by striking or rubbing a leaden bullet out of the body with a silver probe, and comparing the peculiar dull sensation conveyed to the fingers with the sensation experienced when a piece of bone is struck or rubbed, that one cannot under such circumstances be deceived with the eyes shut as to the respective differences between the two substances. But when the bullet or piece of bone is at the bottom of a wound, and the probe comes in contact with the side of the wound, especially if this side happen to be bone; or if the walls of the track be fleshy, and, while the probe is in contact with them, its extremity is pressed against bone which has become smooth and eburnated on the surface; or if any soft tissues intervene between the end of the probe and the object impinged upon it; it will be found such a complicated sensation is given to the fingers that the diagnosis is rendered exceedingly difficult and uncertain.

No more remarkable illustration of the difficulty of diagnosis just adverted to could be adduced, perhaps, than was afforded in the instance of the wound received at Mentana by General Garibaldi. In that case, the opening presented to the surgeon beneath the integument consisted of a fissure across the base of the inner malleolus. This fissure was not wide enough to admit a finger; and ordinary probes, when inserted, so failed to give satisfactory evidence on the important question of a foreign body being impacted in bone near the ankle-joint, that some of the ablest surgeons in Europe, after exploring with them, were led to declare that no bullet or foreign body had become lodged in the wound. And this occurred in a case where the opening made by the projectile was not much more, if any more, than an inch in depth, in which the track was not tortuous, nor among tissues of different kinds or of intricate arrangement, as frequently happens in doubtful cases.

M. Nélaton, after his visit to General Garibaldi, was led to think of various devices for determining whether the ball was lodged in the wound or not. His first idea was to obtain a steel probe cut like a file

at one extremity. He presumed that, by passing such an instrument down to the substance which was suspected by some to be the bullet, and by giving it a rotatory motion, sufficient would be brought away on the teeth of the file to determine its nature, whether bone or lead. At the same time that he was having this instrument made, he reverted to the idea of a chemical reagent, which had been tried before in similar cases of doubt, but without success. Acting on this notion, M. Nélaton applied to M. E. Rousseau, the chemist, to furnish him with some ample means of determining the presence of lead in a wound by chemical analysis. M. Rousseau then suggested the introduction of a body capable of bringing away a metallic impression, should metal be present, such as rough porcelain; thus making the metal capable of being recognised not only by chemical reaction, but by all its ordinary characteristic physical signs. This suggestion led to the construction of the instrument which, since its successful application in Garibaldi's case, has become known as Nélaton's probe.

Nélaton's probe consists of a slender rod of metal, five or six inches in length, terminated at one end by a small knob of white, unglazed, biscuit china. The other extremity of the probe is furnished with a small handle, grooved ridge-and-furrow fashion, in order that the finger and thumb may the more easily roll it between them, while the porcelain knob is being pressed at the bottom of the wound against the suspected foreign body. If it be a leaden bullet against which the porcelain is rubbed, a very distinct mark of lead is impressed on the latter, which is not easily obliterated. The bullet itself is thus caused to give ocular demonstration of its presence and place of lodgment. If the foreign body be iron, having a rusty surface, a stain of rust will be found on the china.

The round ball of china which is fitted to the Nélaton test-probes usually has a diameter of rather more than a quarter of an inch. This is often large enough to cause a difficulty in introducing it through the small fistulous tracks among fibrous tissues which are frequently met with as one of the chronic effects of gun-shot wounds. A sinus of this kind, unless connected with necrosed bone, usually leads to suspicion in the mind of the surgeon that it is prevented from becoming completely closed by the lodgment of some foreign body which passed along it at the time of the original wound. It is, therefore, just one of the cases in which such a test-probe offers itself as a valuable diagnostic aid to the surgeon, but where the size of the round china knob too often prevents the attainment of this object. A probe tipped with a piece of the biscuit china of less diameter, and more oval in form, is required for these narrow fistulous tracks. In a recent wound, the larger round ball is more convenient. It is not so likely to be impeded in its passage along the wound, and the impression made by the lead upon it is more obvious to observation.

The porcelain test-probe was much used during the war of the rebellion in the United States, and many favourable reports of the results of its employment have been published. A very ingenious modification of it, but one of doubtful practical utility, was manufactured during the war by the eminent surgical instrument-makers, Messrs. Tieman, of New York. In this instrument, the porcelain is placed at the extremity of a long flexible gum-elastic tube, which takes the place of the metallic stem in the ordinary probe. The length of the whole instrument is thirteen inches, the flexible part being nine inches long. By turning a screw at the handle in different directions, and by means of a mechanical contrivance concealed within the tube, the lower part of the instrument, at the end of which the porcelain is placed, can be caused to turn slowly round to the right or left, at the pleasure of the operator. It may be moved round so as to assume a considerable curve in either direction.

This instrument has obviously been designed with the purpose of applying the porcelain test in cases where the ordinary Nélaton probe cannot be used; more especially along deep and tortuous bullet tracks, whose ultimate direction is either uncertain or known to be turned from a straight course. The operator is supposed to cause the porcelain to search for the foreign body, as well as to identify it when found by bringing to light the usual evidence of its presence. I have only tried the instrument on the dead body, but the experiments have not been attended with favourable results. The chief sources of failure with it were found to be, firstly, the uncertainty concerning the direction taken by the end of the instrument when turned in search of the bullet among yielding tissues, at distances far removed from the aperture of entrance and from sight; and, secondly, the difficulty of applying sufficient force to get a metallic impression, even when the point of the instrument was directed against the foreign body, owing to the flexibility of the long tube at the end of which the button of china is placed. Another difficulty experienced was the following. If the china knob became entangled in the tissues at the end of a long track, or was prevented from moving freely by any cause, then the screw, not being able to act on

the extremity, caused the middle flexible portion of the instrument to become curved, so as to press on one side the soft tissues of the track of the wound, along which the probe had been passed. It was only through the displacement of the soft tissues being visible externally after it had occurred to some considerable extent, that a knowledge was gained of the fact that the porcelain end was not moving in obedience to the screw, but only that part of the probe lying in the track of the bullet.

It is evident, from the nature of the porcelain test-probes just described, that direct and firm contact between the porcelain and a bullet is essential, in order that the former may furnish the evidence which the surgeon requires. If it be merely a little blood, serum, or soft coagulum, in front of the bullet, pressure by Nélaton's probe will squeeze it away, and the leaden mark can be obtained; but if any resisting medium, however thin—the thinnest membrane, for example—happen to be placed between the surfaces of the metal and the china, no impression will be made on the latter. And there are various substances which are liable to be so interposed—such as muscular or cellular tissue pushed by the knob of porcelain itself before it; pieces of linen, cloth, paper, or other substances which have entered with the bullet; a piece or edge of bone projecting in front of it, and other such matters. The evil in such occurrences may not simply be the impediment to obtaining an impression from the lodged bullet; but possibly a surgeon may be led to an erroneous conclusion that he has obtained proof of no foreign body being lodged, because the usual evidence of its lodgment is absent from the porcelain. This may lead to delay in the healing process and protracted suffering to the patient, which might have been avoided had a more correct diagnosis been arrived at.

[To be continued.]

CASE OF FRACTURE OF THE ATLAS FROM GUNSHOT INJURY.

BY WILLIAM STOKES,

Surgeon to the Richmond Hospital, Dublin.

IN the following brief narrative of the case of the late Constable Talbot, I am indebted to Mr. Agmon Vesey and Mr. J. Walker for a record of many particulars connected with the case, which were noted by these gentlemen, who had the best opportunity of accurately recording them, in consequence of the unremitting attendance they bestowed on the patient, from the time of his admission into hospital up to the period of his death.

Thomas Talbot, aged 44, a large powerfully built muscular man, was admitted into the Richmond Hospital on Wednesday morning, July 12th, 1871, between 12 and 1.0 A.M., suffering from a gunshot-wound of the neck, which he had received about an hour previously to his admission. He was helped into the out-patient room of the hospital by Inspector Gorman and another constable, and immediately afterwards was seen by Mr. Vesey. The patient seemed weak; and, blankets being laid on the table, he was placed on it in the horizontal position. There had been some bleeding from the wound at the station-house in Green Street; but the amount of blood lost was inconsiderable, and at the time of his admission into hospital the hæmorrhage had completely ceased. The patient was perfectly conscious, spoke clearly and distinctly, but was greatly depressed in spirits, and even then despaired of his ultimate recovery. The temperature of the body was normal, with the exception of the feet, and to these a hot jar was applied. Immediately after this, at the patient's request, the surgeon who was on accident duty that day, Mr. Hamilton, was sent for; but as he happened not to be in town, Mr. Walker, who went for him, called for me. I accordingly went, and arrived at the hospital at 2.45 A.M. On my arrival, I found the room where the patient lay filled with people, chiefly police. On the room being to a certain extent cleared from the large and inconvenient crowd that had collected, I proceeded to examine the patient. He spoke slowly, but in a firm and distinct voice, and mentioned that he did not feel at that moment any violent or acute pain. On examining the wound, which I found behind the left ear, a little posterior to the mastoid portion of the temporal bone, I perceived a small round opening about the size of a fourpenny-piece, through which there was not at that time any sign of even an oozing of blood. His respiration was at this time tranquil, and the heart's action regular and strong. Under these circumstances, I considered it advisable to ascertain the position of the foreign body; and, having regard to the situation of the wound, if possible, to remove it. The

patient also expressed an anxious desire than an attempt should at once be made to extract the foreign body. Taking, therefore, a silver probe, I passed it gently into the wound, and found that it took a direction from behind, downwards, forwards, and inwards. After passing in this direction for nearly an inch, the end of the probe struck on something hard; and, on depressing the handle of the probe somewhat more, and striking again, I felt quite satisfied that there was a difference between the body first struck and that on which the probe now rested—the first being, in my opinion, metal, the second bone. As the former was apparently within easy reach, I considered it desirable to make an attempt to remove it, before there was time for any inflammatory action to supervene. Accordingly, I slightly enlarged the opening, cutting horizontally from before backwards; and, through the opening thus enlarged, I passed a fine forceps down, apparently to the bottom of the wound, and endeavoured to lay hold of the ball. This attempt, however, was not attended with success. I then introduced another and still smaller forceps; and, on making a third attempt and not succeeding, I determined to abandon for the time any further proceeding to remove the foreign body, and to wait until I had better light, and also the advice and assistance of my colleagues.

At 11 A.M. on the same day I again saw Talbot, in consultation with Mr. Hamilton, Dr. R. W. Smith, Mr. Tufnell, and some other medical gentlemen unconnected with the hospital. I stated what had already been done; and it was agreed to examine the wound again. This was done in the first instance with an ordinary silver probe; and the existence of a metallic body, apparently in the situation of the lambdoid suture, was determined. Subsequently, a Nélaton's probe was used, but the instrument on this occasion proved neither "reliable" nor "infallible", as some persons have of late inaptly termed it.* It was then determined to make a second attempt to remove the foreign body. Mr. Hamilton stated that he could not quite satisfy himself that the hard body which the probe struck was metallic; but he thought that the operation should be performed for the likelihood of finding the ball, and that the wound should be enlarged in order to relieve the tension of the adjacent soft structures, and to give a free exit to the suppuration which would inevitably follow the gunshot injury. It was accordingly determined that the patient should be brought into the theatre of the hospital, as the light was much better there. During the operation I was assisted by Mr. Hamilton, Dr. R. W. Smith, Mr. Tufnell, Mr. Vesey, Mr. Walker, and Dr. Robert McDonnell. At Talbot's own request, chloroform was not administered; and during the operation he was never heard to utter a murmur. What was done was simply to enlarge the wound, cutting with a small scalpel horizontally from before backwards. In doing this, two arteries were severed: one was a very small vessel, which was at once secured by a ligature; the other was a larger one, and was either the occipital artery, or a large muscular branch which it often gives off in this situation. There was no strong jet of blood from it; but it was obvious that a considerable

* In connection with the Nélaton probe, I may mention that Professor Longmore, undoubtedly one of the highest living authorities on military surgery, is of opinion that the instrument is only of value when its evidence is positive. He observes, in a letter recently received: "It settles the question of lead or rusty iron lodging when it brings away the markings; but it settles nothing when it does not bring away any marks. A surgeon would be very unwise if he concluded no foreign body to be present because he got no evidence of its being present on using the Nélaton probe." In a most important letter also on the subject of the Nélaton probe, which recently appeared in the *Times*, which was signed "An Army Surgeon", the following passage occurs: "I have in several instances failed to obtain indications of the presence of bullets and fragments of lead in wounds by Nélaton's probe, when I have determined their presence by other instruments. It would be entering too much into technical matters to describe these instruments, or to discuss the subject of extraction of bullets, in the columns of the *Times*; but a man does not require to be a surgeon to understand the action of Nélaton's probe, and the extent of reliance which may be placed on it. Nélaton's probe essentially consists of a small knob of 'biscuit china' placed at the end of a slender metal stem. Just as we write on a porcelain tablet with a lead pencil, so the china knob takes an impression of a leaden bullet or of a rusty iron projectile when it is pressed fairly and directly against it; but just as we cannot write on a porcelain tablet if a piece of chamois leather, paper, or other substance happen to be between the tablet and the pencil, so the china knob will fail to indicate the presence of a bullet when a piece of skin, wadding, muscle, or other substance, lies between it and the projectile. Again, if the bullet have sunk in bone, or a portion detached from it has sunk in a cleft of bone, and if the probe happen to be pressed only against the edge or edges of the bone, no indication will be conveyed by it. It is evident, therefore, that on many occasions the test by Nélaton's probe is anything but conclusive, and that if a surgeon were to decide that no metallic substance is present in a gun-shot wound, because he could find no indication of it from the use of Nélaton's probe, he might be led into serious error."

† In a communication recently received by my friend Mr. Tufnell from Professor Longmore on the Talbot case, the following passage occurs. "It would have been acting wrongly, had every effort not been made to extract the bullet from the situation in which it was supposed and reasonably inferred to be lodging. It is of immense importance that foreign bodies lodging in the walls of cavities, whether abdomen, chest, cranium, or spine, should be got away, if possible. No one acquainted with such subjects—at least, no one who respects truth more than some other ulterior object—can really believe that the man's death in this case was due to anything else but the direct effects of the gun-shot wound which had been inflicted upon him."

vessel had been divided, from the rapid manner in which the wound filled up with blood. After sponging out the wound, Mr. Hamilton made pressure with the index finger of his right hand against the temporal bone, and in this way hæmorrhage was promptly arrested. I then commenced to search for the ball, and in doing so used two or three different kinds of forceps. However, although I was satisfied that there was a metallic body in the wound—an opinion in which Mr. Tufnell and others fully concurred, and which the *post mortem* examination verified—still, at the operation, it soon became obvious to me and to those who were assisting, that it was useless to proceed further in attempting to extract it. Consequently I felt reluctantly obliged, though knowing how very important it is to remove, if possible, foreign bodies when lodged in this situation especially, to desist from all further attempts to extract the ball.† Mr. Hamilton then, at my request, removed his finger, and I then, without difficulty, seized the vessel and secured it with a silken ligature. To prevent the possibility of the ligature slipping off, I left the point of the tenaculum in the vessel on the distal side of the ligature. It is my firm conviction that, during the operation, at the very outside not more than six or seven ounces of blood were lost altogether. I may mention that this belief is also shared by Dr. R. W. Smith, Mr. Hamilton, Mr. Tufnell, Mr. Vesey, and Mr. Walker. To a person of Talbot's great strength and muscular development, such a loss of blood could not by any possibility have been of the slightest moment. On the operation being concluded, water-dressings and a bandage were applied, and the patient was soon afterwards removed to bed. At 4 o'clock P.M. I again saw Talbot, in consultation with my colleague, Dr. R. Adams, who was unavoidably absent from the hospital at the time of the operation. When we went into the ward we found that Talbot's depositions were being taken by the legal authorities. Talbot was not unnaturally somewhat agitated, and he presented three remarkable conditions, which I had not observed at all in the morning: these were an almost complete fixation and retraction of the head, a remarkably tremulous condition of the tongue, and a cold clammy perspiration over his hands.

July 13. At 10 A.M., I saw the patient and found that he had had a restless night, but had got some sleep. He was free from pain, and was quite sensible. There had been no hæmorrhage, and, on the whole, he appeared to be doing well. He was ordered beef-tea, wine, and anodyne draughts containing camphor and solution of muriate of morphia. At 10.15 P.M., his pulse was very quick. He was in some pain, but was inclined to sleep, and was quite sensible. He had pain in the forehead during the day.

July 14, 10 A.M. Pulse 120. He had been very restless. Mr. Walker saw him frequently during the night, and stated that at 3 A.M. he had a severe rigor, followed by profuse sweating. This was also accompanied by great pain in the forehead and neck. By Mr. Vesey's advice, he got a warm stimulating draught, with opium. He had five attacks of rigor between 3 A.M. and 6 A.M. At this latter hour he first got some sleep. After a full consultation of the surgeons of the hospital, it was determined to remove the tenaculum, which I accordingly did without any difficulty. His bowels being confined, he was ordered some opening medicine. The head was still fixed and retracted.

July 15, 10.15 A.M. Pulse 120. The patient had had five or six hours' sleep. There was some discharge from the wound. A linseed-meal-poultice was ordered to be applied over the wound. Towards evening, at about 8 P.M., Talbot got into a very unusual and excited state, said he knew that he would soon die, and insisted on having his brother telegraphed for. Pulse very quick; tongue still tremulous. His whole body was covered with a cold clammy sweat.

July 16. He had a very restless night; no sleep. He did not complain of pain. He was bathed in profuse sweat, and in a very excited state. At about 6 A.M., Talbot's brother observed that there was bleeding from the wound. He pressed a handkerchief against the wound, and immediately afterwards Mr. Walker, and subsequently Mr. Vesey, arrived. They found him pressing on the wound. A large clot of blood was observed on the pillow. Mr. Vesey did not raise the head, but turned it a little to one side, removed part of the dressing, and found a slight oozing of blood. A fresh compress and bandage were applied, which effectually arrested all further hæmorrhage. The patient was observed to be covered with a cold clammy sweat. At about 11 A.M. I saw Talbot. I observed a great change for the worse. His eyes were staring and expressionless. He was in a very agitated and excitable state. His pulse had risen to 140, and he was slightly delirious. Many of the answers he gave were unconnected with the questions that were put. At this time he was seen along with me by Sir William Wilde and Mr. Porter. Shortly after this his symptoms became much more urgent. His pulse rose to 160; his breathing more hurried; then he became violently delirious, requiring several persons to keep him in his bed. He refused all food, medicines, stimulants, etc. His

pupils began to dilate, then to contract, and then to dilate enormously again. The respiration became stertorous, then "blowing", and subsequently diaphragmatic. The violence of his struggles surpassed anything I have ever seen even in cases of the most violent delirium; and his screams were very loud. At about 2 P.M. he began to become much worse, and it became obvious that his end was approaching. After each attempt to get off his bed he became weaker. At 3 P.M. he was seen again by me, Mr. Adams, Mr. Hamilton, Sir W. Wilde, and Mr. Porter. Shortly after this he became comatose; and at about 4 o'clock on the evening of that day he died.

July 17th. At about 1 P.M. I proceeded to make a *post mortem* examination. There were present Mr. Tufnell, Dr. Yeo, Dr. Kirkpatrick, Mr. Vesey, Mr. Walker, Mr. Woodhouse, Mr. Smith, Mr. Frazer, Mr. Johnson, Mr. Elliot, Mr. Goode, and two or three others. Mr. Vesey, who acted under my directions, began by removing the scalp and sawing off the calvaria. The brain was then removed and inspected. Its coverings at the posterior and lateral regions (especially at the left side) were found intensely congested. There was a great deal of subarachnoid effusion on the left side also; but there was no evidence of any purulent matter either on or beneath the meninges. On cutting into the substance of the brain, nothing abnormal was observed. An incision was next made down on the original wound, and a portion of the bullet was discovered firmly wedged in the suture between the temporal and occipital bones. Following the incision a little deeper, a collection of matter was discovered in the immediate vicinity of the atlas; and above the left transverse process of the atlas two pieces of lead were found. A third piece of lead was also found lying a little external to the left condyle of the occipital bone. On examining the occipito-atloid articulation, a quantity of purulent matter was found communicating with the spinal canal. The membranes of the cord, from the base of the brain down to the third cervical vertebra, were in a state of inflammation; and it is no exaggeration to say they were bathed in pus. The cord was greatly inflamed and abnormally soft. A fracture of the atlas was next discovered, whereby a small portion of the posterior part of the left superior articular facet was broken off. Several very minute fragments of bone were subsequently found in the adjacent tissues; so that the portion of bone broken from the atlas may be said to have been pulverised. A careful search was then made for the remaining portions of the bullet, but I did not succeed in finding them. Probably, had we continued the search much further, we should have succeeded; but the sole object I had in view in making the examination was, not to discover the whereabouts of some missing fragments of a very minute conical revolver-bullet, such as No. 7 Eley is, but to determine what was the immediate cause of Talbot's death; and, having determined that to my satisfaction and that of all who were assisting, I did not deem it necessary to continue the dissection further, especially as Talbot left distinct and specific directions that nothing but the head and the neck at the situation of the wound were to be examined. A part of the skull, comprising the portions of the temporal and occipital bones in which a portion of the bullet was wedged, was removed; also the atlas and axis. General decomposition of the body had progressed very rapidly.

From the results of the *post mortem* examination, my belief as to the immediate cause of Talbot's death is, that the fracture of the left superior articular process of the atlas necessitated the tearing of the posterior occipito-atloid ligament, and that thus a communication was established between the parts external to the spinal column, where the abscess probably originated, and the spinal canal, through the vertebral canal, or canal for the passage of the vertebral artery; that the fragments of the bullet and the minute particles of bone found in the soft tissues immediately adjoining the fracture, and the tearing of the ligamentous structures between the occiput and the atlas, gave rise to the formation of an abscess, which abscess penetrated the articulation between the atlas and the occiput; that the matter also penetrated into the spinal canal through the vertebral canal; that the existence of that suppuration gave rise to inflammation of the coverings of the spinal cord; that the inflammation extended to the cord itself; and that the inflammation of the coverings of the cord extended up to the base of the brain—these inflammations being the immediate cause of death.

I have, in conclusion, to acknowledge with gratitude the recent publication in the *Times* of the memorandum signed by Sir James Paget and the other justly celebrated English surgeons, who, unsolicited and with characteristic generosity, came forward and stated their opinion not only as to the inevitably fatal nature of the gun-shot injury which Talbot received, but also as regards the treatment that was adopted in his case in the Richmond Hospital.

EXTRACT FROM A LECTURE ON DISLOCATION OF THE HIP-JOINT: DR. BIGELOW'S VIEWS.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital, and Lecturer on Surgery, etc.

NEXT, gentlemen, let me say that I regard the researches of Dr. Bigelow in respect to our subject as amongst the most valuable of recent additions to the science of surgery. His essay on the *Mechanism of Dislocation and Fracture of the Hip* I recommend to you most strongly, as an excellent example of experimental investigation applied to a subject concerning which but too many had been contented merely to guess and speculate. I will endeavour to state to you briefly some of the chief results of the Boston professor's work—for details, of course, I must refer you to his book.

The main fact to which I must ask your close attention is, that the ilio-femoral ligament is the strongest part of the envelopes of the joint; that it is very rarely torn through; and that it is to it that the peculiar positions of the bone in the several displacements are chiefly due. This ligament must be described as arising from the anterior inferior spine of the ilium, passing downwards and outwards, and being inserted into the whole length of the anterior intertrochanteric line. Thus at its origin it is not more than half an inch broad, and at its insertion more than two inches. It is supplementary to the capsular ligament, over which it passes, and with which it is inseparably connected. You will find in most anatomical works that the term ilio-femoral or "accessory intertrochanteric ligament" is restricted to the lower part of the structure described; but as the whole arises from one part, there can, I think, be no question that it is well to regard it in its entirety. Dr. Bigelow purposes for it the name of the Y-ligament, because its lower fan-shaped expansion has a space between its upper and lower portions like that between the arms of an inverted Y. The accompanying diagram, copied from his work, well illustrates the arrangement referred to (Fig. 1). For

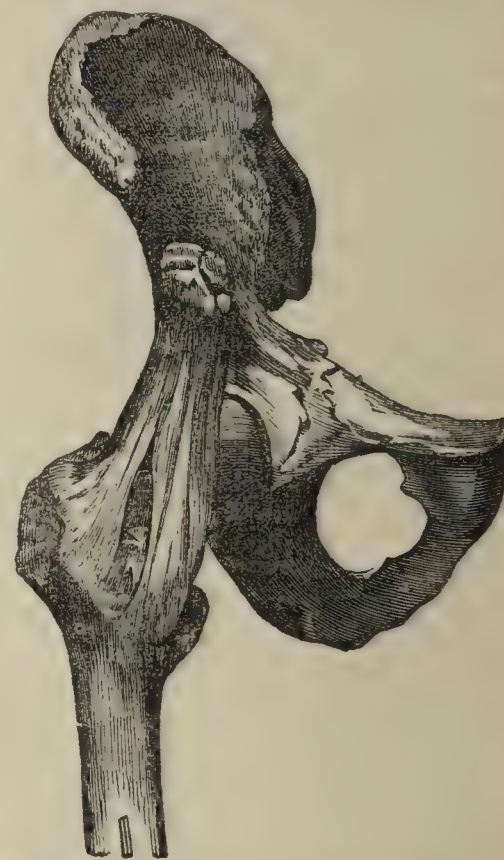


Fig. 1.—The Y-ligament, shewing its inner and outer bands: the former known as the ilio-femoral. (Copied from Bigelow's work, page 18.)

myself, I doubt much whether anything is gained by rechristening it. However, whatever name we give it, the truth remains the same, that it is this ligament—as strong as the ligamentum patellæ or the tendo Achillis—which in dislocations restrains the movements of the great trochanter, and thus regulates the position of the limb. It is this ligament which, when we reduce by manipulation, guides the movements of the bone. We have long known that the ligamentum teres has nothing to do with these matters, being indeed powerless to keep the

bone in the socket; and we may now, I think, discard, to a large extent, the supposed influence of muscles.

The diagram which I now show will illustrate the action of the Y-ligament in the common form of dorsal or posterior dislocations (Fig 2).



Fig. 2.—Dislocation upon the dorsum, shewing the influence of the Y-ligament in causing inversion. (Copied from Bigelow's work, page 40.)

It there holds the great trochanter to the pelvis, and thus inverts the limb. It also, assisted by other lower fibres of the capsular, hinders the passage of the head of the bone upwards, and thus keeps the shortening within limits. Upon it, as upon a pivot, the neck of the bone will move, if you commence manipulations and use the shaft as a lever. It will be by its aid, and not, as erroneously supposed, by that of the adductor muscles, that the head will be directed into the socket if you flex and then abduct (or, still better, circumduct outwards), as in our usual method of reduction.

Amongst the special services which Dr. Bigelow has done, is that of explaining the peculiarity of "the dislocations into the ischiatic notch," and of teaching us how to reduce them. His assertion is, that they differ very little from the majority of so-called dorsal dislocations, for in both the head of the bone lies not so much on the dorsum ilii as just behind, or behind and above, the acetabulum; and in neither does it really pass so far back as the sciatic notch. The real difference between the two consists in the relation of the head and neck of the bone to the tendon of the internal obturator muscle and to the portion of capsular ligament beneath it, these being below the neck in a true dorsal, and above it in the so-called ischiatic dislocation. This fully explains the increased difficulty in reducing the latter dislocations by the old method, and also the ease with which the flexion plan succeeds.

Dr. Bigelow believes that the greater or less laceration of the capsular ligament is a matter of very little consequence to the patient's chance of good recovery; and he instructs us how, in cases when the smallness of the hole in this structure is supposed to be the impediment to reduction, we can easily and safely tear it as much as we wish.

It is not my intention to bring before you in detail at the present time the important statements made by the author I am quoting respecting the other special forms of dislocation. These may be better reserved until we have an opportunity for demonstrating the dislocations on the dead body. It will be sufficient at present to say that they seem to me to simplify greatly a very difficult subject, and that I have no doubt that they will speedily bear good fruit at the bedside. What I chiefly wish you to recollect is, that it is the strong ilio-femoral ligament which, in the backward or dorsal dislocations, holds the great trochanter forwards and inverts the limb, which in the dislocations downwards, still holding the trochanter, flexes the limb, and in dislocations of the head of the bone inwards (thyroid), still restraining the movements of the great trochanter, everts the limb. All these results can be easily witnessed by experiment in the dead body. Lastly, in some rare cases in which the displacement follows no rule, the explanation is to be sought in the fact that this ligament has been wholly or partially torn through. It is, however, very strong, and its rupture is very infrequent.

I need scarcely add that Dr. Bigelow is of course a warm advocate

of the manipulation, or flexion, method of reduction. He urges that almost anything may be done if you only recollect the manner in which the ilio-femoral ligament will be stretched in the different positions of the bone. Extension horizontally, whether in a straight line or obliquely, he for the most part opposes strongly, as only likely to be successful after forcibly tearing the important structure referred to. Extension with the thigh bent at right angles to the pelvis he as warmly advocates, for in this position the ligament is relaxed. For the accomplishment of this he has devised a special apparatus, which looks likely to

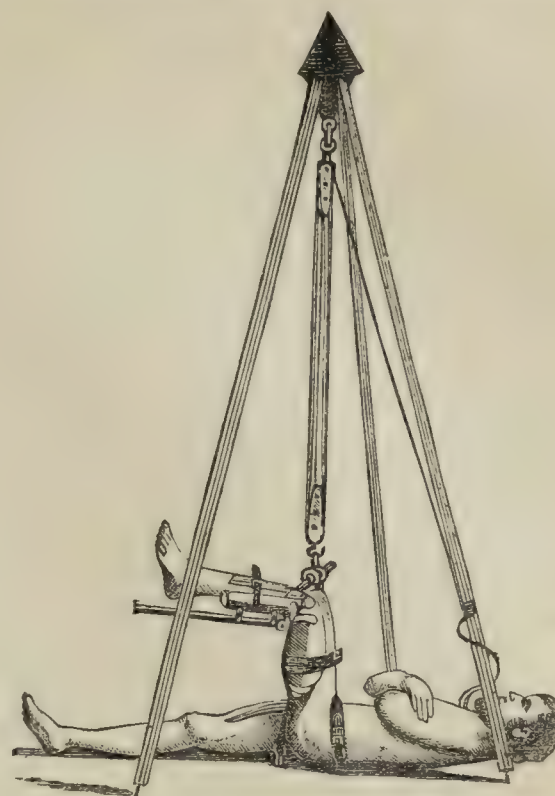


Fig. 3.—Tripod for angular extension. The pelvis is buckled to the floor. The flexed leg is suspended by pulleys from the apex of the tripod. A bar fixed to the splints, and, crossing the knee transversely, serves to rotate the limb.

be very useful (Fig. 3). As a practical suggestion likely to be available under the frequent conditions when this triangle may not be at hand, he advises that the surgeon should place his foot (unbooted) on the patient's pelvis, and then lift from the knee.

TEMPERATURE IN A CASE OF FRACTURE OF THE SIXTH CERVICAL VERTEBRA.

I ENCLOSE a short report of a case of fracture of the sixth cervical vertebra. It was caused by direct violence, which detached the spinous process and laminae, and, as was found on *post mortem* examination, crushed the pedicles and transverse processes into small pieces. There was complete paralysis of all parts below his arms; these latter were unsteady, and had cramps and abnormal sensations. Respiration was purely diaphragmatic. There were retention of urine and loss of control over the sphincter ani. The patient lived five days, and suffered most from thirst. The temperature was taken twice daily, at 10.30 A.M. and 8 P.M., in the mouth and on the thigh. The chief interest of the case lies in the concomitant variations till near death. The fall in the temperature of the mouth in the last observation might be due to the patient's sucking ice freely during the last few hours of life.

| | Temperature of | | Pulse. | Respiration. |
|----------------------|----------------|--------|--------|--------------|
| | Mouth. | Thigh. | | |
| First evening | 97 | ... | 60 | 23 |
| Second morning | 96 | 99.4 | 88 | 17 |
| Second evening..... | 96.8 | 100 | 85 | 17 |
| Third morning | 99 | 102.4 | 81 | 25 |
| Third evening | 99 | 103 | 91 | 16 |
| Fourth morning..... | 99.6 | 102.4 | 92 | 20 |
| Fourth evening | 98.2 | 101.8 | 92 | 16 |
| Fifth morning | 100.6 | 104.8 | 116 | 21 |
| Fifth evening..... | 99.8 | 106.2 | 122 | 29 |

I am not aware of any report similar to the above having been published.
GEO. H. SAVAGE, M.D.Lond.

THE DIAGNOSIS OF ANEURISM OF THE AORTA BY THE AID OF THE LARYNGOSCOPE.

By GEORGE JOHNSON, M.D., F.R.C.P.,

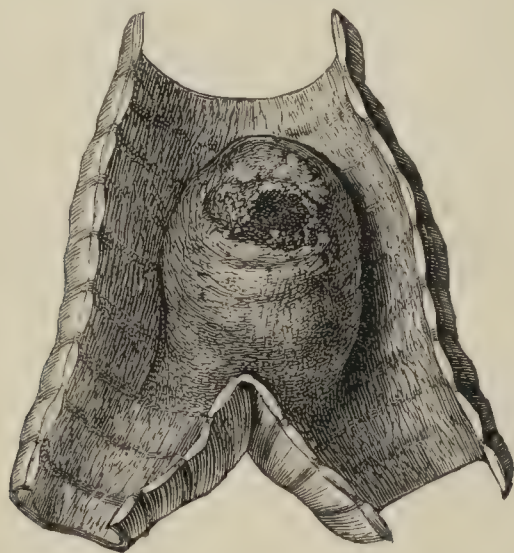
Physician to King's College Hospital; Professor of Medicine in King's College.

IT is well known that, in cases of aneurism of the arch of the aorta, symptoms referable to the air-passages not unfrequently arise. The diagnosis of these cases is often much facilitated by the use of the laryngoscope. Such a case I saw lately with my friend and former pupil, Dr. Richards; the patient being under the joint care of Drs. Butler and Richards, of Winchester.

A gentleman, Mr. H., aged 33, had noticed occasionally for a year past that, after running hard, his breathing became short, and attended with a noise in the throat. About six weeks before I saw him, while running after a wounded hare, his breathing became so difficult that he could run no longer, and he was nearly suffocated. At the time of his visit to me, on the 30th October, the chief symptoms were cough, stridulous breathing, and occasional difficulty of swallowing. The voice was clear and loud; and I remarked to Dr. Richards, before looking into the larynx, that, if the obstruction which caused the stridor were in the larynx, there would almost of necessity be more or less hoarseness and feebleness of voice. A laryngoscopic examination showed the larynx healthy, except slight congestion and redness of the mucous membrane; and while he drew a deep inspiration through a widely open glottis, as seen in the mirror, we heard loud stridor, evidently originating below the larynx. Then the question arose, Is there an aneurism pressing on the trachea? No unusual pulsation could be felt anywhere. No abnormal sound was heard over the front of the chest; but, on auscultation over the upper dorsal spinous processes, the tracheal stridor was heard there almost as plainly as when the stethoscope was placed over the front of the trachea itself; and the voice in that situation had a loud bronchophonic character. In addition to these physical signs, the respiratory murmur was decidedly more feeble over the right than over the left lung. We came to the conclusion that an aneurism of the transverse aorta, pressing on the trachea, and narrowing the tube, was the cause of the stridor, the occasional dyspnoea, and the dysphagia.

I did not see the patient again; but I learn from Dr. Richards that he became steadily worse for some time, and rapidly so a few days before his death, which occurred exactly three weeks after his visit to me. The difficulty of breathing progressively increased, until it became a constant struggle; there was occasional dysphagia; and he died from apnoea on the 20th November. Dr. Richards has kindly sent me notes of the examination made twenty-four hours after death, and a photograph of the aneurism, which I have had copied upon wood.

At the back of the transverse aorta there was a shallow pouch an inch and a half in diameter; at the upper part of this pouch an oval opening, with smooth rounded margins, and scarcely large enough to admit the tip of the little finger, communicated with an aneurism about the size of a walnut; this tumour pressed backwards on the trachea



just above its bifurcation; the cartilages were eroded; and the posterior wall of the aneurism was mainly composed of mucous membrane, which over the most prominent part of the tumour had an ulcerated opening a quarter of an inch in diameter, so that a clot of fibrine alone inter-

vened between the blood in the aneurism and the air in the trachea. The canal of the trachea was nearly filled by the aneurismal tumour, which, as may be seen in the woodcut, projects more over the right than over the left bronchus, and so explains the comparative feebleness of the respiratory murmur over the right lung. The recurrent nerves were found to have no connexion with the tumour.

The case whose history I have here briefly given, is a type of a class of cases. A similar case is at present under my care in the hospital. The chief features of these cases are, that an aneurism at the back of the transverse aorta presses on the trachea, narrows the canal, and so causes frequent loud cough, dyspnoea, and stridor; the stridor is tracheal, not laryngeal; while the voice remains clear and loud, and the laryngoscope shows the larynx quite normal, or the mucous membrane only slightly congested. The tracheal stridor and the sound of the voice are distinctly heard over the upper dorsal spinous processes, in consequence of the trachea near its bifurcation being pressed backwards against the bodies of the vertebræ, so that the sound is conducted through the bones. The symptoms in these cases may steadily or rapidly grow worse, but are not liable to sudden paroxysmal increase, except after unusual exertion, by which the aneurism becomes distended, and so the pressure on the trachea is temporarily increased.

There is another distinct class of cases in which laryngeal symptoms result from pressure of an aneurism on the pneumogastric nerve or its recurrent branch, the muscles of the larynx being either paralysed or thrown into a state of spasm. I have published a case of this kind in the fifteenth volume of the *Pathological Transactions*, p. 72. In that case, the symptoms bore a striking resemblance to those of laryngitis. It is not only of scientific interest, but also practically important, to distinguish the two classes of cases; and the laryngoscope affords much assistance in the diagnosis. When pressure on the nerves causes spasm or palsy of the laryngeal muscles, the voice is usually feeble and husky. With laryngeal spasm, there will be stridulous breathing, which may come and go quite suddenly, often without obvious external exciting cause, like paroxysms of infantile laryngismus stridulus. In these cases, the stridor is laryngeal, not tracheal. Inspection with the mirror during the paroxysm of spasm shows closure or great narrowing of the glottis, without structural change within the larynx, as in cases of hysterical laryngismus. When the spasm relaxes, the larynx appears quite normal. When pressure on one recurrent nerve has caused unilateral palsy of the laryngeal muscles, one arytenoid cartilage, with its vocal cord, may be seen to remain motionless when vocalisation is attempted; and the voice is feeble and husky. In these cases, the tubular breathing and bronchophony resulting from pressure of the trachea against the vertebræ are absent. Now the chief practical advantage of a correct diagnosis between stridor and dyspnoea the result of direct pressure on the trachea, and stridor from laryngeal spasm, or palsy, the result of pressure of an aneurism on a nerve, is this, that, in the latter class of cases, temporary relief may be afforded, and life prolonged, by tracheotomy; whereas in the former class tracheotomy is obviously quite useless, since the obstruction is below the point where the trachea can be opened. When laryngeal symptoms result from spasm, repeated doses of chloral have a decided influence in lessening the spasmodic tendency. Chloroform inhalation, also, relaxes laryngeal spasm, and therefore it may sometimes be employed as one means of distinguishing spasm of the larynx from a more permanent obstruction in the larynx or trachea.

THE SYNTHESIS OF ACUTE RHEUMATISM.*

By BALTHAZAR W. FOSTER, M.D., M.R.C.P.Lond.,

Professor of Medicine in Queen's College, and Physician to the General Hospital, Birmingham.

THE lactic acid theory of acute rheumatism has of late somewhat declined in popularity. The arguments of Prout, the experiments of Richardson, and the statistics of the alkaline treatment, have all failed to establish it firmly. Like many other theories resting on surer grounds, it has suffered from the scepticism of the day. The mint water treatment and other similar manifestations of nihilism have served, more or less, to strengthen the bias in favour of doubt, and to increase the number of sceptics. For some years past, I was myself a disbeliever in the lactic acid theory; and it is to lay before the profession the facts which have recently recalled me to my allegiance that this paper is published. These facts, when added to the arguments which have been adduced by many previous writers, and to the experimental proofs which we already possess, will, in my opinion, strengthen

* Read before the Birmingham and Midland Counties Branch.

the evidence which points to lactic acid as the poison of rheumatic fever.

In the *BRITISH MEDICAL JOURNAL* of February 25th, 1871, I read with much interest an account of Dr. Cantani's observations on the lactic acid treatment of diabetes. At that time, I was engaged in completing an inquiry into the effects of different drugs on the sugar-excretion in diabetes. I determined to add one more drug to my list, and to complete my research by observing the effects of lactic acid.

A man (Wright) who had just come into the General Hospital under my care, suffering from diabetes, offered me the opportunity. His age was 31, and he had been ill some four months before his admission. By trade he was an iron-caster, and up to this attack of illness he had been a healthy man, and had never suffered from rheumatism. He was married, and had several strong, healthy children. On a mixed diet, he passed during the first week of his stay in hospital an average of 180 ounces of urine daily, containing 49 grains of sugar in the ounce. On a strictly animal diet, continued two weeks, the sugar fell to an average of 36 grains an ounce, and the urine passed to an average of 116 ounces daily. The skin was dry and branny. The sugar-excretion remained pretty stationary on strict diet, but lung-symptoms began to manifest themselves, and steadily increased.

On March 8th, I ordered the patient fifteen-minim doses of lactic acid dissolved in an ounce of water four times a day. The dose was doubled the next morning, and in the afternoon he complained of acute pains in his joints, and flying pains about his limbs. In the evening, as these pains had increased, the medicine was discontinued by order of the resident medical assistant.

On March 10th, no lactic acid mixture was taken, and the pains gradually ceased.

On March 11th, I saw the case; and, regarding the occurrence of the joint-pains as a mere coincidence, repeated the lactic acid in fifteen-minim doses three times a day. On the evening of the 12th, he again felt pains in his joints; and on the morning of the 13th, "the small joints of the fingers of both hands, the wrists, and, in a less degree, the elbows," were noted by the resident medical assistant, Mr. E. A. Elkington, to have become "red, swollen, and painful." On my visit, I was much struck by the appearance of these joints, which were typical specimens of acute rheumatic arthritis. In the evening, both wrists, the small joints of the fingers, and the elbows were all red, hot, swollen, tender, and painful. The heart-sounds were clear. The temperature in the morning was 100; in the evening, 101 Fahr. He had moderate perspiration. Pulse 90, soft and full. The joints were wrapped in cotton-wool, and the lactic acid was discontinued.

On March 14th, in the morning, there was a decided improvement in all the joints; the swelling had much diminished, but heat and pain were still present. Temperature 100; pulse 84. In the evening, all the small joints of the fingers were much better. The wrists were still affected, and he complained of a good deal of pain in the knees, which had hitherto escaped. The heart-sounds were clear. Pulse 90. Temperature 100.8.

On March 15th, the joints were better. The temperature in the morning was 98.6; in the evening, 99.4.

On March 16th, he said that his arms were quite well; his legs nearly so. He had slept much better.

On March 17th, all pains in the joints were gone. Temperature 98.2. Pulse 72.

During the next twelve days, no lactic acid was administered. The case was put clearly to the man, and, as he had felt benefit from the acid mixture and had passed less urine during its use, he elected to run the risk of acute rheumatism. Accordingly, on March 29th, I prescribed seventy-five minims of lactic acid dissolved in twenty ounces of water. This was to be taken as a drink in the course of the twenty-four hours. During the next five days, no rheumatic symptoms appeared. The pulse rose twelve beats on and after the third day; the temperature, which had been previously elevated by the lung-complications, showed no marked change, but on the fourth and fifth days remained steadily at 99°, instead of varying, as it had done for some time previously. On the morning of the sixth day (April 4th), he complained of having had a bad night from joint-pains, which had disturbed him very much, and which came on suddenly after midnight. On examination, the metacarpo-phalangeal and first phalangeal articulations of the first and second fingers of each hand were found to be red, swollen, hot, and painful; the slightest movement aggravated the pain, and he could not on this account pick up anything with his fingers. The pulse was 102. The temperature, which on the previous evening had been 98.2, had risen to 99.4. The heart-sounds were clear. The acid mixture was stopped, and in the evening the pain in the knuckles was less, and the redness had diminished; they were, however, still stiff. No other joints were affected. Temperature 99.2.

April 5th.—His hands were much better, and, of his own accord, he resumed his lactic acid drink, and took about thirty minims of acid in the course of the forenoon. In the evening, the pains had returned in the knuckles, which were swollen, red, and tender. He discontinued the acid, had a fair night, and on the morning of the 6th, found his hands free from pain. He again resumed the lactic acid, and took up to 4 P.M. the remainder of the bottle, containing about forty-five minims of acid. In the evening, at 9 P.M., the pain and swelling had returned in his knuckles, and his left wrist was also affected. He now gave up the acid for two days, and the joint-symptoms gradually disappeared.

The acid drink was resumed on the 9th, and continued to the 13th, but he only took about thirty-five minims of acid a day. He experienced no inconvenience, except flying pains about his joints, till the night of April 13th, when he was disturbed by severe pain in the right wrist, which was found in the morning to be red, swollen, painful, and hot, and was a typical specimen of a rheumatic joint. Pulse 98, full and soft. There was copious perspiration, of acid reaction. The heart-sounds were clear. The elbows and knees became painful and stiff the next day. The joints were all wrapped in cotton-wool as before; and in the course of four days nothing remained except a little stiffness in the right wrist. After a week's interval, the acid was again taken, with like results.

The man now had gained so much experience as to the first indications of a coming attack in his joints, that he was allowed discretionary power as to the time and manner of taking the mixture. By trying it first in small doses, so as not to take more than twenty minims of acid a day, and stopping it for a day or so whenever the joints threatened, he managed to continue the acid for some weeks. Gradually he increased the dose, as advised, and early in June was able to take from forty to fifty minims daily. During this month, he had two sharp attacks of rheumatism in the hands and wrists. By the end of June he was taking seventy-five minims of acid daily; and on July 6th, this was increased to 100 minims. On the 7th, he began to experience considerable pain and stiffness in his joints, and kept his bed (he had been up daily previously) on account of the pain caused by walking. On the 8th, these symptoms were worse, and in the evening his wrists and elbows were very stiff and painful, but the knees were less so. The temperature had risen to 100.6. The acid was stopped. On the next morning, he was better. Temperature 99. The joints were less painful and stiff; there was no redness and no swelling. On the 10th, he again took the acid, his joints feeling much better, and the temperature being only 98.4. In the course of the day, he took 100 minims of the acid; and by the evening the pains had returned in his wrists, elbows, and knees. Temperature 100.6; pulse 100, full and soft; skin moist and perspiring. On the morning of the 11th, his right wrist was red and swollen; the left less so. The knuckles of his right hand were also red, swollen, and painful. His left knee was red, swollen, and very painful and tender. He complained also of pain in the left side, but the heart-sounds were found to be clear; pulse 88; skin still moist. The mixture, which had been stopped on the previous night, was discontinued till July 17th, by which date all the rheumatic symptoms had subsided. After this the man only remained in hospital seventeen days. During this period, he, of his own desire, resumed the acid drink, and on one occasion took as much as 125 grains of acid in the course of twenty-four hours. During the last fortnight of his stay in hospital, he had no severe pains in his joints, and whenever flying pains warned him, he discontinued the medicine for a day.

While the above case was under my care in the hospital, it so happened that another diabetic patient of mine, in visiting the wards, met Wright and compared notes with him. From him he heard such a favourable report of the acid treatment, that he requested me to order him the same medicine if I thought it suitable. I did so. A drink consisting of seventy-five minims of lactic acid in a pint of water was prescribed. Of this he took daily as much as contained thirty to fifty minims of acid; and on the fourth day he came to me complaining of a sharp pain in his right knee, which rendered the joint stiff, and made walking very painful. He also mentioned that he had less severe pains in his other joints, and expressed his opinion that he had caught a cold, which had produced rheumatism, a disease from which he had never before suffered. There was no swelling or redness of the knee or other joints. His skin, which had hitherto been harsh and dry, was soft and moist. The acid mixture was discontinued, and in two days the pains had entirely ceased. During the next month, he made several attempts to take the acid mixture, but it was always followed in a day or two by pains in the joints. Early in May, he managed to take the mixture for a week, and then was laid up with such severe joint-pains, that I was called to visit him, and found him in bed with

pains in his elbows, shoulders, ankles, and knees, and, as he said, all over him. None of the joints were swollen except the right knee, which was faintly red, decidedly swollen, and very tender and painful. The other joints were simply stiff and painful on movement. The skin was freely perspiring. Pulse 96, full and soft. The acid mixture was stopped, the joints were wrapped in cotton-wool, and alkalies administered. In the course of a week, all the symptoms had disappeared, and the patient was able to walk about and resume his ordinary habits. This patient had never passed more than twenty-four grains of sugar an ounce while under observation. The excretion was generally not over fifteen grains an ounce.

REMARKS.—The above record contains an account of the joint-symptoms which were observed in two cases to follow the administration of lactic acid. In the first case, at least six well marked arthritic attacks occurred; in the second case, under conditions less favourable for observation as to duration of treatment and place, one well marked attack occurred. The phenomena corresponded in all respects to those which are characteristic of acute articular rheumatism. They came on when the acid was taken, and ceased when it was discontinued. When moderate quantities of the acid were tolerated, an increase in the dose was succeeded by the painful inflammation of the joints. Coinciding with the development of the articular affection was the appearance of perspiration, at first only slight, but afterwards, in the more severe attacks, copious and acid.

These facts have dispelled the last lingering doubt in my mind as to the truth of the lactic acid theory of rheumatism. At first I doubted the connexion between the administration of the acid and the production of the rheumatic phenomena. In my scepticism, I regarded it as an accidental combination. The recurrence of the joint-symptoms, however, on March 13th, following distinctly on the repetition of the lactic acid mixture, shook my disbelief. The coincidence of joint-attacks with the use of the drug might occur once, and I thought even a second time; but, when I found it occur over and over again, there was no room left for the hypothesis of coincidence. To refer Wright's attacks to a series of accidental combinations requires, in my opinion, a much livelier faith than to accept the lactic acid theory of acute rheumatism. If to some, Wright's case presents not evidence enough in the beautifully typical character of the artificially produced disease, and in the precision with which it could be manufactured at the will of the experimenter, then the second case comes in to refute any explanation founded on the assumption of an idiosyncrasy on the part of one patient.

In health, no doubt, much larger quantities of lactic acid than any given in my cases would be excreted without producing any perceptible disturbance in the bodily functions. The acid would escape by the skin, the kidneys, or, after oxidation, as carbonic acid and water. It cannot be justly argued that the quantities of acid taken by my patients were too small not to have escaped in this way. The conditions under which the drug was given must be borne in mind. In diabetes we have a state of suboxidation very unfavourable to the conversion by oxidation of new compounds; and in Wright's case this was aggravated by the serious pulmonary complications. Associated with these, there was a dry and branny state of the skin highly unfavourable to the elimination of the lactic acid by one of the common channels. Lastly, the well known persistent acidity of the urine in diabetes points to a pre-existing hyperacidity of the fluids. These considerations are, I think, important, as defining the conditions under which the experiments were made—conditions most favourable to the development of the specific effects of the lactic acid. It was the combination of all these which rendered Wright so susceptible to the action of the drug. By the absence of one of them (the lung-complication), and the minor degree of glycosuria, we may probably explain the slighter susceptibility in the second case. The larger doses of acid which Wright was able to take occasionally, towards the close of his stay in the hospital, find an explanation partly in his more careful management of the remedy, partly in an acquired toleration of it, and partly in the great improvement which occurred under treatment in the state of the respiratory organs and in the sugar-excretion.

I refrain for the present from discussing the bearings of my observations on the therapeutics of rheumatism. The effects of the lactic acid on the excretion of sugar will be considered, with other modes of treatment, in a future paper. In this communication, my object has been to lay before the profession facts which have an important bearing on the origin of a common and serious malady. If, by pointing out the nature of the poison of acute rheumatism, they help in the smallest degree to improve therapeutics, they will not have been observed in vain.

ABSTRACT OF A CLINICAL LECTURE ON A CASE OF RUPTURED OR LACERATED KIDNEY, FROM A RAILWAY ACCIDENT: SUPPOSED FRACTURE OF THE OS PUBIS, AND RECOVERY.

Delivered at St. George's Hospital on October 24th, 1871.

By PRESCOTT HEWETT, F.R.C.S.,

Surgeon to St. George's Hospital; Surgeon-Extraordinary to His Royal Highness the Prince of Wales; etc.

THE case to which I intend to call your attention to-day, gentlemen, will be of interest, as the injury is not a common one, and not unfrequently terminates fatally. The man is lying in the Oxford Ward; and, from the symptoms which he had, I suppose he has had rupture or laceration of the kidney. He is a fireman on the railway, and while on the line he was caught between two carriages, the buffers compressing the lower part of the belly and pelvis. I mention especially the lower part of the belly and pelvis, because we shall have to determine whether there has been injury of the pelvis. When brought in, he was in a state of collapse, complaining of great pain in the lower part of the belly, and especially in the left loin. Now, in an accident of this kind, it is not easy at first to tell which organ is injured. After awhile, however, if the man pass urine, and you find that there is blood in it, you may fairly suppose that his kidney is lacerated. Well, after this man had been in the hospital some time, he passed blood in his urine; and, as the pain was in the left loin, it was inferred that it was the left kidney which was ruptured. For a day or two he had still more pain, and then there came symptoms of peritonitis, spreading from the left side down into the iliac region. He was admitted on the 27th September, during my absence. On October 2nd I saw him. During these few days he was under the care of Mr. Rouse, and was treated for laceration of the kidney and peritonitis. He was somewhat recovered when I saw him; blood was no longer passed in the urine, and the peritonitis, ending in marked thickening, was subsiding, insomuch that he was lying perfectly flat on the bed, and his legs were stretched out. You will bear in mind that the mere posture of the patient is an indication of his state, especially when the injury is about the belly, and has led to peritonitis.

Now what had been the treatment in all this mischief? It was that of perfect rest and opium. It was under this treatment that he so much improved. The only thing which I had to do was to carry it on. He went on gradually improving, and within a fortnight the whole of the hardness about the left side of the belly had disappeared; there was not the slightest pain, and the pulse was natural. The opium was gradually left off, and the man was put upon a better diet. He is going out to-morrow, about a month after the accident.

The mischief in this case was evidently in the front part of the kidney. I believe this from the fact of the patient having peritonitis. You will find that I have reason for believing this from the anatomical relation of the kidney—covered in front by the peritoneum, but behind by cellulo-adipose tissue. Had the rupture been behind, diffuse cellular inflammation would have occurred, and not peritonitis.

And now as to the probable injury of the pelvis. About a week ago, the man was allowed to get up and walk about the ward. He did this for a day or two, and then began to complain of pain in the right groin. I made him lie down in bed, and examined him, and I there found an extravasation of blood, which had not existed there before. It was exactly as if he had been bruised. This ecchymosis of the skin did not make its appearance until three weeks after the man had been in the hospital. What did this discoloration of the skin here mean? In the injury he met with, there must have been some extravasation of blood on the right side in the iliac fossa; and I strongly suspect, from the limitation of the ecchymosis, that this man has had a fracture—probably a mere crack—of the horizontal branch of the os pubis. These discolorations of skin, appearing some time after severe injuries, are most useful in the diagnosis of fractures which have not been suspected. I am all the more induced to call your attention particularly to this point, because I find no mention made of the fact that discoloration thus appearing over the sternum may lead to the diagnosis of a fracture of this bone, when there was no direct injury done to this region, but to the spine.

Now with such an accident as extensive laceration of the kidney, is it possible for the patient to recover? I have seen many cases in our wards in which I have had no doubt that there was extensive laceration, and in which recovery took place. This is one of these cases. The man has had laceration of the kidney, if the symptoms indicate anything. He may by and bye have, it is true, some ulterior mischief in this region, but he has recovered meanwhile. I have placed upon the table

a specimen of the same kind, which is very interesting. The patient was in this hospital, and you will find all the particulars in the Museum Catalogue, Series xi, No. 4. This man had, it was evident, extensive laceration of the kidney, from which he quite recovered; but two or three months afterwards he died of typhoid fever, and the healed laceration of the kidney was found. There can be no doubt about this case.

I have given you already the plan of treatment which you should adopt when peritonitis ensues in these cases. But when the laceration is at the back of the kidney, and diffuse cellular inflammation occurs in the loin, you must make a free incision to prevent burrowing.

The treatment of lacerated kidney is, for the most part, as I have told you, very simple; but much to my surprise, a new plan of treatment was given to me some years ago when I was examiner at the Army Board. It was to "cut out the injured organ—an operation which has not unfrequently been performed with success"! This answer was given to me in writing by a gentleman who possessed two diplomas! I need not tell you that this treatment I would not advise you to follow.

This patient, as I have said, is going out to-morrow; but he has been warned to be very careful in everything, but especially as to walking and going about much, owing to the injury which I suspect he met with about the pelvis.

ABSTRACT OF A CLINICAL LECTURE ON DROPSY.

Delivered at St. Thomas's Hospital on November 2nd, 1871.

By CHARLES MURCHISON, M.D., F.R.S.,

Physician to St. Thomas's Hospital, and Joint Lecturer on Medicine at St. Thomas's Hospital Medical School; etc.

AFTER noticing the general nature of dropsy, and tracing it to the osmotic circulation constantly going on in the tissues of the body, and between the vascular system and the serous and mucous membranes, Dr. Murchison said that the causes of dropsy may be reduced to two heads—(1) excessive venous repletion, and (2) diminished exhalation in one part of the body, leading to compensatory exhalation in another. There are some other causes, he said, which you will find mentioned, and which may contribute to the existence of dropsy: one of these is an altered condition of the blood. No doubt this may assist in the production of dropsy, as in anæmia or hydræmia, when the blood passes more easily through the membranes than in the state of health; still, in the dropsy of anæmia, you will find the heart at fault mainly: there is a deficiency in its propelling power. There is a general impression that, in renal disease, the dropsy is due to an altered state of the blood; but I shall give you some reasons for a different conclusion—that the dropsy from kidney-disease is to be explained by the second general cause which I have mentioned. Some writers speak of dropsy as sometimes having a nervous origin; and cases of dropsy, associated with paraplegia, and even with hemiplegia, have been recorded by Dr. Laycock of Edinburgh, in support of this view. But this cause of dropsy is certainly far from common. It is very important to remember the two main causes of dropsy, for the key to the whole treatment depends upon them.

Dr. Murchison then divided the forms of dropsy, from a clinical point of view, into three: 1. Partial dropsy, or dropsy limited to one part of the body throughout its course; 2. Dropsy which is first partial, but becomes general; and 3. Dropsy which is general from the first. The first form is due always to excessive venous repletion; and this overdistension of the small veins is the result of some mechanical impediment to the venous circulation. Dr. Murchison illustrated this by various examples, and called particular attention to the clinical characters of the dropsy due to obstructed portal circulation; viz., the beginning of the dropsy in the abdomen; the dyspnoea following, but not preceding, the ascites; the tendency to hæmorrhoids, vomiting, and diarrhoea, or to hæmatemesis; enlarged spleen and varicose veins on the right side of the abdomen. In the second form of dropsy, the swelling begins in the feet and proceeds upwards; and this also is due to excessive venous repletion, from obstructed venous circulation. But here the obstruction is in the central organ of circulation—most frequently mitral disease, or fatty heart, or dilated right side of heart, consequent on chronic bronchitis and emphysema. In the third form of dropsy, the swelling invades all parts of the body at once; and this is due to diminished exhalation in one part, leading to compensatory exhalation in another. This dropsy is almost invariably renal. Albumen is present in the urine. How is it that disease of the kidneys produces dropsy? On this point you will find great difference of opinion among different writers. In some works this question is rather evaded than answered; but the general view is, that in consequence of disease of the kidney, the blood becomes poisoned, and, as the result of this altered condi-

tion, the liquor sanguinis exudes. For example, Dr. Owen Rees, in the Harveian Oration a few years ago, made the remark that the retention in the blood of the urinary salts made the liquor sanguinis permeate the membranes with increased facility. But there is one very important objection to this view of the case—that, if it be correct, it is most remarkable that in the form of kidney-disease, in which of all others there is the greatest tendency to the retention of the urinary salts in the blood, there is little or no tendency to dropsy. I mean the contracted granular or gouty kidney, the peculiarity of which disease is, that the patients often die of uræmic coma and convulsions, with little or no dropsy. We must look, then, for some other cause of the dropsy. It is this: you get a diminished exhalation of water from the kidney; and hence dropsy is chiefly met with in those forms of kidney-disease in which the tubes are blocked up by diseased epithelium or inflammatory products (acute nephritis and fatty kidney).

Dr. Murchison then made some remarks on treatment. In the first place, one great object is to relieve venous repletion, which, in the case of portal dropsy, may be accomplished by purgatives, which cause a watery exhalation from the bowels. Another object is to remove obstructions to exhalation from the skin or kidneys by diaphoretics, warm baths, diluents, and diuretics. Thirdly, you must endeavour to stimulate compensatory exhalation from the skin and bowels. You will also find much good derived from tonics, such as iron.

Several cases in the hospital were commented upon as illustrating the above remarks, and the details were given of two cases now in the wards; viz., a case of ascites due to disease of the vessel, and a very remarkable case of general dropsy, in which there was no evidence of disease either of the kidneys or of the heart.

VISIBLE PULSATION OF THE ARTERIA CENTRALIS RETINÆ IN A CASE OF INCOMPETENCY OF THE AORTIC VALVES.

By C. E. FITZGERALD, M.B., M.Ch. (Dubl.),

Assistant-Surgeon to the National Eye and Ear Infirmary, Dublin.

AT the Heidelberg Ophthalmological Congress held in September last, Professor Becker of Heidelberg, as my colleague Mr. Swanzy informs me, read a paper on Visible Pulsation of the Arteria Centralis Retinæ in cases of Incompetency of the Aortic Valves, and also showed a patient who exhibited the phenomenon. Quite recently I have had an opportunity of examining a well-marked case, which appears to me possessed of sufficient interest to make it worth while recording.

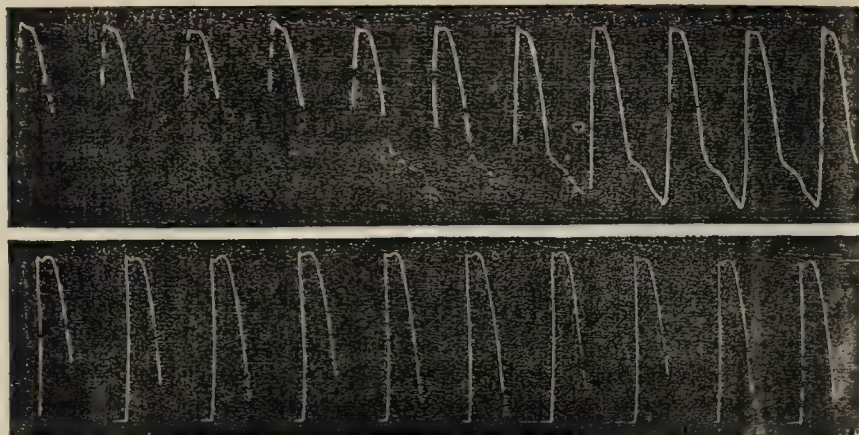
The patient is a man aged 40, who was admitted into the Infirmary of the South Dublin Union on the 3rd instant, under the care of Dr. W. B. Jennings, to whose kindness I am indebted in granting me permission to publish the following particulars. I do not think it necessary to give the history of the case; suffice it to say, that all the symptoms of incompetency of the aortic valves were present, and very well marked.

On the first occasion on which I examined the patient's eyes, I was able to detect in the right eye (the pupil being partially dilated with atropine) a very distinct pulsation of one of the retinal vessels, immediately at its point of emergence from the optic disc; this portion of the vessel presented such a dark purple colour, that, combined with its close proximity to one of the veins, which were somewhat congested, I failed to satisfy myself completely as to whether the pulsation was in the artery or in the vein. On a subsequent occasion, I again examined the patient several times, but was still unable to settle this point; a few days later, however, I dilated the pupils fully with atropine, and used a four-inch, in place of the ordinary two-and-a-quarter-inch convex lens. The large image thus obtained enabled me to determine clearly that the pulsation was certainly in the artery. Moreover, by resting the little finger of my left hand on the temporal artery, I found that its pulsations and those of the retinal vessel were synchronous.

It was in a portion of the superior branch (inverted image) of the arteria centralis, extending from its point of emergence to where it crossed over one of the veins, that the pulsation was visible; and I am inclined to think the difficulty of determining as to whether it was in the artery or vein was caused by the column of blood at each pulsation projecting this portion of the artery forwards; the rays of light were consequently no longer reflected directly from the walls of the vessel, which, in fact, became foreshortened and partially thrown into shade. I was unable to detect any pulsation in the retinal vessels of the left eye.

I may mention that there was no increase of tension in either eye; in fact, the tension of the right eye was, if anything, below the normal.

Dr. Becker states that the phenomenon is not invariably present in cases of incompetency of the aortic valves, nor is it at all times visible in those cases in which it has been observed. It was previously noticed by Dr. Quincke, assistant to Dr. Frerichs.



I am indebted to Dr. Purser for the sphygmographic tracings of the man's pulse.

MANAGEMENT OF THICKENED OR DISEASED OMENTUM IN HERNIA.

By THOMAS LEEDS, ESQ.,

Lecturer on Physiology in the Sheffield School of Medicine.

IN cases of hernia, where the sac has been opened and found to contain thickened or diseased omentum, what is to be done with the omentum? As the opinions of surgeons are still divided upon this point, I may, perhaps, be excused for describing the particulars of a case which has lately occurred in my practice. The plan of removing the omentum, applying ligatures, and returning into the abdomen, is, I believe, deservedly falling into disrepute. The best practice lies, it would seem, between the plans (1) of leaving the omentum in the wound; (2) of removing it and allowing the upper portion to remain in the wound; (3) of leaving the omental tumour outside the wound, and applying a ligature around it, with a view of causing it to separate, and of setting up adhesions around its neck. Various eminent surgeons, including Syme (*Principles of Surgery*, 1863) and Callender, recommend the first-named mode of practice. Mr. Callender says: "Unless, however, it" (*i.e.*, the omentum) "is unmistakably gangrenous, it should, as a rule, be left in the wound, and the wound should be left partly open for drainage. I never saw any result from removing omentum, except now and then a troublesome bleeding. I never saw any harm from leaving it in the wound; but I have seen the disastrous consequences of returning, even what one hears called 'not bad-looking' omentum, into the cavity of the abdomen." (*St. Bartholomew's Hospital Reports*, vol. iv). Mr. Callender elsewhere also urges the necessity of leaving a portion of the wound open for drainage. Of the second, or immediate removal plan, I know little; but, as there is some danger of hæmorrhage and its consequent debilitating effect upon the patient, and the possible risk of peritonitis through blood escaping into the abdomen, it seems to me inferior to the third plan—that of applying a ligature. In Holmes's *System of Surgery*, vol. iv, is given the result of some cases in which the ligature was successfully applied at St. George's Hospital (by Mr. Pollock, I believe). "Of twenty cases, in which the omentum was securely tied, a few died; but the notes of the after-death examination of these show the cause of death to have been, in all cases, independent of the ligature placed around the omentum. Of eleven cases in which the omentum was allowed to remain in the sac, many recovered, although abscess and sloughing of the tissue occurred in some of them."

CASE.—On November 3rd, I was sent for to see a woman, aged 61, who had been vomiting for four days, and was now throwing up stercoreaceous matter. The history of the case pointed to an irreducible hernia of six years' standing. The taxis having been tried, without success, assisted by my friend, Mr. Fayer, I cut down and found a pad of omentum, of the size of a large hen's egg, under which lay a knuckle of liver-coloured intestine. The stricture (at the external ring) was divided, and the bowel returned. Taking into consideration the length of time that the omentum had occupied its present position, it was deemed unsafe to return it. The omentum was left outside the wound; sutures being placed on each side, so as to constrict it, as far as possible, and to prevent the escape of fluids into the abdominal cavity. A ligature was afterwards placed tightly around the omentum. On the

tenth day, the removal was completed by means of the *écraseur*. There was scarcely any hæmorrhage. The patient recovered without a bad symptom throughout, and is now (November 18th) able to sit up. By thus constricting the neck of the tumour, this patient—an old woman—was saved from the chance of exhausting suppuration, which occasionally follows the plan of leaving the omentum in the wound, and from the injurious effects of troublesome hæmorrhage, which has been known to occur through the immediate removal of omentum.

In another case of a similar nature I should be inclined to use the *écraseur* earlier—about the fifth or sixth day—as adhesions would by that time in all probability have taken place.

A PLAN FOR FACILITATING THE REDUCTION OF STRANGULATED HERNIA BY TAXIS.

By PHILIP CRAMPTON SMYLY, M.D., F.R.C.S.I., Surgeon to the Meath Hospital.

"THE objects to be attained in the treatment of hernia in a state of strangulation, are the release of the protruded parts from stricture, and their replacement within the abdomen, provided they are in a suitable condition." These objects are usually sought to be accomplished either by taxis or by operation with the knife."

Some years ago, a nurse in one of the medical wards in the Meath Hospital had a reducible femoral hernia. She neglected to wear a truss, and one day it consequently became strangulated. My father, being the surgeon on duty, tried taxis, as did also the other surgeons, without success. After consultation, an operation was decided on, but every argument failed to persuade the patient to submit—she would rather die than be cut. After the surgeons had left, the clinical clerk (since a very distinguished medical officer in the army) and I thought it a good opportunity to study the relation of the ring to the sac. The result of our examination not a little surprised us. On withdrawing my finger from the ring into which I had inserted it, we heard a distinct gurgle. My fellow-student pressed the tumour, and it passed into the abdomen. The patient lived for many years afterwards, and performed her duties in the hospital. I have since frequently tried to repeat this happy manoeuvre, and with most satisfactory results.

For inguinal hernia in the male, the index finger is applied to the lowest part of the scrotum. This is invaginated (as in Wutzer's operation for radical cure), the finger being passed behind the testicle and cord up to the external ring. The hernial tumour is then pressed down-



FIG. 1.—Scrotum invaginated.

wards over the finger towards the back of the hand, so as to make the structures in the ring tense, and consequently smaller. The invaginating finger is then forced firmly upwards and outwards in the direction of the internal ring. As soon as the finger is firmly grasped, the

hand should be slightly turned, and the finger pushed towards the middle line. Considerable force may be safely applied in this way, as



FIG. 2.—Finger pressing inwards.

all the delicate structures are behind the finger, which acts mainly on the stricture. On withdrawing the finger, the hernia can usually be easily returned. The same principle is equally applicable to femoral hernia. This plan may have occurred to others; but if so, it is perhaps not generally known, and any suggestion by which a cutting operation may be safely avoided is acceptable to the practical surgeon. My colleague, Mr. Porter (surgeon to the Queen in Ireland), was much pleased with the success of this plan in a case of inguinal hernia strangulated four days; and he has since tried it himself with satisfactory results.

The advantages which I claim for this procedure are.—1. The strangulating portion of the ring is dilated before any pressure is applied to the bowel; 2. Much greater force may be applied to dilate than could safely be brought to bear when the intestine itself is employed for dilatation, as in ordinary taxis; 3. There is much greater probability of returning the bowel into the abdomen in a good condition, and, consequently, in a number of cases avoiding a dangerous surgical operation.

CLINICAL MEMORANDA.

THE IODIDES OF AMMONIUM AND SODIUM IN SYPHILIS.

It not unfrequently happens in cases where iodine is required, and the patient has taken iodide of potassium with good effect for a certain time, that this medicine either ceases to produce any result, or is no longer tolerated. *Faute de mieux*, mercury is sometimes resorted to; but, as the cases are not suitable for mercury, they generally become worse while taking it. In this difficulty, the iodides of sodium and ammonium are very useful, for they affect the body somewhat differently from the potassic salt. They can be borne by, and produce the effect of iodine in many persons who have become nauseated by the latter. They moreover contain less alkali per weight of the salt, and their alkali is less deteriorating to the blood than potash. One or two cases will illustrate my meaning. A gentleman was brought to me by his medical adviser, with extensive and obstinate syphilitic ulcers of the tongue and palate. He had had several other forms of syphilis during the nine or ten years he had been infected, and was in a weak and low-spirited condition. Early in the disease, he had taken mercury and other remedies in the usual way. Latterly, for the ulcers in his mouth, iodide of potassium had been given in doses gradually increasing to a scruple, and even half a drachm; but, when I was consulted, these had ceased to check the disease, and had produced iodism. In consequence of this, mercury and several other drugs had been tried again without benefit. Though his tongue was foul, his appetite, but for the pain of eating, was good. This is important; if the digestion be deranged, it must be set right again before iodine can have fair play. Under these circumstances, the patient was ordered to begin with eight-grain doses of iodide of ammonium in bitter infusion three times daily. He bore this well, and in the course of a few weeks his tongue and palate were nearly healed. For complete cicatrization it was necessary to alter the form to

iodide of sodium; and, during two years, he has been taking this salt at short intervals to prevent the relapse of his disease. Here is another case of syphilis appearing unconquerable by either mercury or iodine, which had been given by several medical men whom the patient had consulted. The case was interesting from the probability of its being one of contagion through an infected monthly nurse "sucking the breasts." The child was infected at the mouth subsequently to its mother, and the history in the mother points to contagion having entered by the nipple. I did not see the patient until two years after infection; she had then severe ulceration of the tongue and of the soft and hard palate, and limited necrosis of the bone in the palate. From the prescriptions which she showed me, she had been taking scruple doses of iodide of potassium, for some time with good effect; but, latterly, even double doses of her medicine had only produced severe iodism without controlling the disease. It was with some reluctance that she consented to try iodine again; but, after a few eight-grain doses of iodide of sodium, coupled with frequent washing of the mouth with hyposulphite of soda and glycerine lotion, her sufferings were so far removed that she announced, a week afterwards, that she could eat crusts with ease; and, in a month, except that a morsel of necrosed bone still adhered, the mouth was quite well. The course of this case since has been obstinate; gummata appearing elsewhere after that in the mouth had healed; but she still takes iodine, sometimes in one salt, sometimes in another, and occasionally mixed with Bell's liquid extract of sarsaparilla. It would be easy to multiply instances where, iodide of potassium having lost its effect, the progress towards recovery can still be maintained by another form of iodine; but that is needless.

BERKELEY HILL, Surgeon to University College Hospital.

EFFECT OF ROCKING ON TEMPERATURE.

THE *Journal of Anatomy and Physiology* for November, in its report on the progress of physiology, mentions some experiments of Manassein concerning the effect of "rocking" upon the temperature of animals. This gentleman found that by this means the temperature was lowered from 0.66—1.2 deg. C. It is not stated what animals were experimented upon; but, on repeating his experiments with infants, I have not met with a similar result. On December 19th, I took the temperature of four children, varying from six months to a year old, and found it to register as follows: 98—97.8 deg., 97.4—97.3 deg. F. They were then cradled and rocked for a quarter of an hour, and the temperature taken again, when precisely the same results were obtained as before the rocking. S. MESSENGER BRADLEY, Manchester.

THERAPEUTIC MEMORANDA.

VACCINATION-PAPERS.

SMALL-POX having entered our hitherto healthy town, there has been a great demand for vaccination; and I have, at times, found difficulty in keeping up a regular supply of lymph. To meet this, I have devised a new method of lymph preservation; it is most portable, and very certain in its effects. Taking a sheet of common sized (*i. e.*, cream-laid) note-paper, I paint it with fresh lymph taken from the vesicle with a fine camel-hair pencil. The lymph soon dries; and the paper is ready for use. When required, a minute piece may be cut out or torn off the sheet, and, after having been slightly breathed upon, should be stuck upon the freshened surface. If the paper be required to be kept for any length of time, it should, after being charged, be covered with a thin coating of white of egg. Isinglass will not do, as it cracks when dried. THEODORE J. PRESTON, M.R.C.S., Mansfield, Notts.

CATHETERISM OF THE EUSTACHIAN CANAL.

IN Dr. Hibbert Taylor's paper on this topic, in the *BRITISH MEDICAL JOURNAL* of November 11th, he says that the introduction of the catheter is by no means difficult, requiring the possession of a certain amount of dexterity; but he does not describe the procedure. It may be useful to learn that Mr. Henry Power has, in his translation of *Kramer's Aural Surgery* (New Sydenham Society's edition), at pp. 28-29, very clearly rendered the steps to be taken. Other portions of Dr. Taylor's paper induce me to add some remarks. Kramer is strongly opposed to any other insufflation into the Eustachian tube than from the mouth of the operator, objecting to the use of "any caoutchouc bag, bellows, or air-press, either large or small" (p. 30, *et seq.*) At page 31, he mentions how the "position, extent, and tightness", of any contraction of the canal can be ascertained by the "introduction of a catgut or

elastic bougie"; and proceeds with the mode of applying those instruments. The blowing into the tube of nitrate of silver in solution (one to three grains of an ounce of water), or sulphate of zinc (five grains to an ounce of water), or hydrochlorate of ammonia, is recorded in pp. 102, 110, and 112; and dilatation by bougies at pp. 103, 107, and 112.

Dr. Taylor has done good service by inviting attention to this subject, and has mentioned some of the authors who have written concerning aural catheterism. Those who wish to study it will find some additional references in the appendix (p. 145) to Kramer's work.

Malvern Link, Nov. 15, 1871.

STANLEY HAYNES, M.D.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE TREATMENT OF SCROFULOUS ABSCESS OF THE CERVICAL GLANDS.

It is remarkable that, in the treatment of so common an affection as scrofulous inflammation and abscess of the glands of the neck, there should be so much variance of opinion amongst surgeons. The notes on this interesting and familiar subject which we have collected, and of which we commence the publication this week, are, it will be observed, sometimes of a contradictory character as to the influence of remedies which have long been in repute in preventing the formation of pus, and as to the best method of evacuating the abscess when it has formed.

UNIVERSITY COLLEGE HOSPITAL.

So long as the enlarging lymphatic glands which ultimately form abscess are tender, and the skin is unchanged in colour, Mr. BERKELEY HILL applies an evaporating spirit lotion to the lumps themselves for half an hour twice or thrice daily. If the patient can keep up the evaporation longer than that, so much the better; but hospital out-patients can seldom afford time to do this, and a rag worn round the neck and occasionally wetted is usually more a warm than a cold application. When tenderness has ceased, or before it comes on, iodine ointment is rubbed into the skin over the enlarged glands, night and morning, till rubefaction is produced. Meantime, counterirritation is set up by painting an area of skin, not over but round the glands, on the nucha and shoulder; for example, with solution of iodine, one in five of water dissolved in half its weight of iodide of potassium being added. This usually vesicates in the course of a few hours, and the counterirritant action is kept up without repeating the vesication, by applying the liniment of iodine of the *British Pharmacopœia* every day, or every other day, according to the effect produced. Sometimes Bullen's liquor vesicatorius of cantharides is used instead of the caustic iodine solution. This is painted in a narrow ring, half an inch wide, at two inches' distance round the enlarged glands, and solution of iodine, one part in twenty-four of water, is spread over the lumps themselves. It may be remarked, *en passant*, that in Mr. Hill's out-patient room for the last twelve months the methods of treating inflammation by counterirritants laid down by Mr. Furneaux Jordan have been tried extensively in strict accordance with that gentleman's direction. But the success consequent thereon has been so small, that counterirritants cannot be relied on to any great extent for controlling inflammation. In chronic inflammation of lymphatic glands, this mode of treatment appears more useful than in most other affections, and it is customarily employed even when the inflammation has advanced to chronic abscess. It seems clear that the adhesion and cicatrization of undermined patches of skin and closure of sinuses are more rapid when counterirritation is used. In acute abscess, hot fomentations, poultices, and early evacuation of pus are employed. Sinuses and deep irregular cavities are injected with the solution of iodine, one part in twenty-four of water, and compressed by a soft pad and strapping if that can be arranged. The enlarged and indolent glands that are sometimes exposed by the breaking away of the skin are either partially destroyed by a light application of potassa fusa, or stimulated to suppurate freely, as sprinkling them with red oxide of mercury and poultices. The general treatment consists in giving good food and clothing; in the removal of decayed teeth, should they be present; iron as potash-tartrate, perchloride solution, Parrish's syrup of iron, this latter form being very good for young children. When the patients are much debilitated, or their pasty aspect denotes amyloid degeneration of the tissues through continued suppuration, the Samaritan fund of the hospital is employed to

send the patients for a month to Eastbourne. Mr. Hill has employed sulphuret of calcium internally in several cases, but has never been able to perceive the slightest benefit to ensue from its administration.

ST. THOMAS'S HOSPITAL.

Mr. LE GROS CLARK never attempts to disperse (so to express it) glandular scrofulous abscess in the neck, simply because he thinks such attempts futile. He has tried setons and other expedients in opening such abscesses, but now uniformly employs a delicate and thin lancet or a cataract-knife for the purpose. Mr. Clark does not delay this operation till a large surface of skin is thinned, and always tries to anticipate the patchy reddening which often, in these abscesses, immediately precedes ulceration. If deferred too long, there is more risk of tear, by the drawing in, puckering, and adhesion of the skin, if it escape ulceration. The opening should be sufficiently free to secure unobstructed discharge of the contents of the abscess; the opening should not be unnecessarily meddled with; and the dressing should be as simple as possible.

Mr. SYDNEY JONES says that it is a matter of importance to diagnose true scrofulous glandular enlargement from glandular enlargement consequent on irritation of neighbouring cutaneous or mucous surfaces. We are too much in the habit of looking upon enlargement of cervical glands as necessarily scrofulous. In a large number of such instances amongst hospital out-patients, some source of irritation, such as scalp-eruption or sores, dirt, or vermin, might, with little difficulty, be discovered. In cases of glandular enlargement, when evidently not dependent on neighbouring irritation, iodine with potash or iron has been administered by Mr. Sydney Jones, combined or not with cod-liver oil. Locally, iodine paint has been applied in the early stages; and warm-water dressing on evidence of suppuration. Evacuation of pus should be carried out so soon as formed, if the pain be acute. When the case is more indolent, the opening should be deferred until the superjacent skin shows discoloration. A fine point of potassa fusa hastens the breaking down of the scrofulous material where such breaking down has not been complete in the formation of the abscess. Potassa fusa has been found by Mr. Jones of great service in destroying reddened and brindled or irregular cicatrices. The application is painful; but a beautiful white smooth cicatrix results.

Mr. MAC CORMAC thinks that the local treatment of scrofulous abscesses is of secondary importance to the constitutional. Pure air, improved food, and tonic medicines, should be ordered. External applications will never induce the absorption of these abscesses. As they frequently occur in the neck and under the chin, to avoid cicatricial deformity becomes of importance. This is of very common occurrence if the abscess be left to open of itself, since there is usually loss of skin and tedious healing. So soon as the presence of pus is determined, Mr. Mac Cormac would prefer to open the abscess-cavity by means of a small puncture with a tenotomy-knife, or else drain off the pus through the cannula of a fine trocar. The operation is thus reduced to the most trifling proportions. It may be frequently repeated, and it by no means interferes with any other form of treatment which may subsequently prove needful. If the surgeon have succeeded in improving the general health, the abscess-cavity may in this way be induced to contract, and finally to heal, and an unsightly scar wholly obviated.

Mr. FRANCIS MASON has a very decided plan of treating scrofulous glandular abscess of the neck. As soon as suppuration is fairly established, he makes a very small puncture with a tenotomy-knife at a depending part of the swelling, the contents being allowed to drain away spontaneously. Anything like pressure or rough handling, to favour evacuation, is especially avoided, as occasioning pain to the patient and increased irritation in the part. Water-dressing is applied, or the patient is directed to bathe the neck once or twice a day with tepid water. The wound thus made seldom completely heals, but generally scabs over. In a few days the scab is gently lifted off; or, if necessary, the puncture may be reopened with a probe, when none of the semi-purulent fluid peculiar to strumous abscesses again exudes. Now a pad of lint of suitable size is placed on the abscess, over which a strap is applied, so that, whilst the point of puncture is left uncovered, the walls are kept in close contact. The pressure thus maintained prevents the re-accumulation of matter, and appears to have the effect of modifying and ultimately arresting the secreting power of the lining surface. Mr. Mason disapproves of large incisions, believing them to be often the cause of the unseemly cicatrices observed in the neck of strumous subjects. Neither does he think well of the practice of allowing the abscesses to burst of their own accord; for the opening thus made by Nature often involves and destroys a considerable and irregular amount of skin-tissue, leaving a far larger and more unsightly scar than that—often scarcely appreciable—occasioned by the timely interference of the surgeon.

Mr. ARNOTT has employed various remedies for chronic inflammation of the lymphatic glands of the neck in scrofulous children, but without sufficiently encouraging results to wed him to any special treatment. Painting the skin over the glands with tincture of iodine has seemed to do no good. Somewhat better effects have followed the use of iodine ointment in the same way; but he has generally preferred inunction of the skin in the neighbourhood, which he has practised with the view of causing the iodine to be taken up by the lymphatics, and carried by them directly to the diseased glands. He has tried in several cases the plan of extensive counterirritation of the back of the neck and below the gland-swellings, as recommended by Mr. Furneaux Jordan; but he has never yet seen any reason to prefer this remedy to any other. It has certainly not succeeded in his hands to anything like the extent which Mr. Jordan's recorded experience led him to expect. Where the glands have distinctly suppurated, he has long practised the method of passing a thick piece of silk cord through the swelling, and tying it loosely in, so as to permit of a continued drain of pus without any serious scar resulting; and in some instances the treatment has yielded excellent results. Pressure by means of carefully applied strapping has also seemed useful. In more advanced cases, free evacuation of the pus, and subsequent light water-dressings, have been used. But in all cases it has seemed essential to attend carefully to the diet—giving meat twice a day, with plenty of milk, and cod-liver oil where this may be readily borne; and to ensure abundant open-air exercise. Generally, iron has appeared to be clearly indicated, the form most beneficial being either the syrup of the iodide of iron or steel wine. In one case, very notable improvement seemed to follow doses of iodide of potassium and carbonate of potash, taken twice daily in warm milk, as recommended by Mr. Erichsen.

THE MIDDLESEX HOSPITAL.

Mr. HULKE treats indolent swellings of the lymphatic glands by painting them with a gentle stimulant, as tincture of iodine; but when there are pain, tenderness, and redness, he generally finds a tepid water compress of cotton-wool, covered with any impervious material, soothing and useful. When matter has formed, he prefers to make a small dependent incision, which leaves a much less disfiguring scar than if the abscess is allowed to break. Where an abscess has already broken, and there is an indolent ulcer enclosing portions of nearly insulated tuberculous gland-tissue, he destroys these with iodide of starch, and stimulates the ulcer with a weak watery solution of iodine. In exceptional cases it is, he thinks, well to clip away pieces of very thin undermined and floating skin. With these local measures he always combines tonics, and as much outdoor exercise as can be taken without fatigue.

Mr. HENRY MORRIS says that scrofulous abscesses of the glands of the neck present two varieties—firstly, those in which, though the glands are predisposed to disease owing to the scrofulous taint, the inflammation and suppuration run an ordinary and sometimes a rapid course, and terminate kindly; and, secondly, those in which the glands pass through their various stages slowly and tardily, continue to discharge for a long time after they have burst or been opened, or leave fistulous tracts, with perhaps portions of gland-tissue, exposed or protruding through the opening. The treatment must in all cases be general and constitutional as well as local. Fresh air and exercise, nourishing but varied diet, and a sleeping apartment which is well ventilated and not crowded, are as necessary as they are difficult in some cases to obtain. Moderately and wisely administered, stimulants are of benefit, especially where there is but slight disposition to take food. Amongst medicines, cod-liver oil is, Mr. Morris thinks, the most serviceable. Where anæmia is present, as generally is the case, the preparations of iron are important aids to treatment. The syrup of the iodide of iron, with some bitter infusion, such as quassia, or taken together with the cod-liver oil, is the one he prefers. In older patients, and if the general state of the patient do not contraindicate it, he gives the tincture of the perchloride of iron; in other cases the citrate of iron and ammonia; and in others ammonia and bark. In the local treatment of inflamed cervical glands, every effort should be made to prevent suppuration by warmth, fomentations, iodine applications, or blisters; and even after suppuration has occurred the abscess may, in some cases, be absorbed, while iodine tincture or ointment is being applied and the constitutional treatment followed up. In all cases, however, in which the abscess remains stationary, or the degeneration of the gland is increasing, or suppuration is extending into the surrounding tissues, a small but sufficiently free opening should be made, and the wound afterwards dressed with chloralum-wool or some other dressing into which pus can drain, and by which the abscess-cavity is protected from the air. If the skin be much thinned and the abscess of large size, and induration around it when the case is first seen, it may be advisable to

open it by destroying a portion of the skin with caustic potash: this sometimes stimulates the walls of the abscess to granulate healthily, and a less conspicuous cicatrix than otherwise is left. Fistulous tracts are best treated by means of solid nitrate of silver, or the solid sulphate of copper; and if a portion of the gland protrude, this may be treated in the same way by dusting over its surface the powdered sulphate. In some cases, where other means fail, and if there be not much disease of the tissues around, so that a good covering can be obtained for the parts below, the remnant of the gland may be extirpated with the knife; but this can but seldom be advisable or necessary. If healing be delayed by disturbance of the walls of the abscess being kept up by the muscular tissues in the neighbourhood, as by the platysma or sterno-mastoid, the best remedy is to restrain the action of the muscle by means of a light compress and some strips of plaster applied over the surface of the muscle.

Mr. ANDREW CLARK recommends scrofulous glandular abscesses to be opened as soon as fluctuation can be detected. They should never, he thinks, be allowed to burst. This may be done with the knife or with potassa cum calce, the latter not leaving such a scar. Should the abscess continue to discharge thin unhealthy pus, and burrow downwards into the tissues, this may often be arrested by dressing the sinus with lint smeared with paste of iodide of starch, which often produces a good effect when everything else fails.

ST. MARY'S HOSPITAL.

Mr. SPENCER SMITH thinks that, in the treatment of these glandular affections of the neck, we are not sufficiently impressed by the fact that scrofula is a constitutional disease manifesting itself in local affections; that these occur in the earlier stages of life, and are not often persistent; that they, comparatively with other lesions, affect the general system but slightly, and frequently change their seat of action, but must have opportunity for the exercise of their energies. With this view, he thinks that the glandular affections of the neck in scrofula are too frequently over-treated; that the local manifestation is too apt to be treated as a strictly local disease. It is better, he thinks, to let the constitutional disease disfigure the neck or destroy a joint than cause death by destruction of the lungs. As to local treatment of these glandular affections of the neck, he is of opinion that the use of iodine is much abused. It is commonly employed in such strength and so frequently as to become a powerful irritant; quite inconsistently, therefore, with the view above suggested. Leeches, again, mask the symptoms by counteracting for the moment an effort of Nature to produce suppuration. But there is a condition of the glandular swellings when, after protracted and abortive efforts of Nature to induce suppuration, a mass of glands is seen studded with small abscesses in various situations—*i.e.*, in immature or incomplete suppuration; and in such instances, the free application of leeches will, by reducing the circulation in the already deteriorated tissues, speedily cause their final destruction by suppuration, and hasten cure, temporary or permanent. Scrofulous abscesses in the neck should be opened by the smallest incision consistent with due evacuation. In these sluggish suppurations we constantly observe unhealthy sores, margined by overlapping edges of congested, but yet lowly vitalised integuments, almost without an effort at the healing process; if such margins be destroyed by a rather free use of the potassa fusa, the removal of tissue will not only expedite the healing, but afford a healthy stimulus to the ulcer, and the resulting cicatrix will be much less deformed than if left to Nature.

When scrofulous glands in the neck commence to soften and threaten to suppurate, Mr. GASCOYEN endeavours to promote the formation of pus and disorganisation of the glands as speedily as possible. To this end, he paints the swelling, if indolent, with tincture of iodine, or covers it with the iodine or camphorated mercury ointment under a poultice, continuing the use of the latter constantly, and of the former applications according to the pain they occasion or the effect they produce upon the skin. If the swelling remain hard and the suppurative process go on very slowly, a blister will often hasten it; or, if there be pain, a leech or two will relieve this and expedite the formation of pus. In these cases, Mr. Gascoyen objects to an early opening of the abscess, unless it be deeply seated or there be some special reason for doing so—such as severe pain; injurious pressure upon surrounding parts; tendency for the matter to burrow, or to cause death of a large piece of integument, etc.; but he prefers to leave it until the glandular tissue is well broken down, and the pus is fast approaching the surface. For, if the swelling be opened before disintegration of the glands is advanced, an enlarged gland will often project between the edges of the wound, and form a fungous protrusion, which prevents the closure of the wound, until destroyed by escharotics or allowed slowly to break down of itself—a process which may require weeks or even months for its completion, and which will leave a chronic ulcer very difficult to heal.

Moreover, these scrofulous glands in the neck (as in the groin or elsewhere) will, under slight chronic inflammation, often become infiltrated with serum to such an extent as to fluctuate and cause reddening of the skin; and yet, after presenting the local indications of an abscess, the serum will sometimes become absorbed, and the swelling entirely subside. If, when in this condition, the glandular swelling be opened, only a few drops of serous fluid, with some blood, will escape, and the gland protruding will be long before it is destroyed sufficiently to allow the wound to heal. In these cases, care must be taken not to delay the opening of the abscess too long, so that sinuses be formed by the burrowing of the pus, or death of a large piece of skin result from its pressure. The treatment Mr. Gascoyen adopts is to make an incision into the abscess at the most dependent or the most prominent point; a small opening is, as a rule, better than a large one, as lessening the risk of the skin sloughing. If the patient be in the Hospital, he advises opening it under the carbolic oil, and treating it according to Lister's method; but if he be an out-patient, this treatment cannot be carried out properly, and Mr. Gascoyen then employs poultices until the discharge diminishes, when he changes them for the zinc or calamine ointment; and if there be an indisposition to heal, he combines these with stimulating lotions or nitrate of silver. Should the edges of the wound remain livid, undermined, with no tendency to adhere to the subjacent parts, they should be removed by the knife or scissors; and if a gland protrude it may be cut away, or, better still, on account of the bleeding which sometimes follows, it may be destroyed by the application of nitric acid, nitrate of silver, potassa fusa, the nitric oxide of mercury in powder, etc., under a poultice or an ointment. Internally, the usual tonics, especially iron and cod-liver oil, should be given, with plenty of nourishing food and a small quantity of stimulant.

Mr. A. T. NORTON's sole treatment is to open scrofulous glandular abscess of the neck before discoloration of the skin takes place, by means of a small incision, and then to inject them with a solution of carbolic acid, one part in twenty of water. By this means he is enabled usually to avoid poulticing. Where there are extensive nodulated cicatrices which have been in existence for a long period, he cuts the cicatrix away, and brings the margins finely and closely together. The mark left is scarcely visible; and in some people such an operation, where available, is of very great importance.

EDINBURGH ROYAL INFIRMARY.

Dr. PATRICK HERON WATSON thinks that scrofulous glandular abscess of the neck can generally be referred to some peripheral irritation recent or remote—*e.g.*, eruptions on the scalp or behind the ears; suppurating conditions of the face; primary or secondary dentition; the decay of teeth, and the formation of gumboils; various forms of stomatitis; or affections of the throat and tonsils. Dr. Watson fancies that such conditions, continuing in action, should form an important element in the early treatment of the glandular swelling which precedes abscess. Mineral waters or medicinal preparations containing the chloride of calcium are beneficial: tincture of cantharides and the salts of iron have also appeared to him much more efficacious than any other means of general medication. Locally, in the early stage, warm fomentations, or the application of cotton-wool over the swollen and tender surface, will usually give most signal relief. Painting with iodine has always seemed to him hurtful. If the suppuration occurs with any degree of acuteness, simple evacuation will generally be found sufficient. When the suppuration is tardily attained, blistering with cantharides is an excellent means of hastening progress. After such chronic abscesses have been opened, pressure should be employed to squeeze out any curdy concretions. The introduction of a stick of chloride of zinc to act upon the suppurating surfaces, or the injection of a strong solution of the chloride of zinc (fifteen grains to the ounce of water) into the sac, will materially hasten the progress towards sound cicatrization. After evacuation of the abscess in any case, the part should be dressed with any of the antiseptic materials fashionable at the moment.

In treating scrofulous glandular abscess of the neck, Mr. ANNANDALE practises early incision and treating the wound carefully, according to Lister's method. When a single gland is diseased and is acting as a source of irritation, he excises it, if possible, before the surrounding textures and skin have become much involved. Proper constitutional treatment must accompany any local interference.

Mr. JOSEPH BELL treats scrofulous abscesses of the neck in the following manner. Before they have softened, he blisters them at short intervals, giving the patient good food and malt liquor, with cod-liver oil, and, in some cases, small doses of the tincture lyttae, as recommended by the late Mr. Syme. Ten drops a day largely diluted will be a full dose. After the glands have begun to soften, he uses blisters or other counterirritants to aid in the breaking down of

the gland-structure, but opens the abscess with antiseptic precautions before the skin has had time to get thin or purple in colour. The opening is best done with the aid of chloroform, and should be very thorough, as much as possible of the curdy pus and gland-*débris* being squeezed out of the wound, and the parts well washed out with an antiseptic solution. If the skin is already thin and undermined, it may be necessary to destroy some of it with caustic potash to prevent an ugly scar. Mr. BELL has tried the method of frequent evacuation of the contents of the abscess by a fine trocar, but has not seen reason to be satisfied with the result.

ROYAL INFIRMARY, ABERDEEN.

CASE OF ACUTE DIABETES, WITH CLINICAL REMARKS.

By J. W. F. SMITH, M.D., Physician to the Infirmary, and Lecturer on Clinical Medicine.

DIABETES, in the vast majority of cases, is a chronic disease; occasionally, however, it assumes an acute form, of which the following case is an instance; and Dr. Noble has recorded two similar examples in the BRITISH MEDICAL JOURNAL for 1863, vol. i.

CASE.—John Grassick, a farm-servant, aged 16, was admitted into the Infirmary on the 25th January, 1871. According to the testimony of his father and himself, he had only been ill about four weeks, the prominent symptoms being loss of flesh, weakness, constipation, increased urinary secretion, and great thirst. Excessive desire for food had never been complained of. Next day, it was found that he had passed eleven pints of urine in the twenty-four hours, of a pale-greenish colour, with a specific gravity of 1036, and which, when tested, contained a large quantity of sugar. He had no cough. The lung-sounds were normal. On the 28th January, he had passed eight pints of urine since the previous day at noon; and the nurse reported that he was taking little or no nourishment, and that he was very weak. His pulse was 80, and feeble, and he seemed restless and uneasy. His tongue was dry, and his bowels had been opened by an enema. He was ordered beef-juice and six ounces of wine. His temperature at 9 P.M. was 97. On the 29th January he was much worse; his pulse being irregular and very weak, and his mind confused. The temperature at 11 A.M. was 92.5. Soon after this he became comatose, and he died at 9 P.M. Every effort was made to get a *post mortem* examination, but it was not allowed.

REMARKS.—This case of diabetes seems to have run its course in four weeks. I could scarcely credit the short duration of the illness; but the father was most positive in his statements as to the lad having been in good health five weeks previously, and as to the sudden onset of the symptoms of thirst, weakness, and loss of flesh. In the absence of a necropsy, no decision can be arrived at as to the cause of the diabetes, but I am inclined to think that it was of cerebral origin. It is very probable, also, that as he came a distance of more than thirty miles to the hospital (and only a part of that by railway), during very cold and frosty weather, his vital powers had been depressed, and his death accelerated by the journey. Dr. Prout used to remark on the frail tenure of life held by diabetics, and how the fatigue and excitement of a long journey to consult him caused a rapidly fatal termination in several instances: at the same time, I believe that the fatal event would not have been long delayed even had Grassick remained at home.

In all the cases of diabetes in which I have taken a note of the temperature, it has been below the normal, and this is the general experience. In a case that I had lately, the temperature, when taken at night, was at first almost at the normal, but this was only for two days; after that it varied, never exceeding 97, and sometimes being as low as 94 and 95. In another case, where there was the complication of phthisis, the temperature, in place of being raised, as it almost invariably is in ordinary cases of tuberculosis, was lowered, and stood at 97.

Phthisis is one of the most frequent terminations of diabetes; but, in the experience of Dr. Pavy and Dr. Wilks, it consists of a chronic pneumonic inflammation, leading to excavation and the formation of cavities without the existence of any tubercular deposit. In my case, however, the right lung was loaded throughout with tubercle, softened in several places with cavities; the left lung, also, contained a few spots of tubercle, but not broken down.

The treatment of diabetes is mainly dietetic, but every now and again some new remedy is proposed for it. Opium is often of great service.

It soothes the irritability and distress of the patient, which are often very marked, and it diminishes considerably the quantity of urine, but at the same time the specific gravity is raised. I have never given more than six grains in the day, although there is a great tolerance of this drug in diabetes; and there are cases on record where as much as a drachm has been given in the twenty-four hours.

LEEDS GENERAL INFIRMARY.

MYELOID DISEASE OF LOWER JAW: REMOVAL OF HALF THE BONE.

(Under the care of Mr. JESSOP.)

DANIEL FOLEY, aged 10, was admitted towards the end of October 1871. About Christmas, 1870, his left cheek was observed to be a little swollen, but it was not until August last that the lower jaw presented anything like a distinct tumour. Since that time the growth of the disease was rapid. Throughout there was neither pain nor deterioration of health. On admission, the left cheek presented a prominent swelling over the body of the lower jaw. Beneath the jaw were two movable and painless lymphatic glands, each of the size of a field-bean. On examining the interior of the mouth, a tumour was found on the outer aspect of the lower jaw, reaching from the left middle incisor tooth to the angle of the bone. The growth had a firm semi-elastic feel, and the mucous membrane covering it was superficially ulcerated. The teeth on that side were all pushed towards the interior of the mouth. It was decided to remove the bone at the joint, and to divide the jaw on the right of the symphysis. Accordingly, on November 2nd, the right middle incisor tooth having been extracted, an incision was commenced over the angle of the jaw, carried along the

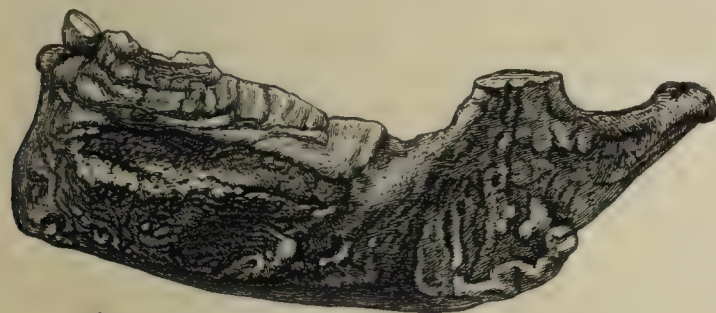


Fig. 1 shows the portion of the jaw removed with the tumour.

margin to the symphysis, and then turned upward through the centre of the lip. The lip and cheek having been dissected off the tumour, the jaw was cut through where the tooth had been extracted. The bone was then turned up, and with a few touches of the knife was dissected out at the joint, this part of the operation being much facilitated by cutting through the coronoid process with bone-scissors. The flap



Fig. 2 is taken from a photograph of the boy on the day before his discharge from the hospital.

was then adjusted and retained by wire sutures. Healing by first intention took place, and the boy was sent home on December 29th.

Mr. Jessop remarked to the students assembled in the theatre upon

the doubtful character of the tumour; of the many varieties of new growth found in connection with the alveolar processes. Myeloid was by far the most common, and there was nothing in the present case inconsistent with what had been previously observed in myeloid disease; and yet the rapidity of its growth, the early ulceration on its surface, the youthful age of the patient, the presence of enlarged glands which, however, were not fixed, pointed to the possibility of malignancy. It was because of this possibility that it had been deemed prudent to take away so large a portion of the bone. In removing the lower jaw at the joint, it had been usual to commence the incision over the joint, to carry it straight down to the angle, and thence along the margin of the jaw to the symphysis. The incision adopted in the present case, although it involved cutting through the lip, had the great merit that it avoided division of the facial branches of the portio dura, and of the salivary duct. The removal of the bone was, moreover, effected with considerable facility. On microscopic examination, the tumour proved to be a well marked example of myeloid.

THERAPEUTIC RECORD.

POPLITEAL ANEURISM CURED BY FLEXION IN THREE DAYS.—The *Bulletin de l'Académie Royale de Médecine de Belgique* contains an account by Dr. Larondelle of the cure of a popliteal aneurism of the size of an orange. Dr. Larondelle adopted Mr. Ernest Hart's method of forced flexion of the leg upon the thigh. There was oedema of the foot and leg. The bandage employed was applied after the fashion recommended by Mr. Hart in his first paper in the *Medico-Chirurgical Transactions*; and the patient, as in his second published case, was allowed to walk about the room with the help of a crutch. The bandage was solidified by starch. The flexion seems to have been forced a little in excess. At the end of the second day, as the patient was complaining much of the pain, the bandage was removed. The pulsation was less. A second bandage was applied, and on the third day the tumour was found to be solidified. The cure thus effected was permanent; and the tumour, at the end of five months, was reduced to the dimensions of a small hard kernel.

TRANSFUSION OF BLOOD.—Three interesting cases of transfusion are recorded by Jürgensen (*Centralblatt*, No. 28). The first was a case of phosphorus-poisoning. The patient was reduced to the last extremity of weakness, and suffered from hæmorrhage and jaundice, when, two months after the poisoning, about 580 cubic centimeters of blood, taken from three healthy persons, were injected into the median vein. Nearly the same quantity of blood was at the same time taken from the radial artery. He began to recover immediately, and in a month could leave his bed. A syphilitic eruption, from which the patient was suffering at the time, disappeared after the transfusion, and did not return till two months afterwards. In the second case, the patient was a young woman in a state of extreme debility from gastric ulcer, to which had succeeded peritonitis and pleurisy. The blood used in the operation had to be brought some distance to the patient's residence in small well-closed bottles. It had been previously defibrinated, and before use was warmed to the temperature of the body. At the first operation, 350 cubic centimeters were injected into a deep vein of the arm; and, ten days later, a smaller quantity into the peripheral end of the radial artery; while the same quantity was allowed to flow from the central extremity. This had no favourable result; and death subsequently ensued, after the evacuation of the pleuritic fluid by paracentesis. The third case was that of a man poisoned by exposure to carbonic acid in the hold of a ship. Nearly a day after exposure to the gas, the patient was quite unconscious, and had irregular and interrupted respiration and paroxysmal muscular contractions, while the reflex irritability was quite lost. In this case, 400 cubic centimeters of blood were drawn from the median vein; and thereupon 375 cubic centimeters of defibrinated blood, taken immediately before from three other persons, were injected into the same vessel. During the operation, the muscular spasms ceased; and after the patient had been for one hour in a warm bath, and subsequently had cold water poured over him, he was able to open his eyes and to drink. Three hours later, he answered questions; and on the next morning consciousness was perfectly restored. Recovery was complicated by the formation of red maculæ, which subsequently became gangrenous, on the skin. These were seen at the time of the operation, and presumably were due to stoppage of minute vessels. Jürgensen regards transfusion of blood as a most valuable remedial measure in carbonic acid poisoning, and advises an early recourse to it.

VACCINATION WITH GLYCERISED LYMPH.—Dr. Weiss has contributed some important statistics on this subject to the *Vierteljahrsschr. für gerichtl. und öffentl. Medizin*. His observations were made during an outbreak of small-pox among the war-prisoners at Alt-Damm in December 1870 and January and February 1871. He first vaccinated three children with lymph mixed with glycerine, brought from Berlin. The lymph taken from these children was mixed with glycerine; and, from January 16th to March 6th, he revaccinated with the diluted lymph 5,801 men, the operation being successful in 1,586 cases. All the subjects had been vaccinated in youth, many two or three times; and in 4,023 there were distinct cicatrices. From November 21st to January 21st, among 2,687 men, there were 72 cases of small-pox, with 7 deaths. After the revaccination, from January 25th to April 15th, among 8,851 men, there were 195 cases, with 22 deaths; viz., among the successfully revaccinated, 6 cases, no deaths; among those in whom revaccination did not succeed, 25 cases, no deaths; among the unvaccinated, 164 cases, with 22 deaths. Dr. Weiss mixes the lymph from the arm with five parts of glycerine and the same quantity of distilled water. He says that, placed in bottles covered with bladder, it remains good for a long time.

POLYGONUM HYDROPIPER AS AN EMMENAGOGUE.—Dr. J. S. Unziker speaks highly (*Philadelphia Medical and Surgical Reporter*, October 14) of the polygonum hydropiper or water-pepper as an emmenagogue. Its saturated tincture, in teaspoonful-doses three or four times a day, was recommended by Eberle in cases of amenorrhœa. Dr. Unziker says that it was formerly much used in Cincinnati, but has become disused in consequence of having fallen into empirical hands. He has found it efficient and useful. Where anæmia or other constitutional defects are present, these have first to be corrected. It is the safest and best remedy in cases where the general health is not impaired, but where the menses are checked by cold, mental emotion, or other like causes, where it is wished to bring them on without fear of producing congestion in the head or chest.

TREATMENT OF BURNS.—Dr. de Bruyne uses, in place of Carron oil, or Velpeau's modification of it by using oil of almonds, a compound of 3 parts of partly precipitated hydrate of lime, 150 parts of glycerine, and 3 parts of chlorinated hydrochloric ether. The lime and glycerine are slightly warmed, and the ether is added. The product is a transparent uniform fluid. A piece of fine linen, soaked in it, is laid on the burn; and over it is placed oiled silk or some other covering, so as to prevent the access of air and the evaporation of the ether. Dr. de Bruyne has found this dressing useful in burns unattended with sloughing, and also after the detachment of sloughs. He thinks that it may be useful in ill-conditioned wounds, and in atonic, callous, fungous, and foul ulcers.—*Montpellier Medical*; and *Bull. Génér. de Thérap.*, December 1871.

TREATMENT OF HYDROCELE.—M. Monod, in a communication to the Surgical Society of Paris, has recommended, in cases of hydrocele, the withdrawal of a small portion of the fluid, and the injection of a little alcohol. This is repeated several times, until the hydrocele disappears. He relates several cases treated successfully in that way. His explanation of the *modus operandi* of the alcohol is, that it enables the fluid to undergo absorption, over which, in hydrocele, secretion predominates.—*Journal de Méd. et de Chir. Prat.*, December 1871.

TREATMENT OF NÆVUS BY SUBCUTANEOUS RUPTURE OF THE VESSELS.—Dr. Mezger of Amsterdam describes, in the *Archiv für Klin. Chirurgie*, Band xiii, the case of a child who had a nævus a centimeter broad in the left ala nasi. It had a dark blue colour, which was deepened on prolonged expiration, the swelling at the same time being slightly distended. When seen, the child was three months old. The tumour was said to have slowly but steadily increased since birth. Dr. Mezger pressed one finger on the veins leading from the tumour, so that its capillaries were distended with blood; he then rapidly squeezed the nævus, so as to rupture the vessels while full. This proceeding was repeated on several occasions, commencing at the edge, and proceeding towards the centre. It was followed by extravasation of blood and slight inflammation. The result, Dr. Mezger says, was perfectly successful.

CALCULI UNDER THE PREPUCE.—The *Canadian Medical Journal* for October reprints from the *Pacific Medical Journal* a case related by Dr. H. W. Nelson, in which a Chinaman, aged 35, had phimosis, the result of an injury received in childhood. The opening for the passage of the urine was very small; and, during micturition (which was accompanied with much pain), the prepuce became distended to the

size of a fist. Dr. Nelson operated for the cure of the phimosis; and, in doing so, found in the preputial sac thirty-eight small calculi. The patient recovered well after the operation, and had no signs of calculus in the bladder. Dr. Nelson believes that the calculi must have been deposited from the urine which could not escape.

CANCER OF THE ETHMOID BONE: EXTIRPATION: RECOVERY.—In a statistical account of the University Clinic at Berlin for 1869, in the *Archiv für Klinische Chirurgie*, Band xiii, Dr. Busch relates the case of a man aged 78, who had a large tumour of the size of a fist occupying the middle of the face. It had partly destroyed the nose. In extirpating it, it was found necessary to cut close to the under surface of the cribriform plate of the ethmoid bone, and to completely open up the nasal cavity as far as the posterior nares. The defect in the face was remedied by transplanting a flap from the forehead, which had the result not so much of forming a new nose as of closing the hole left by the operation. Healing went on steadily, and the patient left the hospital in a few weeks.

REVIEWS AND NOTICES.

A PRACTICAL TREATISE ON BRIGHT'S DISEASES OF THE KIDNEY. By T. GRAINGER STEWART, M.D., F.R.S.E., etc., Physician to the Royal Infirmary, Edinburgh. Second Edition. Edinburgh: Bell and Bradfield. London: Longmans and Co. 1871.

DR. GRAINGER STEWART is well known in connexion with the pathology and treatment of Bright's disease, and we are pleased to see that his work on this subject has already reached a second edition. Considerable improvements have been effected, and numerous additions made in the way of illustrations, new cases, and the subject matter generally. Of the more important additions, we would call attention to the records of the subsequent history and pathological conditions of several cases which had been under personal observation for several years. Dr. Stewart finds in them a full confirmation of his views regarding the pathology of these cases, founded on the symptoms manifested during life. The author adheres to the classification of Virchow, whose views he has further elucidated and in some degree modified. We do not at present propose to enter into any discussion as to whether the facts bear out this classification in all its details. The subject is, however, ably handled by Dr. Stewart; and we would refer to the work itself for the data on which the views regarding the nature of the different forms and stages of the disease are based. A valuable chapter has been added on the differential diagnosis of the different forms of Bright's disease. Supplementary chapters, embodying the results of original investigations previously published elsewhere, treat of other pathological conditions of the kidney, such as simple fatty degeneration, and its relation to Bright's disease; acute atrophy of the kidney; and the nature of waxy degeneration, in which Dr. Dickinson's views are fully discussed. An elaborate chapter has likewise been added on the complications of the different forms of Bright's disease, of great practical value. The treatment of Bright's disease is fully discussed. Altogether, the work before us will stand favourable comparison with the numerous treatises which have been written on this subject, and will take a high rank in medical literature.

NEW BOOKS AND NEW EDITIONS.

Mode d'Invasion et de Propagation du Cholera, étudié à Smyrne. Par le Dr. W. CHASSEAUD. Constantinople: De Castro. 1871.—Dr. Chasseaud has rendered a service which epidemiologists will readily appreciate in writing the local history of the epidemics of cholera at Smyrna. The relations of Smyrna with Alexandria, with Constantinople, and with European ports, makes its epidemic history scientifically and historically valuable. Dr. Chasseaud traces it in great detail and with clearness. He is an enthusiastic believer in the transmission of cholera-poison along the lines of human intercourse and by human intervention. He calls it frequently contagious, and even (unwisely) refuses to consider how or by what means it is conveyed, whether by secretions, dejecta, or effluvia. Of course, therefore, he is the warm partisan of quarantines, and thinks that by a strict quarantine the invasions of cholera may be checked. A strict quarantine, in this country at least, is, however, little less than a sheer impossibility. In passing, we note that Dr. Chasseaud has proved the inutility of various reputed prophylactics, and that he is disposed to regard the period of incubation as extending over five days. Treatment, he finds, as most others have done, modifies the disease but little. He looks upon cholera as a slight form of cholera.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 23RD, 1871.

PROLEGOMENON.

THE few words proper to this occasion may be brought within a small compass. The volumes of the JOURNAL for the year now about to end have contained a mass of scientific and practical original matter such as it has never before been the good fortune of the editor of any medical journal to be able to offer to his readers within a similar period. It is unnecessary to speak of it in detail; for the many thousands who have become possessed of these volumes have, if we may judge by the numerous communications which we have received and by the spontaneous compliments from foreign sources, fully appreciated the value of the remarkable series of lectures and original contributions which the JOURNAL has contained. To those who do not possess them, we are equally unable to offer any observation of interest; for a large part of the issue ran speedily out of print, and we have been unable to meet the demand for back numbers. We cannot, however, abstain from expressing our thanks to the Rev. Professor Haughton, Mr. Lister, Dr. George Johnson, Sir Thomas Watson, Dr. Gee, Dr. Hughes Bennett, Dr. T. K. Chambers, Dr. C. J. B. Williams; Inspectors-General Smart and Murray; Deputy Inspector-General Gordon; Drs. Beatty, Banks, Macnamara, and Grimshaw, of Dublin; Dr. Barnes, Mr. John Wood, Dr. T. L. Brunton, Mr. Haviland, Mr. Erasmus Wilson, Dr. A. Fleming, Dr. Crichton Browne, Dr. E. C. Seaton, Dr. A. T. Waters, Dr. H. Simpson, Dr. Bradbury, Dr. J. G. Swayne, Dr. Clifford Allbutt, and many others, for the kindness with which they placed at our disposal, for publication, scientific material of the highest value.

The influence which the JOURNAL has exercised throughout the profession, and in impressing the views of the profession on statesmen, publicists, and general readers, has never reached a higher point than during the last year. Its statements of fact and opinion have been repeatedly and respectfully discussed by the most influential organs of public opinion in London, and throughout the kingdom.

We shall endeavour at least to maintain, and shall not spare any fitting effort to overpass, the success and usefulness which have attended the career of the JOURNAL during the last year. Many years have passed since a new series of Lectures on the Practice of Medicine from one accomplished hand have appeared in any medical journal. The course of lectures on the Modern Practice of Medicine, which we shall commence in the first number of the new year, from the pen of one of the ablest, most accomplished, and encyclopædic of teachers, will, we are persuaded, prove eminently instructive and highly acceptable to the widest circle of professional readers. Dr. Murchison never fails to carry through whatever he undertakes with success and completeness; and we shall expect to be able to carry on the publication of these lectures with regularity. The communications of Dr. Oscar Liebreich of Berlin, the discoverer of the anæsthetic properties of chloral, upon this and three other new narcotic agents not yet known in this country, will be read with the greatest interest. The rest of the programme for the year speaks for itself; it is rich in promise; and we have every reason to anticipate that the promises will be fulfilled.

In this hope, and with the desire to make the JOURNAL continue to uphold and aid the best interests of the Association and the profession, we are emboldened to ask all the members of the Association and of the profession to continue the kindly and earnest support which has already been given to the JOURNAL the high and useful position which it now

occupies, and to assist in making it worthy of an Association whose numbers, usefulness, and influence have increased to an extent beyond parallel. We number now more thousands of professional readers than were ever before represented by any journal in any profession. There is reason to hope that their number may be increased, until it includes the whole body of the active and working members of the profession.

THE ANNUAL MEETING IN 1872.

THE Annual Meeting of the British Medical Association in 1872 will be held in Birmingham, the metropolis, no less medical than commercial, of the Midlands. Our members in that district are already making preparations to render the event useful and interesting. The President-elect of the Association, Mr. Alfred Baker, Senior Surgeon to the General Hospital, is widely known, and no less widely respected, throughout the midland counties. The profession is rallying round him with offers of assistance and of work; and a liberal subscription-list towards the expenses of receiving and entertaining this great Association has been formed, and is still increasing.

The Committee of Council, at their last meeting, appointed Dr. Fleming, Senior Physician to the Queen's Hospital, and Mr. Oliver Pemberton, Surgeon to the General Hospital, to deliver the Addresses in Medicine and Surgery respectively. The reputation of these gentlemen, and the resources of the Birmingham hospitals, are a guarantee of what we may expect from them. The number of Sections for scientific and professional papers is not yet decided. At present, four are proposed—Medicine, Surgery, Midwifery, and Public Health; and we believe that the claims of our provincial members will be largely recognised in appointing the officers of those Sections. In order to enable the members to attend the meetings more regularly than has occasionally been the case, it is proposed by the Committee of Management to repeat the practice which has been followed on some previous occasions, of providing each day a luncheon in close proximity to the place of meeting. We think that this will be a great advantage and convenience to the members and visitors, and that it will add much to the successful working of the Sections.

The Committee of Management met on December 14th, when various subcommittees were appointed for superintending the numerous requirements for the interest, the comfort, and the amusement of the members visiting Birmingham. The important department of the Museum is entrusted to the management of Professor Bracey, M.B.; and it will, we doubt not, be an important feature of the meeting. Mr. Clayton is Chairman of the Executive Committee. Mr. Bartleet, Honorary Secretary to the Local Branch, Dr. B. W. Foster, Secretary to the Pathological Section, and Mr. West, are the Honorary Secretaries. Mr. Taylor and Mr. Bindley are the Treasurers. Under their superintendence, there can be no doubt that the annual dinner, and the *souirée* which is proposed to be given by the President, and indeed the meeting altogether, will be thoroughly well arranged.

Birmingham itself may present fewer historical or archæological associations, and a neighbourhood less picturesque and less grand, than other places at which the Association has met. Its interest is that of industrial vastness and social character. Probably at no one place could one so readily see and investigate the complex machinery, the delicate arts, and exquisite processes, which are employed in ministering to the wants and luxuries of the world.

The various public buildings will be thrown open. The Hospitals, the College, the Gaol, the Lunatic Asylum, the Sanatorium, King Edward's School, the Midland Institute with its museum and art-gallery, the Free Library, and the Shakespeare Memorial Library, the latter the only one of its kind in England, will claim attention. The various manufactories, including Elkington's electro-plate works, with their gorgeous show-rooms and art-treasures; the mediæval and domestic brass and bronze work; glass works of every variety; the wire and tube and boiler works; the small arms manufactory, where all the Enfield processes may be seen; the manufacture of pins, of pens, of

papier-maché, of jewellery; the Mint; and innumerable other manufactures of things of artistic or domestic utility, will provide interest and amusement to our members. Permission will, it is confidently hoped, be obtained to visit many interesting places in the neighbourhood; among them, iron and coal pits; salt mines at Droitwich; the porcelain works at Worcester, where also the beautiful and recently restored Cathedral will repay a visit; and the beautiful inland watering-place, Malvern; Dulley Castle; Lichfield Cathedral; the Leachey Hills; Sutton Park; and the beautiful ruins of Kenilworth Castle; and Warwick Castle, itself now, alas! partly a ruin; and, though last, not least, Stratford-on-Avon, with its beautiful parish church and walk by the banks of the river, and the birthplace and residence of Shakespeare. With all these attractions, and with the known professional and social cordiality of our midland brethren, we confidently anticipate that the Annual Meeting of 1872 will be an era in the history of our Association.

THE CONVALESCENCE OF H.R.H. THE PRINCE OF WALES.

THE health of His Royal Highness the Prince of Wales has continued steadily to improve during the week; and we are profoundly pleased to be able to state that his progress towards convalescence has not been marked by any interruptions, or by any other causes of anxiety than those necessarily incidental to the recovery from a disease so exhausting as a severe attack of typhoid fever. At the moment at which we write, we have the happiness of being able to state, from information dating late on Thursday afternoon, that defervescence is complete; there is a gradual return of power, and there are no visceral troubles. The exacerbation of fever which gave rise to the serious symptoms appears to have been the result of the severe intercurrent bronchial affection—an affection which of itself, as we had recently occasion to notice, is capable of raising the bodily temperature to 105 deg. This difficulty and danger having been happily surmounted, and having left so little trace, there is—we speak it with thankfulness and assurance—the best prospect of a very sound and complete convalescence. We must not count the weeks required to establish it with too great impatience; but above all things, we may rejoice that the fever has not left behind it any organic lesions.

For the re-establishment of the Prince's health, a mild winter resort may be useful. Osborne itself offers many advantages for such purpose. But this is still a speculation, rather than a forecast.

The Prince being happily so well restored, Sir William Jenner was enabled on Wednesday to return to town. Dr. Gull will return, it is expected, in a few days. These two eminent physicians have been in constant consultation and joint charge of his Royal Highness now for upwards of a month. The more immediate and continuous charge of the patient and the management of the sick room devolved from the first upon Dr. Gull, who was first in attendance. A very high, but by no means too high, tribute has been paid to the devoted, skilful, and ceaseless care which Dr. Gull brought to his anxious and all-important task. Never, indeed, was a malady so serious, and in a personage on whom the hopes and fears of a nation were centred, combated by a more fortunate combination of qualifications, capacity, and experience, than Sir William Jenner and Dr. Gull brought to their important task. We have the means of knowing that they were throughout closely united in opinion, act, and word upon everything which concerned the principles and details of treatment; and in all that they proposed and wished they were diligently—indeed indefatigably—seconded day and night by Dr. Lowe. None who know the admirable and gracious sensibility of the Queen and the Princess of Wales and the members of the Royal family, will fail to understand how fully the devotion of the medical attendants has been appreciated by those who themselves displayed in the serious events of the illness a ceaseless anxiety to do quietly, unobtrusively, and usefully, all that the most tender affection and well

directed but intense earnestness of purpose could suggest for the well-being of the Prince. Happy, indeed, is the conclusion which, under Providence, has crowned these efforts.

CAUSE OF DIABETES.

A MOST interesting and important addition to our knowledge of the cause of diabetes has been recently made by Professor Cyon, in a paper which he, along with M. Aladoff, has communicated to the Imperial Academy of Sciences at St. Petersburg, and which is published in the *Mélanges Biologiques*. Several years ago, Claude Bernard put forward the theory that in diabetes the functional activity of the liver is increased, and a larger amount of sugar formed in it in consequence of the vessels of the organ becoming dilated, and the circulation in them more active. The increased activity of the circulation he attributed to some change in the vaso-motor system of the hepatic vessels, which allowed their walls to relax in a similar way to those of the ear of the rabbit after the sympathetic has been divided in the neck. He ascertained that the formation of sugar could be greatly increased, and diabetes produced, by galvanising the pneumogastric nerves in the neck, or by irritating their roots by puncturing them at their origin in the fourth ventricle. At the same time that the production of the sugar was increased by the puncture, the vessels of the liver became much dilated. It might thus have been supposed that the nervous influence which originated in the medulla oblongata and caused diabetes, passed down to the liver through the vagi. This, however, was not the case; for when these nerves were cut and their ends galvanised, diabetes was only produced by irritation of the central end, but not by irritation of the peripheral extremity. Diabetes could also be induced by puncturing the fourth ventricle, just as readily after the vagi were cut as when they were intact. If the splanchnic nerves were cut before the fourth ventricle was punctured, no diabetes was produced; but if they were cut after the puncture had been made, their section did not remove the diabetes which was present.

From these and other experiments, Bernard concluded that the air inhaled during respiration irritated the ends of the vagus in the lung; that this irritation was conducted up to the medulla oblongata, and was thence reflected down the splanchnic nerves to the liver, and caused the formation of sugar. By what way the nervous influence passed from the medulla to the splanchnics, however, was not ascertained; and no very satisfactory explanation could be given of the fact that section of the splanchnics after puncture of the ventricle did not remove the diabetes. Some light was thrown upon this question by the observations of Eckhardt and Pavy, but it has been reserved for Cyon completely to solve it.

Pavy noticed that section of the superior cervical ganglion of the sympathetic might cause diabetes; and Eckhardt found that it followed section of the last cervical or any thoracic ganglion, just as certainly as puncture of the fourth ventricle. Section of the splanchnic nerves did not produce it.

Eckhardt tries to explain this difference between the effect of dividing the ganglia and the nerves by supposing that diabetes is due to irritation of the ganglia by the exposure of their cut surfaces to the air, and that, when the nerves are divided between the ganglia, paralysis and not irritation is produced. If this hypothesis were true, diabetes should not occur when the ganglia are completely extirpated; but Eckhardt does not say whether it does or not, and therefore Cyon determined to perform this operation, and thus test the truth of Eckhardt's theory. When he cut through the last cervical or the first dorsal ganglion, he found, like Eckhardt, that diabetes was produced; but it occurred just as certainly when both ganglia, or even the last cervical alone, were cut completely away, or when the nerve-fibres entering this ganglion were all cut through, although the ganglion itself was never touched. This clearly

showed that Eckhardt was wrong, and that the diabetes occurring after operations on the last cervical or first thoracic ganglia was due to paralysis of the nerves which were connected with them, and not to irritation of the ganglia themselves. He next ascertained that all the fibres entering these ganglia had not the same effect in causing diabetes, for it occurred when either the branches which pass along the vertebral artery from the spinal cord to the last cervical ganglion, or the two fibres which connect it with the first thoracic ganglion, were divided, whereas section of the other nerves proceeding from the ganglion did not do so. It thus became evident that the nerve-fibres whose paralysis causes diabetes, come from the spinal cord through the vertebral nerves to the last cervical ganglion, and pass from it to the first dorsal in the two connecting branches which, in their course from one ganglion to another, enclose the subclavian artery, and form the annulus of Vieussens. So much having been ascertained, it would seem easy enough to trace the nervous path down the gangliated cord and splanchnics to the liver; and one would expect that, by dividing the cord in the thorax, and thus paralysing the fibres going to the liver, diabetes would be produced as certainly as when they were divided at the level of the vertebral artery.

Such, however, was not the case; for not only did subcutaneous division of the gangliated cord between the tenth and twelfth ribs not produce diabetes, but, if the cord were cut before, or at the same time as the last cervical or first thoracic ganglion, the diabetes which would otherwise have occurred did not appear. But when diabetes was first produced, division of the cord did not diminish it, or even hinder its increase, just as Bernard had found with regard to the splanchnics. In order to explain this apparently contradictory result, Cyon set about investigating the way in which the fibres of the annulus of Vieussens affect the liver, and more especially the circulation in it.

On irritating these fibres, he found that a number of fine white lines appeared round the lobules of the liver, in the position occupied by the small branches of the portal vein and hepatic artery; and these were so numerous as to produce the appearance of whitish spots on the organ, which continued while the irritation lasted, and disappeared after it ceased. At the same time that these spots appeared, he noticed that any cut or tear in the liver bled less freely than before. This indicated that contraction of the portal vein or hepatic artery, or of both, had been occasioned by irritation of the annulus; but, in order to make assurance doubly sure, as well as to find out whether it was the artery or the vein that contracted, he put a T-cannula into the hepatic artery, and connected it with a manometer. On then irritating the annulus of Vieussens, the pressure rose in the manometer as much as thirty to seventy *millimètres* of mercury; while in the carotid it only rose five to ten *millimètres*. To remove the last objection which might be raised, and show conclusively that the rise of pressure was due to contraction of the branches of the hepatic artery in the liver, and not to any other cause, he compressed the artery beyond the point where the cannula had been inserted, so that no change in the calibre of its branches could have any influence on the blood-pressure in its trunk. On again irritating the annulus, he found that no alteration in the pressure was produced. Division of both annuli produced, as was to be expected, dilatation of the branches of the hepatic artery, and fall of the blood-pressure in it. When the portal vein was experimented on in the same manner, the pressure only rose ten or twelve *millimètres* during irritation; and he thinks this is probably due indirectly to the change in pressure in the artery.

These experiments completely prove that the vaso-motor nerves of the hepatic artery are contained in the annulus of Vieussens; that their division causes the vessel to dilate, and at the same time produces diabetes. The theory of Bernard, that the diabetes depends on the dilatation, and on the consequent rapid circulation of blood in the liver, is thus rendered in the highest degree probable. But why should section

of the splanchnics or of the gangliated cord prevent the production of diabetes, but not remove it when present? This Cyon also explains. These parts of the nervous system contain the vaso-motor fibres for the vessels of the intestines; and, when they are cut, the vessels dilate, and blood accumulates in them to such an enormous extent that there is either too little blood remaining, or it is under too low a pressure for the circulation in the liver to become increased above its normal, even although its vessels be dilated. When the hepatic vessels, however, are dilated first, the blood continues to pass through them, and diabetes continues, even although the intestinal vessels have become relaxed.

The researches of Cyon, along with those of Bernard, render our knowledge of the part which the nervous system plays in influencing the production of sugar in the liver, and in causing diabetes, in so far as this disease depends on increased formation and not on diminished combustion, tolerably clear, though still incomplete; and enables us to form some kind of idea of the manner in which opium and allied remedies prove beneficial. The irritation which the inspired air produces on the ends of the vagi in the lungs is conveyed up these nerves to the medulla oblongata, and there exerts an inhibitory action on the vaso-motor nerves of the liver. When the irritation is increased, as by galvanising the vagi, the inhibitory action is so great as to produce complete paralysis of the vaso-motor nerves, and induce diabetes; and, on the other hand, when the vagi are cut, the vaso-motor nerves act more powerfully, causing the vessels of the liver to contract, and the production of sugar to diminish, as Bernard found that it did. It seems, therefore, not improbable that the beneficial action of opium and its alkaloids is due to their lessening the excitability of the vagus. We can hardly suppose, however, that diabetes is not sometimes due, either in whole or in part, to diminished combustion; and the causes of this still remain a matter for future investigation.

A SUBSCRIPTION is being raised among the medical profession in Italy, for the purpose of a medal in commemoration of the visit of Virchow to that country a few months ago.

AFTER great delay, Professor Bamberger, of Würzburg, has been appointed Professor of Medicine in the University of Vienna, in place of the late famous Professor Oppolzer.

THE Amussat prize has been awarded by the Academy of Medicine in Paris to Dr. Berenger-Féraud, for his treatise on ununited fractures and false joints.

THE *Philadelphia Medical and Surgical Reporter* learns, from good authority, that the abortion business is in such a flourishing state, that those who conduct it in New York City can afford to spend 150,000 dollars annually in advertising.

THE statement which has been circulated that Sir James Paget was summoned to attend the Prince of Wales in his illness, is erroneous. There have not been at any time in the course of the fever any complications requiring surgical assistance.

THE Royal Society of Natural and Medical Sciences in Brussels has elected Sir James Paget and Sir William Fergusson as honorary members. It has also conferred the same honour on Donders of Utrecht; Skoda, Hebra, Billroth, and Sigmund, of Vienna; Frerichs of Berlin; and Polli of Milan.

FROM a note communicated to the Academy of Sciences by M. Sainte-Claire Deville, and from some researches made by M. Renou, it appears that the November just past was colder in Paris than the corresponding month of any year during the past century, with four exceptions—1774, 1782, 1786, and 1858.

THE WATER AT SANDRINGHAM.

THE water of the wells at Sandringham has this week been subjected to examination by chemical experts; and it is understood that the fullest examination of all the drainage and sanitary arrangements will be instituted. It was from the first intended that it should be so. The water was examined chemically three years since; and the report was then satisfactory. The subsequent arrangements have been carried out by highly qualified and skilled persons; but they will be subjected to re-examination.

LONDESBOROUGH LODGE.

OWING chiefly to an unfortunate defect in the memory of the contractor, who, subsequently to the Prince's visit, was actively engaged with a full staff of workmen in examining, repairing, and ventilating the drains and cabinets at Londesborough Lodge, at the time of the visit of our commissioner, a somewhat unsatisfactory controversy has occurred as to some of the details in our report. The plan of the cesspool of which Mr. Peacock, the contractor, has since impugned the existence, was drawn on the spot at which he described it to exist, under his own eye, in Dr. John Murray's note-book. Some of the details in connexion with it are added in a pencil-sketch, drawn by Mr. Peacock's hand, on the same page. The written authority which Lord Londesborough courteously and candidly gave for the examination conducted on our behalf was at the same time placed in his hands in the presence of two other persons. His subsequent communications are curiously inconsistent with these facts. If any further investigation be at all needed, it had better be conducted by an official medical inspector of the Local Government Board.

POISONED BY SEWER-GAS.

MR. WILLIAM ALLISON of East Redford writes to us as follows, *à propos* of the baneful effects of pent up gases, on their escape after concentration. "Many years ago I attended the members of a household, each of seven or eight of whom were feverish, but differently affected. Near a large country house, a bank of earth had been made and planted with shrubs, over a drain from a kitchen sink-stone (to hide the back premises; and, we may presume, the roots of shrubs had grown into the sough and blocked it). The bank was burst open by the expansion of strong foetid gas, which escaped from it and affected the air through the entire house, the windows of which were open during the daytime in close, hot weather. Of three servants with simple continued fever, one had a quinsy, and two deeply ulcerated throats. Of the family, all had fever and spurious rashes. The rash of a lady simulated measles; that of one child, scarlet fever; of two others, nettle-rash; of a fourth, an appearance of erysipelas; and all had ulcerated throats. They all began to sicken within a week of the escape of the gas, and I could not attribute their illness to any other cause."

THE TEETH AND MOUTH IN IDIOTS.

IN an instructive paper recently read at a meeting of the Odontological Society, Dr. Langdon Down insists on the importance of an examination of the mouth and teeth of idiots as a means of determining whether the idiocy is congenital or acquired. An abnormal formation of these parts indicates that the affection is congenital. The lips, especially the lower, are usually thick; they are often deficient in prehensile power; the mucous membrane is very liable to chronic inflammation, and to ulceration from very slight pressure; and the mucous and salivary glands are usually hypertrophied. The first dentition is almost invariably postponed; sometimes it is attended with no disturbance of the general health, sometimes with violent convulsive attacks. The milk-teeth are frequently dark and speedily become carious; and their stunted growth is often rendered more stunted by incessant grinding, which is very common in idiotic infants. The second dentition is accompanied often by epileptiform convulsions, which may have remained in abeyance from the completion of the first dentition, and may again, when the second dentition is completed, again be suspended until puberty. The evolution of the permanent teeth is

often postponed, and the sequence is slightly irregular. They are often crowded, so that sometimes the sides are presented. They are often arranged in different planes; sometimes the canines, sometimes the incisors, are most prominent. The enamel is imperfect, giving a honey-combed appearance, and they speedily decay. Dr. Down has been able to discover among the feeble-minded very few examples of the syphilitic teeth described by Mr. Hutchinson; and he considers this state to be quite distinct from the honeycombed teeth which he describes. The tongue is often unusually large; being elongated and deficient in muscular tonicity and co-ordination. The surface is often corrugated; and the papillæ are hypertrophied, producing roughness. The condition of the palate is of most significant value. From a very large number of measurements, Dr. Down finds that, with a few exceptions, there is a marked narrowing of the distance between the bicusps in the two sides, with a consequent inordinate vaulting of the palate—the line of junction of the palate-bones occupying a higher plane. In the exceptional cases, the palates were wide in excess. The posterior part of the hard palate is often deficient, so that the soft palate hangs down abnormally. Cleft palate, in Dr. Down's researches, did not occur in more than five cases in a thousand.

SMALL-POX AND VACCINATION IN HAMBURG.

SMALL-POX has been raging fearfully in Hamburg lately. The following are the official statistics with which we have been furnished. They indicate, as usual, the great extent to which vaccination, even when imperfect or partially worn out, protects from death and modifies the disease, in the cases where, from want of complete or recent vaccination, it has not afforded an entire immunity. The numbers are: vaccinated, recoveries, 2954, deaths, 347; unvaccinated, recoveries, 10, deaths 700.

CONDURANGO.

AT a recent meeting of the Aerzlicher Verein in Vienna, Dr. Schroff stated that the result of experiments made there with the alleged specific for cancer—condurango—had shown it to be quite worthless, as our English trials have already proved it to be. The Austrian Government had purchased a quantity of this supposed remedy, at a high price, for the purpose of having its effects tested in the Rudolf Hospital.

EPIDEMIC DISEASES IN VIENNA.

VIENNA is under an evil epidemic influence. The deaths from small-pox, scarlet fever, measles, and diphtheria, showed in each case a marked increase during the ten days from November 29th to December 8th, as compared with the preceding ten days. The numbers were—small-pox, 22 (against 19); scarlet fever, 20 (against 14); measles, 14 (against 11); and diphtheria, 16 (against 10). It was not, however, known whether there had been an increase of the total number of patients suffering from each disease. In the three large hospitals, there had been a daily average of seventy small-pox patients, instead of fifty-two as in the previous period of ten days.

WELL-DESERVED.

WE have lately had occasion to notice the very ungenerous and almost illegal conduct of the Warminster guardians, who declined to allow a superannuation pension to their medical officer Mr. Grubb, on the scandalous ground that they did not desire to establish a precedent. A few days since, Mr. Grubb was agreeably surprised by receiving from the vicar of Warminster and another gentleman the following letter, enclosing bank-notes to the value of £200.

"Dear Mr. GRUBB,—We beg you will kindly do us the favour of accepting the accompanying bank-notes, as a token of the deep sense we entertain of your untiring and devoted attention to the sick poor of this and neighbouring parishes, for the long space of twenty-seven years, and also of our true regard and esteem for you as a friend and neighbour. We heartily trust that your health may ere long be thoroughly restored, and that you may be spared for many years to come to your family and friends. Signed in the names of the contributors,

"JAMES ERASMUS PHILIPPS,
"JAMES CHAPMAN."

"Dec. 11th, 1871.

TYPHOID FEVER.

THE following resolutions have been passed by the Weekly Board and Medical Committee, on the occasion of the lamented death of Dr. Davidson from typhoid fever, contracted at the hospital in discharge of his duties.

"The Medical Committee desires to express its great regret at the death of Dr. John Davidson, late House-Surgeon and Resident Physicians'-Assistant, whose intelligence, devotion to duty, high principles, and amiability, won the esteem and respect of the whole staff."

"The Weekly Board desire to record how cordially they unite with the expression of sympathy with the Medical Committee at the death of Dr. John Davidson, and their thorough appreciation of his most excellent character and services."

THE CONCOURS IN FRANCE.

A COMPETITION by *concours* for the office of surgeon to the Charité Hospital at Lyons commenced on December 4th, and lasted four days. There were six candidates—Drs. Aubert, Christôt, Fochier, Leriche, Magnien, and D. Mollière. The subjects of competition were: 1. A lecture of twenty-five minutes' duration on the anatomy and physiology of the hand; 2. A description of the influence of pregnancy on traumatism, and the influence of traumatism on pregnancy; 3. A description of erectile tumours, and ligature of the femoral artery in its lower third; 4. A written account of a clinical case (traumatic lesion of the elbow in a child); 5. A clinical lecture on the case of a child aged 12, who had pes valgus, and had been admitted into hospital in consequence of the foot having become painful. The contest, which appears to have been a very close one, ended in favour of M. Fochier.

SMALL-POX IN PHILADELPHIA.

SMALL-POX has been prevalent in Philadelphia. The reports received at the Health Office show the following as the number of cases during the months named: July, 15; August, 58; September, 110; October, 942. In the October statement, only three weeks are included. The reports for the last week of the month, however, showed that the disease is decreasing. The following statement shows the number of deaths from small-pox in the city during the years stated: 1860, 57; 1861, 758; 1862, 264; 1863, 171; 1864, 260; 1865, 524; 1866, 144; 1867, 48; 1868, 1; 1869, 6; 1870, 9; 1871, 198. One hundred and fifty-three deaths from small-pox occurred in Philadelphia during the week ending November 25th, being an increase of twenty over the number in the preceding week.

THE SUBORDINATE MEDICAL DEPARTMENT OF INDIA.

WE learn with pleasure from the *Indian Medical Gazette* that an attempt is being made to form a fund for the benefit of the widows and orphans of the subordinate medical officers in Bengal. A fund of this kind was formed twenty years ago, but perished from want of government support. Attempts have since been made to revive it, but without success. The present attempt, it is hoped, will be successful. It is said that there is every reason to hope that the Government will give its support. Dr. Francis, Deputy Inspector-General of Hospitals, is President of a Committee sitting at Dinapore for the purpose of discussing the means of forming and maintaining the fund. An actuary in Calcutta has been consulted for the purpose of calculating tables of subscriptions and payments.

PRACTICAL GRATITUDE.

It is not often that we hear of such a display of gratitude on the part of a patient as one which has lately occurred to Dr. McIntyre of Odham, an old and esteemed member of our Association. Twenty-five years ago, Dr. McIntyre operated on a lady for the relief of femoral hernia; and some years afterwards relieved her by his surgical skill of another troublesome malady from which she suffered—thereby enabling her to live in comparative comfort for twenty years. Her death took place a few weeks ago. In her will she appointed Dr. McIntyre one of her executors, with a legacy of £100; and also bequeathed to him

£4,000 "in testimony" (in the words of the will) "of his great kindness and professional services". Such an expression of gratitude and good feeling is creditable to both parties concerned.

"CORNER FOR THE CURIOUS."

DR. SAUNDERS of Exminster writes to us: "It has often occurred to me that a 'Corner for the Curious' might be set apart in the JOURNAL, in which might be found bibliographical references to the old and often much forgotten medical literature of subjects brought from time to time before the medical world, such as the history of an operation, or the ideas which have prevailed at different times as to the nature of a particular disease. Medical antiquarian jottings and notes of medical superstitions, as they crop up in different parts, might here also find a suitable place." We shall be glad to see this idea take take root. It is not altogether a novel one, and there are difficulties in carrying it out. For the success of such an archæological corner, we need the spontaneous contributions of our readers. There are amongst our members such men as Dr. Aquilla Smith of Dublin, Dr. Greenhill of Hastings, Dr. Diamond of Twickenham, and no doubt many others, who from among their accumulating stores of quaint and curious erudition might enrich the medical stores of historic notes. To endeavour to vitalise the suggestion, we shall make in an early number a sort of beginning which will illustrate the possibilities of such a corner; and we shall be very glad to find that medical workers will fill this corner with chips from their workshops.

THE CHOLERA.

CHOLERA has broken out at Medina, and between September 21st and October 4th (twelve days) 773 deaths took place; all the caravans from Medina to Mecca were consequently compelled to perform quarantine before being allowed to enter the latter city. Cholera is now, however, reported to be present in Mecca; and though Jeddah is yet free from the disease, all arrivals from that place are treated as if it were suspected of cholera. A cholera death is reported at St. Jean d'Acre in a passenger from Constantinople. Cases have also occurred at Samsoun (though not since November), at Galatz (which is stated to be in a bad sanitary state), at Amol, a place in the neighbourhood of the Caspian Sea, and at Astrachan.

THE HUNTERIAN MUSEUM.

MR. ERASMUS WILSON has just purchased, for a large sum, and presented to the Museum, a fine specimen of the *Berardius Arunxii* of Duverney. This is a very rare animal, of which only four other specimens have been seen, all on the coasts of New Zealand. In 1862, an animal, conjectured to have been a *Berardius*, was embayed in Poriura Harbour, and was converted into oil. In January 1870, another was taken in Worser's Bay, near Port Nicholson; and the skull and a few bones were preserved for the Wellington Museum. Lastly, a specimen of this fine animal, which is thirty feet long, and, after *Hyperoodon latifrons*, the largest of the cetacea, ran aground on the beach near New Brighton, Canterbury, in December 1868. It fortunately came under the notice of Dr. Julius Haast, F.R.S., Curator of the Museum at Christ Church; and, on Professor Flower drawing Mr. Wilson's attention to its great rarity, and expressing a desire to have it for the College Museum, a check was at once given for the amount.

NEW ROOMS FOR PATIENTS AT THE LONDON FEVER HOSPITAL.

WE have had the pleasure of inspecting the new rooms provided for the accommodation of private patients at the London Fever Hospital yesterday, and are glad to find the arrangements all that could be wished. The wards which previously accommodated eight patients have been divided into two large and handsome rooms, each intended for one occupant. The furniture is plain, but substantial and neat; there are short strips of carpet for each side of the bed, a few chairs, a table, looking-glass, and marble-top wash-stand. The roofs are high, and the rooms well ventilated, not only by the doors and

windows, but by traps in the side walls or roofs. A bath-room and water-closet are attached to each two rooms, exclusively for the use of the two patients. It is proposed to open at first four rooms for ladies, and four for gentlemen, and each is to be charged three guineas weekly for board and attendance. One of the long general wards on each side of the hospital is now to be divided by a partition—the convalescent and mild cases to lie on one side, and the acute on the other. The principle of isolation is thus as far as practicable to be carried out. These wards are intended for the reception of patients recommended by governors and annual subscribers, and for working-men and their families, clerks, and tradesmen, who cannot find sufficient attention at home, or who wish the superior skill and management to be had at the hospital. These will obtain admission on payment of two guineas on entry, or one guinea weekly. The Committee of the hospital are assured that, in making provision for private patients, they meet an urgent public requirement, and they are prepared to extend the accommodation should the demand for an extension arise.

CHRISTMAS IN HOSPITAL.

WE are most glad to find that the preparations for rendering this season as happy as possible to the inmates of the London hospitals are not behind those of former years, but rather excel them. In all the hospitals, such patients as can eat roast beef and plum-pudding will be welcome to a handsome quantum for dinner, with some fruit, and an excellent special "tea." In St. Thomas's, Guy's, and King's, the wards are to be profusely decorated with evergreens and mottoes. Dissolving views are to be shown to the patients of Guy's and St. Thomas's; and the little sufferers of the Hospital for Sick Children are to have a similar treat if they can be brought to see them. A children's Christmas-tree is to form a prominent source of pleasure in the Middlesex, St. Thomas's, and Sick Children's Hospitals. In Guy's, through the special efforts of the students and well-wishers, an entertainment by the "Apollo Minstrels" is to be given, and singing in the wards is to be generally allowed, and a prolongation of visits of friends. All the officers of the different hospitals happily seem to recognise the desirability of doing all that may prudently be done to make "Christmas in hospital" as pleasant to the patients as possible, compatibly with safety to their lives and progress to recovery. Mrs. Priestley, who is this year out of England, will be much missed at King's.

SCOTLAND.

EDINBURGH ROYAL INFIRMARY.

THE managers have made an excellent selection in Surgeon-major Fasson for the appointment of Superintendent of the Royal Infirmary. From his long experience at the Herbert Hospital, Woolwich, and elsewhere, Mr. Fasson is highly qualified to fulfil the duties of the office.

GLASGOW MATERNITY HOSPITAL.

WE have simultaneously received the Thirty-seventh Annual Report of the Glasgow Maternity Hospital, and a Glasgow paper containing some rather serious complaints against the subordinate officials of that institution. The former states that, during the past year, 1,011 women participated in the benefits which the hospital confers; the number of women confined in the hospital having been 313, and at their own homes 698. The hospital has been very free from disease, which, moreover, has been mostly of a light character. But the interesting and instructive fact in the history of the hospital during the year is that relating to the occurrence of puerperal fever. The number of patients treated at their own homes amounted to rather more than double the number of those treated in the hospital; and five deaths from puerperal fever occurred amongst the former, while only one death from that cause took place in the wards of the hospital. The experience of this hospital for several years past, the reporters (Dr. J. G. Wilson and Dr.

Tannahill) go on to state, seems to prove that, by the systematic and rigid observance of complete segregation of cases of puerperal fever, perfect cleanliness, thorough ventilation, daily fumigations with carbolic acid and chloralum, and other measures, puerperal fever may be prevented from becoming epidemic in small lying-hospitals. These are important facts in the history of this lying-in charity, and should receive due attention from those who, in the question which was recently debated by the late Sir James Simpson and others, advocated home treatment, and who proposed to sweep away institutions of the kind. The complaints referred to, in connexion with the hospital, appear to have had their origin in the refusal of the matron to admit a woman who lay at the door of the hospital at three o'clock in the morning, on the point of confinement. The patient, it would seem, had threatened puerperal convulsions; and the medical gentleman in attendance had, in anticipation, made some previous inquiries regarding her admission into the hospital. While lying on the pavement, and after several attempts for admission had been made by the medical man in behalf of the woman, she was confined. It was only after the assistance of the police that the woman and child were then admitted. It is urged that the matron did no more than carry out her instructions by refusing the admission of the woman, the hospital having already its full complement of ten cases of confinement. Besides, no definite arrangement had been made for the admission of the patient. This may be so far true; but, in the circumstances of the case, the matron's conduct seems to require further explanation, especially when it is alleged that there were several empty beds in the hospital at the time.

THE RIGHT HON. ROBERT LOWE AND EDINBURGH UNIVERSITY.

A CONTROVERSY is being carried on in the *Scotsman* regarding certain statements made by Mr. Lowe, in his speech at Halifax on December 4th, as to the superiority of the London to the Edinburgh Medical degree in medicine. The examination in the Edinburgh College, he remarked, may be easily passed, but numbers of candidates prefer to come to pass the more severe examination imposed upon them by the London University. This statement has naturally irritated the Edinburgh professors; and Mr. Turner comes forward to vindicate his University—we need not say, with success. The substance of his letter is simply that Mr. Lowe's statement is not founded on fact, and is calculated to misrepresent and seriously injure the Edinburgh School of Medicine. He gives an analysis of the examinations in the Edinburgh University and the percentages rejected, from which it is seen that in the first and second examinations, nearly one-third of the candidates are rejected; and, though the ill-prepared and less industrious students are thus eliminated, yet even at the final examination as many as eight per cent. are remitted. He points out that an analysis of the *London University Calendar* shows that of the 539 graduates in medicine and surgery of that University, only eight received their medical education in Edinburgh; and of the 503 medical undergraduates, only six have studied in the Edinburgh Medical School. Mr. Turner further states that, during the five years in which he acted as Examiner in Anatomy in the University of London, only two Edinburgh candidates appeared before the Board. It has been stated by one of our contemporary's correspondents that the London University degree necessarily stands higher than the Edinburgh, inasmuch as the London examiners are not the teachers of the men who pass, whereas the Edinburgh examiners are also teachers. But the same may be said to a large degree of the London University. The great bulk of its medical examiners are teachers in University and King's Colleges, London, and in the hospital schools of the metropolis, which supply most of the medical graduates of the University. Moreover, the universities of Scotland have the advantage of having official examiners associated with the professors. If it be an evil to have the teachers of the schools also the examiners for degrees, it is to be found in the London University as well as in that of Edinburgh. The University of Edinburgh holds justly a very high position among the medical qualifying bodies of this kingdom.

IRELAND.

DEATH OF DR. MAYNE FROM SMALL-POX.

DR. ROBERT ST. J. MAYNE, Surgeon to the Meath Hospital, died on Saturday last of small-pox, after a few days' illness, at the early age of 28. He contracted the disease in the performance of his hospital duties. It was in his case accompanied by purpura, and combined with a rash much resembling scarlatina. Renal hæmorrhage seriously complicated the case. Dr. Mayne had not been revaccinated.

CHARGE AGAINST A DISPENSARY MEDICAL OFFICER.

DR. BRODIE, Poor-law Inspector, has held an investigation into the charge of neglect of duty brought by Mr. O'Flaherty, Lisdon, Tuam, against Dr. French, Medical Officer of the Headford Dispensary District. The facts brought out after a long inquiry were, that Dr. French was engaged at a dangerous midwifery case, when a red ticket was sent to his house summoning him to attend a poor man named Murphy. He was not informed, on his return home, that the case was urgent; and early next morning a messenger was sent again. Dr. French attended after the dispensary hours. The man suffered from great prostration and pain, and died the same night. This dispensary district is 46,490 acres, or nearly 73 square miles, in extent. There is but one medical officer; no apothecary, nor midwife. The salary is only £136 : 16; and the number of tickets issued for the last year was 821. Of these, 304 were red or visiting tickets, and 517 black. Under these circumstances, unfortunately, cases will occasionally require the attendance of the medical officer at different places at the same time. The appointment of a resident apothecary in extensive districts would afford medical attendance in cases of emergency, which otherwise might prove fatal before the dispensary physician could attend.

SMALL-POX IN DUBLIN.

It is stated, on a computation of cases that have come to the knowledge of the authorities, that seven hundred cases of small-pox existed in Dublin on Saturday last, December 16th. Owing to the difference of opinion as to revaccination which exists among the profession in Dublin, the public have not generally adopted this precaution. Very many infants have been found unvaccinated by the City Dispensary medical officers in houses, and even in rooms, and sometimes in the same beds, with persons suffering from the disease. The general rule in such cases has been to vaccinate all such unprotected children immediately; and this step has been generally followed by prevention or diminished severity of the disease. The law in Ireland permits the child to attain the age of six months before vaccination, instead of three as in England. "Waking" those dead, with the aptitude for taking the disorder engendered by sitting up all night in rooms offensive from the emanations both of the dead and of the living, and by the intemperance and irregularity of food in those celebrating this superstitious custom, has powerfully promoted the spread of small-pox, as it has before done in the case of cholera, fever, scarlatina, and measles. It is well, therefore, even now that the Roman Catholic Archbishop of Dublin has addressed his clergy (some of whom are reported ill of the small-pox) on the subject.

THE DUBLIN OBSTETRICAL SOCIETY.

THE second meeting of this Society took place on the evening of the 16th instant. Papers on the subject of transfusion in cases of uterine hæmorrhage were read by the Drs. Ringland, senior and junior, detailing the particulars of two cases—the one fatal, the other successful—in which resort was had to this operation. A very interesting discussion took place, almost all the leading obstetricians of Dublin taking part therein. The instrument used in both instances was the invention of Dr. Robert McDonnell, and is to be commended at once for its efficacy and simplicity. It consisted of a glass pipette containing from six to eight ounces, ending in an India-rubber tube, to which is joined

a portion of glass tube; and this latter is connected by another portion of India-rubber tube to a piece of silver tube whose distal terminal opening is on the side, distant about an inch from its closed probe-pointed extremity. By this arrangement, security is afforded against the admission of air to the vein that is to be injected; for, the moment a bead of air is seen passing the glass tube, the nozzle of the silver tube can be withdrawn so far as to allow its escape outside the vein. Gravitation, aided, if need be, by forced expiration by the operator, is depended on for propelling the warmed and defibrinated blood into the opened vein of the patient.

MEDICAL DECLARATION RESPECTING ALCOHOL.

IN the BRITISH MEDICAL JOURNAL of September 30th, we wrote as follows concerning the duty of medical men in relation to the temperance movement to the habitual and medical use of alcohol. "Looking to the ineffable misery and disaster, the waste, degradation, suffering, and crime, which are constantly wrought in this and most other civilised nations by drink, we are far from thinking that the importance of the subject can be exaggerated. The influence of medical men, if they were united and agreed, might be all powerful on this subject; and we should be glad to see a conference of medical men, including those of the highest class, originated in some really influential quarters, with a view to giving this subject a more thorough discussion than it has yet had. We should like to hear a discussion in which Parkes, Edward Smith, Hughes Bennett, A. P. Stewart, Paget, Jenner, and some of our leading provincial practitioners, would take part, in which the whole subject should be probed. To what extent, if at all, are physicians justified in recognising alcohol as an article of daily food in health? Does the habit of prescribing alcoholic drinks act injuriously upon the morals and welfare of the people? Is it possible or desirable to substitute the more enticing forms of alcohol by medicinal and less alluring forms? We all of us sympathise with the ends which the National Temperance League has in view. A small minority only practically participate in their means of action. Can we in any way, and in what way, help to rescue this nation from the curses which drink brings upon its population?" Consequent upon the publication of these observations, Mr. Rae, the secretary of the Temperance League, sought an interview in which to ask the advice of the Editor of this JOURNAL as to the best means of carrying out his suggestion. Mr. Hart sketched an outline memorandum, stating the points at issue, and recommended that Dr. Parkes of Netley, in the first instance, and other physicians and psychologists of eminence, should be consulted as to their views upon the subject. The result has been the framing of the subjoined memorandum, based upon the original sketch, under the revision of Dr. Parkes, Dr. Burrows, and others. It is a document of which the importance and interest are obvious, and we commend it to the careful consideration of the profession.

As it is believed that the inconsiderate prescription of large quantities of alcoholic liquids by medical men for their patients has given rise, in many instances, to the formation of intemperate habits, the undersigned, while unable to abandon the use of alcohol in the treatment of certain cases of disease, are yet of opinion that no medical practitioner should prescribe it without a sense of grave responsibility. They believe that alcohol, in whatever form, should be prescribed with as much care as any powerful drug, and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion is past.

They are also of opinion that many people immensely exaggerate the value of alcohol as an article of diet; and, since no class of men see so much of its ill effects, and possess such power to restrain its abuse, as members of their own profession, they hold that every medical practitioner is bound to exert his utmost influence to inculcate habits of great moderation in the use of alcoholic liquids.

Being also firmly convinced that the great amount of drinking of alcoholic liquors among the working classes of this country is one of the greatest evils of the day—destroying more than anything else the health, happiness, and welfare of those classes, and neutralising, to a large extent, the great industrial prosperity which Providence has placed

within the reach of this nation, the undersigned would gladly support any wise legislation which would tend to restrict, within proper limits, the use of alcoholic beverages, and gradually introduce habits of temperance.

George Burrows, M.D., F.R.S., President of the Royal College of Physicians; Physician Extraordinary to the Queen.

George Busk, F.R.S., President of the Royal College of Surgeons.

G. E. Paget, M.D., D.C.L.Oxon., President of the General Council of Medical Education.

Thos. Watson, Bart., M.D., F.R.S., Physician in Ordinary to the Queen.

Henry Holland, Bart., M.D., F.R.S., Physician in Ordinary to the Queen.

Cæsar H. Hawkins, F.R.S., Sergeant-Surgeon to the Queen.

William Fergusson, Bart., F.R.S., Sergeant-Surgeon to the Queen.

Jas. Paget, F.R.S., Sergeant-Surgeon Extraordinary to the Queen.

Richard Quain, F.R.S., Surgeon Extraordinary to the Queen.

John Hilton, F.R.S., Surgeon Extraordinary to the Queen.

W. White Cooper, F.R.C.S., Surgeon Oculist in Ordinary to the Queen.

E. H. Sieveking, M.D., Physician in Ordinary to the Prince of Wales.

George D. Pollock, Surgeon in Ordinary to the Prince of Wales.

Thos. King Chambers, M.D., Honorary Physician to the Prince of Wales.

Henry W. Acland, M.D., F.R.S., Regius Professor of Medicine, Oxford; Honorary Physician to the Prince of Wales.

Arthur Farre, M.D., F.R.S., Physician-Accoucheur to H.R.H. the Princess of Wales.

George T. Gream, M.D., Physician-Accoucheur to H.R.H. the Princess of Wales.

Francis Hawkins, M.D., Physician to the Queen's Household.

T. Spencer Wells, F.R.C.S., Surgeon to Her Majesty's Household.

T. G. Logan, M.D., K.C.B., Director-General of the Army Medical Department; Honorary Physician to the Queen.

Thos. Longmore, C.B., Deputy Inspector-General, Army Medical Staff; Professor of Military Surgery, Army Medical School; Honorary Surgeon to the Queen.

J. Ranald Martin, Knt., G.B., F.R.S., Inspector-General of Hospitals; Physician to the Secretary of State for India in Council.

H. H. Massy, M.D., C.B., Deputy Inspector-General; Head of Sanitary Branch, Army Medical Department.

Thos. Crawford, M.D., Deputy Inspector-General of Hospitals; Head of the Medical Branch, Army Medical Department.

T. Graham Balfour, M.D., F.R.S., Deputy Inspector-General of Hospitals; Head of the Statistical Branch, Army Medical Department.

W. C. Maclean, C.B., M.D., Deputy Inspector-General; Professor of Military Medicine, Army Medical School, Netley.

E. A. Parkes, M.D., F.R.S., Professor of Hygiene, Army Medical School, Netley.

Wm. Aitken, M.D., Professor of Pathology, Army Medical School.

Wm. Johnstone Fyffe, M.D., Surgeon-Major; Assistant Professor of Medicine, Army Medical School.

And two hundred and thirty-seven other physicians and surgeons, mostly attached to metropolitan and provincial hospitals.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At a meeting of the Council on Thursday, the 14th instant, the following business was transacted, in addition to the matters mentioned in the last number of the *BRITISH MEDICAL JOURNAL*.

The following resolutions of the Dental Board were approved and adopted by the Council.

1. That it be recommended to the Council that paragraph 10 of the Regulations relating to the diploma in Dental Surgery; viz., "10. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of dental surgery during two winter and two summer sessions"—be altered as follows, viz., "10. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of dental surgery during the period of two years."

2. That it be reported to the Council that, in the opinion of this Board, it is desirable that the diploma in Dental Surgery should bear the College arms, and that the diploma should be so altered in form as to admit of its being signed by the President of the College as well as by the Examiners.

3. That it be recommended to the Council that a ticket of admission to the Museum, to the Library, and to the College lectures, be presented to each candidate on his obtaining the diploma in Dental Surgery.

The following Report as to the wording and mode of issuing the general diplomas of the College was read and adopted.

That, in the opinion of your Committee, each of the several diplomas granted by the College should be issued on the direct authority of the Council, be signed, on behalf of the Council, by the President, or in his absence by one of the Vice-Presidents, and bear the College arms; and that the wording of each diploma should be altered accordingly.

It was resolved: That it be referred to the Committee to consider and report to the Council on the necessary alterations in the wording of the several diplomas, including the dental diploma.

The following resolutions, involving slight alterations in the draft scheme for an examining board for England were passed. That, in pursuance of the opinion of the Committees of the two Colleges, Clause x, altered as follows, be approved; viz., "That every matriculated student of an English university, who shall have completed the curriculum of study required by his university, and shall have passed such an examination," etc.

That, in pursuance of the opinion of the Committees, the suggestion of the University of London, that the nomination of Examiners should take place annually, be adopted, provided that the two corporations, the Colleges of Physicians and Surgeons, can legally give effect to it.

The following letter from Mr. Cock was read.

"Dean Street South, December 11th, 1871.

"My dear President,—Although my virtual retirement from the Court of Examiners took place at the last meeting, when I received such kind expressions of feeling from my colleagues as I can never forget, I believe it is right that I should inform you that it is not my intention to be a candidate for the next election.—Yours ever truly,

(Signed) "EDWARD COCK."

The President reported that the vacancy in the Court of Examiners, caused by the retirement of Mr. Cock, would be filled up at a special meeting of the Council in the ensuing month.

A correspondence with the Solicitor, on the subject of the oath hitherto administered to members of the Council and of the Court of Examiners on their accession to office, was read. The President stated that, in pursuance of the opinion of the Solicitor, a declaration in the terms proposed by him would in future be substituted for the oath.

Mr. Charles Hawkins, in pursuance of his notice, brought under the consideration of the Council the question as to the advisability of placing those who pass the examination for the Fellowship in classes according to merit; and, the Council having discussed the question, the subject was allowed to drop.

Mr. Gay, in pursuance of his notice, moved that the proportionately large number of rejections at the preliminary examinations for the diploma of the College was a fact which demanded the serious consideration of the Council, and that a committee be appointed to consider the subject and report thereon to the Council. The motion was seconded by Mr. Wilson.

It was moved as an amendment by Mr. Simon, and seconded by Mr. Erichsen: That it be a further reference to the committee appointed in December 1869 "to consider and report to the Council on the means offered to students entering the medical profession for passing examinations in general knowledge; to consider the causes of the large number of rejections which take place in the preliminary examinations of the College, and to report thereon to the Council." The amendment was carried, and Mr. Gay was appointed a member of the Committee.

Mr. Erichsen gave notice of the following motion: That, on the occurrence of a vacancy in any professorship or lectureship in the College, with the exception of that of Hunterian orator, due notice be given of such vacancy by advertisement in such journals and at such times as the President shall decide, and that candidates be invited to apply for such vacancy.

Sir James Paget, Bart., gave notice of the following motion: That it is desirable that, before proceeding to any nomination of members for election to the Fellowship under the fifth clause of the Charter of 1852, the Council should determine the conditions under which the election should take place.

Mr. Charles Hawkins presented a rare medallion of John Hunter by Tazzi, and a bronze Brodie medal.

DR. ALFRED MEADOWS has been elected a Corresponding Member of the Gynæcological Society of Boston.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

THE following cases and pathological specimens have been brought before the Medical Institution during the present session.

A Secondary Malignant Tumour of the Jaw of a middle-aged man appeared about two years after the removal of epithelioma of the lip, and grew with alarming rapidity. It was adherent to the bone, and passed down as far as the great cornu of the hyoid. Its removal by Mr. Bickersteth involved carrying away a large portion of the lower jaw, and a careful dissection of the tumour and infected glands from over the carotid artery and jugular vein. In connexion with this case, Mr. Harrison noticed a case of removal of a large fibro-plastic tumour from the neck, at which he assisted, where the internal jugular vein was severed. Its cut ends were promptly tied, and no ill effects resulted. He noticed also a case of wounding and subsequent ligation of the axillary vein, without any ill consequences. Not many years ago, injury to such large veins during an operation would have been deemed almost certainly fatal.

Mr. Bickersteth has performed Excision of the Wrist in seven cases, after the method introduced by Mr. Lister, with very satisfactory results, useful hands having been preserved. The important point in the after-management of the limb was the use of a splint reaching not further down than the palm of the hand, by which perfect rest to the sawn ends of the bones was secured, while daily movement of all the joints of the fingers was kept up.

A communication on Obstruction of the Lacrymal Passages was made by Mr. Shadford Walker, in which he deprecated the indiscriminate use of Weber's probe and Stilling's knife, by which the delicate structures of the canal, he said, are liable to be extensively lacerated. In chronic cases especially, he preferred careful probing of the passage, to produce gradual and permanent dilatation. The knife should be applied with caution, and only to those parts where the stricture is firm, limited in extent, and of old standing, or where the canaliculus and puncta are either obliterated or greatly narrowed, while the general state of the canal is but little below the healthy standard. As aids to the instrumental treatment, the application of a solution of alum or zinc by means of a long cannula-syringe directly to the part, followed by weak mercurial ointment, was recommended.

Dr. Turnbull narrated the case of a female patient under his care in the Royal Infirmary, suffering primarily from Œdema of the Left Leg, having all the appearance of Phlegmasia Dolens. After admission, an aortic murmur was discovered. Subsequently, pneumonia of the left base occurred, from which the patient was recovering, when the right apex was affected, and she died. On *post mortem* examination, the aortic valves were found fringed with soft prominent out-growths, one of which seemed to have been knocked off, there being a raw surface, with sharp ulcerating edges. It was supposed that this vegetation, detached from the aortic valve, had caused plugging of the iliac vein.

A very interesting paper on Hay-Fever was read by Dr. Davidson. It was illustrated by a history of a well marked case, in which the chief causes of the fits of sneezing were sunlight, growing hay, or any kind of luxuriant grass, a warm moist atmosphere, or any overheating of the body or head. The chief means of alleviation were: 1. Keeping in the dark or under shade during the brightness of the day; 2. Hill or sea breezes; 3. Whatever promoted a comfortable general circulation through the body. Two or three minutes' swim in the sea generally removed the symptoms as if by magic. The principal theories advanced to account for the irritation in hay-fever were described as being as follows. 1. The mechanical theory, which attributes the irritation to the pollen of hay and grass floating in the atmosphere, and coming into contact with the mucous membranes of the eyes, mouth, and throat. 2. The chemical view, that heat volatilises the benzoic acid which is known to be a constituent of some grasses, and which thus is inhaled, and sets up the coryza. But, although the vapours of benzoic acid are irritating, they are not more so to hay-fever subjects than to others. 3. The vital theory, first advanced by Helmholtz, which attributes the disease to the formation of vibriones in the nasal passages from the emanations from the hay. Infusions of hay are a ready source for obtaining vibriones; and a microscopical examination of the secretion of the nose during the disease had shown peculiar bodies to exist.

In a note on Psoriasis Palmaris, Mr. Edgar Brown contended that the affection thus designated is not true psoriasis, but a local form of eczema.

A very remarkable case of abnormal foetation has occurred in the Lying-in Hospital. A woman, aged 33, the mother of two children, was brought in. She was pregnant, supposed to have gone a fortnight beyond term. A fistulous opening existed at the umbilicus, communicating with the cavity of the uterus, from which there was a copious discharge of horribly offensive dark fluid. The os and cervix uteri were not in the condition usual at term—the os being closed, and the cervix about its ordinary length. After dilatation with a tent, Condyl's fluid, injected into the os, escaped freely by the opening at the umbilicus. A tumour was felt in the posterior vaginal *cul-de-sac*, which gave the impression, as to size, form, and consistence, of a foetal head, quite unconnected with the uterus. The os and cervix were in the condition usual after artificial dilatation with tents; but, on passing the finger high up towards the fundus, the denuded cranial bones of a foetus could be felt. The parietal bones were separated, much as if perforation had been performed. The previous history of the case was very imperfect. The woman stated that she had been under medical care at the dispensary; that she had no vaginal discharge or other indications of labour; and that the opening in the umbilicus had existed for three days before admission. In consultation, it was decided that the condition of the patient called for immediate interference; and it was determined to enlarge the opening already existing at the umbilicus. This was accordingly done by Dr. Finegan, and a full-grown foetus extracted in an advanced state of decomposition. The ribs were quite denuded, and the two parietal bones lying detached in the cavity in the abdomen were removed subsequently. There was no trace either of a placenta or decidua. The umbilical cord consisted of about three or four inches of decomposed tissue. The cavity in which the foetus had been enclosed presented externally a perfectly smooth surface; its walls were very thin, and closely adherent for a considerable distance to the abdominal parietes. The patient rallied from the operation well, but succumbed in a few days. A *post mortem* examination showed the cause of death to have been peritonitis. The foetus had not been contained in the cavity of the uterus, which was about the size of the organ at the third month; but its walls, instead of being closed in alone by the fundus, were continuous with the cavity already described which contained the foetus, and appeared to have consisted of a gradual development of the tissue of the fundus, the result of interstitial extrauterine gestation; the ovum having probably passed into the structure of the uterine parietes, and there gone on to its full development. The tumour felt in the posterior vaginal *cul-de-sac* proved to be the ovary, occupied by a large ossific cyst, filled with pultaceous matter mixed with hair. The probable explanation of the absence of the placenta and decidua was, that these structures had undergone decomposition, and had escaped through the opening in the umbilicus, from which the discharge during life was profuse, and of an unusually offensive character.

The introduction of Australian preserved meat into some of the work-houses and gaols in this locality is said to have effected a very considerable saving in the cost of maintenance; and the meat is much relished by the inmates.

VIENNA.

[FROM OUR OWN CORRESPONDENT.]

The Pathological Museum of Vienna.

OUR Vienna correspondent sends us the following interesting account of this collection.

The museum of pathological anatomy at Vienna is of no remarkable size, but contains some great curiosities, and every object in it is worthy of attention. On first entering, a case of calculi is seen in front. The vesical calculi present nothing very special; some of the renal calculi are of portentous dimensions—one, indeed, is as large as an ordinary kidney. Many have assumed the shape of the pelvis of the kidney and ureter, and resemble pieces of native coral. There are in a neighbouring case kidneys showing most complete hydronephrosis, and resembling bladders blown and dried. There are also some fine specimens of cystic foetal kidneys, where the kidney, from its size, presented an obstacle to delivery.

In another case, is a collection of skulls exhibiting the different injuries inflicted by lethal weapons in war, as sabre-cuts, bullet and shell wounds, etc. One skull had been so struck as to drive in the nasal bones and the interorbital portion of the frontal bone, but to no great extent. There is the usual array of skulls showing the ravages of syphilis, and others showing the fearful progress of some forms of cancer. Others have a mass of bony plates coming off from the skull at right angles, and constituting curious masses, at a little distance looking like "sea-urchins;" and some small ones projecting from the interior of the skull.

There are spines with the ordinary curvatures, and others illustrating

lordosis and scoliosis (Rokitansky), and so twisted that the ribs of one side spring from the opposite side of the mesial line. The absence of pelvic deformity when rickets is situated in the upper half of the body, and its presence when the legs are distorted, on which the late Sir James Simpson strongly insisted in his lectures, are well shown here. Even in spines with evidences of the most extensive disease the pelvis are of fair shape, and presented no obstruction to parturition. One spine is completely ossified from one end to the other by the substitution of thin bony plates for the intervertebral cartilages, so that the owner must not only have had a perfectly rigid spine, but must also have been distinctly diminished in height. In connection with spinal caries is a specimen of the cyst-like wall of a psoas abscess, with one large bladder-like distension within the abdomen, an isthmus under Poupart's ligament, and another large cyst below, the whole of very unusual dimensions, and dwarfing the one engraved in Miller's *Surgery*.

Some cases of rickets affecting the lower limbs are preserved, and in one the legs are so much curved, that the patient must have incessantly occupied a sort of Turk-like sitting posture. There is a skeleton showing exostosis of almost every bone, especially at the insertion of the muscles in the lower part of the femur and head of the tibia and fibula. There are, too, as might be expected, examples of curiously united fractures; and in one is a piece of the original bone, about one and a half inches long (a comminuted fracture), lying on the outside of an united bone, which is by so much shortened.

There is a capital specimen of reversal of the viscera, with the heart and spleen on the right side, and the liver on the left; a second, in course of preparation, will soon be added. There is one specimen of obstruction of the aorta at the ductus Botalli; not quite complete, however, the descending aorta being about as large as the external iliac, and the collateral circulation being established through the internal mammary and epigastric descending branches from the axilla to the gluteal vessels, and by most extensive and numerous anastomoses between the vessels of the muscles of the back. A companion to it in the shape of a similarly imperfectly obstructed vena cava ascendens, and development of a collateral venous circulation in a very much similar manner, is also of great interest.

There is a (probably) unique case of a ring through the vocal cords. A man was eating goose, and got one of the rings of the goose's trachea into his own larynx; here it excited inflammation on each side, till it became encircled by a hasp, if I may be permitted to use the expression, from each vocal cord, and there it hangs, a curiosity of no ordinary character.

The curiosities of foetal life are very interesting. There are several forms of united twins, both *en masse* and as skeletons. In two or three of the skeletons there is union of the sternum merely, and in another union of the sternum and the forehead. But even more curious still are the cases, three in number, where the union is by the head alone—one head and two entirely separate bodies. In one, the union has taken place so perfectly that there is one face, complete and symmetrical, formed by the left side of the face of the left infant, and the right side of the face of the right infant. But there is no vestige of the opposite sides of the faces to be discerned, and this symmetrical face is accompanied by two ears in front, and a second pair behind, with bulging occiputs. What difficulties they presented in parturition is not recorded; but it would have taxed the intellect of the late Sir James Simpson himself to lay down rules for the diagnosis of a head common to two separate bodies. Even more curious still is a veritable genuine Syren. There it is, with a human head and an united extremity, widening out at the tail, apparently by the distribution of the feet. The limbs which should have been found along with that head are wanting; the original vertebræ have apparently remained unchanged, and instead of a human trunk, etc., there is a fish-like continuation; and the feet, true homologues of the tail, still in their altered form the great means of progression, have gone back to their primitive form; not, however, in the vertical tail of the fish, but in the horizontal tail of the pinnigrade carnivora. The seal-like head and eyes, and fish-like trunk of that human foetus, are rendered still less human by injection for the purposes of observation. The wax cast which accompanies it and is of the colour of human skin, is far more atrophied than the original. Near it are other monstrous and misshapen infants, either by abnormal attachment of the placenta, or from excessive development of one organ, or atresia of another; of which, and of the highly interesting abnormalities and morbid conditions of viscera in the adult, some further account may some day be given.

At a public meeting at the Guildhall, Swansea, the Mayor in the chair, it was resolved to "build and establish a convalescent home for Glamorganshire and the adjacent counties," and an influential committee was appointed for the purpose of carrying the resolution out.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE second ordinary meeting of the session was held at the College Green Hotel, Bristol, on Thursday evening, December 14th, at seven o'clock; CROSBY LEONARD, Esq., President, in the chair. There were forty-two members and three visitors present.

New Members.—Mr. Louis J. King was elected a member of the Association and of the Branch.

Cases.—The following cases were read. 1. Successful Case of Severe Compound Dislocation of the Ankle-joint. By H. Cooper, Esq. 2. Case of Successful Staphyloraphy. By F. P. Lansdown, Esq. 3. Excision of Upper Jaw. By C. Steele, Esq.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 12TH, 1871.

T. B. CURLING, Esq., F.R.S., President, in the Chair.

ON THE PATHOLOGY OF SCARLATINA, AND THE RELATION BETWEEN ENTERIC AND SCARLET FEVERS. BY JOHN HARLEY, M.D. LOND.

IN the first portion of the communication, the author treated of the morbid anatomy of scarlatina, and gave the details of twenty-eight cases of his own observation. Of these, the greater number died on days ranging consecutively from the third to the fifteenth; the remainder died on the seventeenth, twentieth, twenty-fourth, twenty-ninth, thirty-third, forty-first, and sixty-ninth days. More or less albuminoid and fatty degeneration of the kidneys existed in six of the cases, and these died on the fifteenth, seventeenth, twentieth, twenty-ninth, forty-first, and sixty-ninth days respectively; the kidneys were healthy in the remainder. The pathological changes common (with a few exceptions depending chiefly upon the time of death) to all the cases were as follows.

1. *The Formation of Fibrinous Clots in the Heart and Great Vessels During a Pyrexial Condition at any Period of the Disease.*—This was the commonest cause of death during the early stage. It was indicated during life by the reduction, often very sudden, of a full and bounding pulse of 120 to a dribble of 150 or 160 almost imperceptible impulses; and the failure of the heart's action was commonly attended with orthopnoea and delirium from obstruction of the pulmonary and cerebral circulation. On opening the body before it had lost a degree of temperature, and while the blood was hot and fluid, the right heart would be found distended partly with dark blood, which coagulated on exposure; and partly, sometimes chiefly, with a large, firm, white bifid clot, continuous through the auriculo-ventricular opening. Each portion was interlaced with and firmly adherent to the tendinous cords and muscular bands of the cavity in which it lay; and each portion sent a rope-like prolongation into the orifice of the great vessel connected with the cavity. These processes frequently were prolonged, in ramifications corresponding to those of the blood-vessels, into the cranial cavity, and into the lungs. These partial casts of the great vessels were often nine inches long, and occupied vessels of the sixth and seventh degrees of ramification.

2. *Marked Derangement of the Hepatic Function.*—The bile was examined in twenty cases. In five only was the secretion normal, and in these cases death occurred on the third, fourth, twenty-fourth, forty-first, and the sixty-ninth days respectively. In the remaining fifteen cases the bile was deteriorated. In two the coats of the gall-bladder were injected, and the mucous membrane rose-coloured. In the first of these cases there was a complete absence of bile, there being only a few drops of colourless alkaline fluid. In thirteen other cases the bile was greatly deficient in solid matters. The specific gravity did not exceed 1014, and the amount of solid matter in 1,000 grains in no case amounted to more than 36.4 grains. In one case there were only 11.1 grains of solid matter in 1,000 grains. In the majority of the cases the bile was turbid from epithelial debris, but on standing it became transparent, and resembled pale urine. In all the thirteen cases there was a notable deficiency of biliary acids, and in two a complete absence. The colouring matter of the bile was present in every case. If, as rarely happened, the bowel contained solid faeces, it was of a pale ochre or sulphur colour. But the faecal matters were commonly fluid, grumous, or flocculent, often slimy, and of a pale ochre colour. Such, also, were the characters of the stools before death in many cases.

3. *General inflammation of the lymphatic glands* was present, usually confined to those of the neck, but occasionally extending to those of the extremities; of the spleen and mesenteric glands; and of the whole of the solitary and agminated glands of the alimentary canal, but commonly affecting only those of the fauces, and of the ileum and colon. These morbid appearances were remarkably uniform, and were observed in every case. The tonsils and solitary glandulæ of the tongue, and the external glands of the neck, were perceptibly affected in every case. In several cases large buboes formed in the neck; in three these were associated with diffuse cellulitis and purulent infiltration; and in one of these the popliteal and axillary glands and their surrounding connective tissue were similarly affected. In these cases the glands themselves were slow to take on suppurative action; and, although they were generally much enlarged and purple, comparatively few had softened centres. The spleen was enlarged in twenty-three cases, and in five of these it was increased to nearly twice its ordinary bulk. In two others it was not examined; and in the remaining two cases it was of the normal size. The mesenteric glands were swollen and inflamed in every case. In eight cases the mesentery formed a thickened, heavy, lobulated mass, and many of the glands were as large as walnuts or pigeons' eggs. Even the small glands in the attached borders of the transverse and descending mesocola were purple and turgid. The solitary glandulæ of the ileum were in a condition of psorentery—*i.e.*, forming white granular and more or less hard elevations, like a thick sprinkling of large sago-grains upon the mucous membrane—in fourteen cases. In six other cases, the solitary glandulæ were only partially affected, the swelling was more diffuse, the glandulæ being only moderately raised; but they were always deeply injected, and in some cases had an abraded appearance. In three cases, in which death occurred on the eleventh, seventeenth, and sixty-ninth days of the fever, there was only very slight swelling of a few of these glands; and in four cases, in which death occurred on the fifteenth, twenty-fourth, twenty-ninth, and thirty-third days respectively, the glandulæ were altogether unaffected. The agminated glands of the ileum were more or less swollen and inflamed in every case but one—that in which death happened on the thirty-third day. In one case (death on the seventeenth day from suppurating buboes in the neck), there was only very slight swelling. In all the other cases the results of inflammatory action were decided, and in many cases severe. The glands were commonly raised the eighth of an inch above the surrounding mucous membrane, than which they were always more deeply injected. In the greater number of cases the mucous membrane was generally pale, and sometimes thin and bare, while the agminated glands were of a vivid red or claret colour. The inflammatory action was usually confined to the glands in the lower third of the ileum, but in three or four cases the whole of the patches from the jejunum downwards were affected. In some of the larger glands isolated foci of inflammatory action were occasionally observed. The interfollicular ridges were often the eighth of an inch wide, giving to the paler glands a spongy appearance; but these ridges were as often vascular, with fine hair-like turgid vessels, and in some cases they were prolonged into folds a quarter of an inch in length. In two or three cases an almost bleeding gland had a softened abraded surface. The mucous membrane of the ileum was itself severely inflamed in two or three cases, and was covered by a thick adherent layer of white opaque mucus. The solitary glandulæ of the large intestine were enlarged and inflamed in eight cases. In one of these there was acute desquamation of the mucous membrane of nearly the whole of the bowel. In another case, the cæcum was severely congested. In those of the remaining cases in which the large intestine was examined, it was quite healthy.

On taking the above described pathological conditions into one general view, it appeared that there was an increase of fibrin in the blood during an attack of scarlatina, and that death was likely to occur during the first week from its deposition in the heart and great vessels; that the condition of the biliary function was such as to lead to an outbreak of diarrhoea, if this had not already happened; that a latent enteritis, sometimes general, but commonly only affecting the solitary and agminated glands, existed in a high state of development during the pyrexial stage of scarlatina, ready to declare itself openly upon very slight provocation; that this intestinal affection was only a part of a general lymphatic inflammation involving the whole of the lymphatic system, including the mesenteric glands and the spleen in one common action; and, further, that this condition might persist in some degree, either in the bowel or the mesentery, as late as the sixty-ninth day, and without any outward indication of its presence throughout.

From this view one general conclusion was inevitable—*viz.*, that the pathological changes accompanying an ordinary attack of scarlatina included all those of the first stage of enteric fever, and that the transition from one disease to the other was but a natural pathological

sequence, readily determined by any cause which might increase the intestinal irritation.

The proofs of this interchange, or sequence, constituted the second part of the subject, and contained accounts of several original observations.

The author next gave a series of cases to illustrate the coexistence of the two diseases; and he concluded by remarking that the interchange or sequence of scarlatina and enteric fever had been frequently noted, and always attributed to accidental coincidence. In his article on "Enteric Fever" in Reynolds's *System of Medicine*, he had expressed his convictions on this subject; and had thought of terming the contagious variety of enteric fever "abdominal scarlatina." He had abandoned the term then, because it had seemed that the evidence which he had adduced to show the close relationship implied in it was insufficient for conviction. Now, however, he submitted this term to the profession as a definite description of a disease which the practitioner would occasionally meet with. He would also ask his fellow-labourers to go one step further, and to discard those transcendental ideas of enteric fever which make of it a disease *per se*, and to open their minds to receive what nature would soon teach them—*viz.*, that enteric fever and all its attendant phenomena might occasionally become a part of almost any other more general inflammatory condition, specific or simple.

Dr. BROADBENT said that the Society was indebted to Dr. Harley for a very complete description of the pathology of scarlet fever. He could not, however, agree with all the views of the author of the paper. It was quite true that an attack of enteric fever often followed one of scarlet fever; but it must be remembered that the converse was sometimes the case, the two diseases overlapping each other in all directions. Not only did enteric follow scarlet fever, but scarlet fever sometimes followed enteric. He (Dr. Broadbent) had seen instances in which, during an attack of enteric fever, scarlet fever appeared, and ran through its course before the completion of the enteric attack; so that for a time there was a combination of the symptoms of both fevers—sore-throat and intestinal affection, rose-spots and scarlet rash. Their overlapping, and their occasional co-existence, indicated that the diseases were distinct rather than identical. There was no doubt a similarity in the pathological results of the two diseases; but there was this striking difference, that in scarlet fever, unless there were distinct evidence of a new attack, the disease stopped short of ulceration of Peyer's patches; whereas this occurred early in enteric fever. The affection of the lymphatic system in both diseases was no proof of their relationship, further than it showed that they were both blood-diseases.—Dr. SANSOM admitted the elaborateness of Dr. Harley's description of the pathology of scarlet fever; but he thought that much credit was also due to Dr. Fenwick, who had worked at this subject. He agreed with Dr. Broadbent that evidence as to the unity of the diseases was deficient. Another argument against the view of identity was in the difference of the causes; typhoid fever being propagated by emanations, scarlet fever by contact. It should be remembered that scarlatina raged most in localities where typhoid fever prevailed.—Dr. T. H. GREEN must hesitate considerably before being able to accept Dr. Harley's views. As to the pathological changes in the lymphatic glands, these occurred in other acute inflammatory conditions, especially in children.—Dr. JOHN WEBSTER could not think that scarlet and enteric fevers were identical. He asked whether a child suffering from scarlatina ever communicated enteric fever.—Dr. REGINALD THOMPSON said that there were two points of distinction in the clinical history of the two diseases. First, it sometimes happened that scarlet fever occurred in a choreic patient, and then the chorea became mitigated or removed; while, in two cases where he had seen typhoid fever occurring during chorea, the latter disease was not influenced. Secondly, rheumatism often followed scarlet fever, but was not known as a sequence of typhoid.—Dr. CHARLTON BASTIAN said that the facts brought forward by Dr. Harley tended to show the alliance between the pathological conditions of scarlet and of enteric fever. It was known that there was a general resemblance between the pathological conditions in fevers, and that there was a general tendency to affections of the lymphatic system. The evidence brought forward by Dr. Harley suggested the question whether the condition of system induced by scarlet fever might not favour the development of enteric fever. He saw no reason why the two conditions should not be interchangeable. The idea of the so-called specific nature of diseases was derived from the belief in the specific nature of animal and vegetable species; and if there were, as he believed, grounds for doubting the latter, our faith in the former must also be shaken. He rejected the notion of the origin of these diseases from germs, and regarded them as blood-diseases, modified by circumstances in various cases, and bearing a relation to each other much in the same way as certain diseases of

the nervous system, which are known to be interchangeable.—Mr. SAVORY asked, with regard to the affection of the lymphatic glands, whether all blood-poisons did not chiefly affect the organs concerned in the elaboration of blood. By the term specific, as he understood it, it was meant that the group or class to which it was applied was separated from others by certain well defined characters. Did cases occur in which it was difficult to say to which group a case belonged? Was there a hybrid between scarlet fever and enteric fever? He also asked whether the two diseases were mutually convertible—*i. e.*, whether one gave rise by infection to the other.—Dr. JOHN HARLEY said that he had noticed cases of intercurrent of the diseases, such as had been described by Dr. Broadbent. He had examined the intestinal and mesenteric glands in typhus fever, and had not found them enlarged to any appreciable extent. The mesenteric glands were no doubt enlarged in the diseases of children. With regard to the relative contagiousness of typhoid and scarlet fevers, he thought that this property had been much overrated in respect to the latter disease. He thought that one of these diseases was capable of producing the other, as he had sometimes seen cases of enteric fever brought from houses in which several of the inmates were at the time suffering from scarlet fever.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 16TH, 1871.

FLEETWOOD CHURCHILL, M.D., in the Chair.

Fracture of Cervical Vertebra.—Mr. EDWARD HAMILTON exhibited a specimen taken from the body of a man about 40 years of age, who had fallen through a height of sixteen or seventeen feet on his vertex. On being taken up, he was in a state of collapse; but was shortly able to give a detailed account of the accident. He was removed to Stevens' Hospital, where it was found that, from a line a little above the nipple, there was complete loss of muscular power, voluntary and reflex; loss of sensation; and there was also priapism. The skin was clammy, and the pulse below 40. Respiration was diaphragmatic. His head was drawn back in a state of opisthotonus. He was, however, rational and able to swallow. Next day, his pulse had risen to 70, and he presented a marked line of hyperæsthesia between the healthy and paralysed portions of his body. He died of asthenia forty-eight hours after the accident. On examination, the atlas was found to be comminuted, and the laminae of the sixth and seventh cervical vertebrae to be fractured, with displacement of the former, so as to compress the cord. There was no fracture of the skull, nor of the odontoid process.

Stenosis of the Mitral Orifice.—Dr. HAYDEN exhibited the heart of a lad aged about 18, who had been under his notice for the last four years. His illness dated from a fall from a cart, in which the pony trod upon his chest. He suffered at the time from pain in the chest and hæmoptysis, as well as dyspnoea, but was soon able to resume his duties as night-porter in a shop. Eight months after the accident, he began to suffer from sudden and severe attacks of dyspnoea. In a state of collapse from one of these, he was taken to the Mater Misericordiae Hospital. On examination next day, the lungs were found to be normal. There was a basic systolic murmur, not traceable into the aorta. The apex-beat was violent, and a præstolic murmur was here audible; the pulse, which was 150 on his admission, soon fell to 70. He soon improved. Before leaving hospital, the systolic murmur had vanished. On his second admission, he presented similar symptoms, with the addition of a reduplicated second sound. The symptoms remained the same throughout, the systolic murmur appearing and vanishing at intervals; the apex gradually approached the left side, considerably transgressing the line of the nipple. While in the hospital for one of his usual attacks, he took small-pox, and, during the course of the disease, he died suddenly. On the *post mortem* examination, the heart was found to be greatly hypertrophied. It weighed 18½ ounces. The left ventricle was of normal size, but the left auricle was enormously dilated and hypertrophied. The apex was bifid, owing to the hypertrophy of the right side. The mitral orifice was so contracted as hardly to admit the tip of the little finger.

Primary Scirrhus of Mediastinum.—Dr. BENNETT showed a specimen of a scirrhous tumour situated in the anterior and middle mediastina, which he has met with in the dissecting room. The tumours appeared to have originated in front of the base of the heart, and to have extended inwards, so as to cause obliteration of the pericardium. It had invaded the heart-structure, and pierced the right ventricle in the front of its conus arteriosus. A mass projected into the right ventricle, close to the origin of the pulmonary artery, extending to its valves. Secondary growths occurred in the mediastinum, in the heart-tissue, in the root of the left lung, and in the wall of the œsophagus. These latter had so pressed the vessels of the left lung and pleura as to cause

great fluid effusion into the left pleural cavity, and complete compression of the lung. There was moderate general dropsy and ascites present, due to the impediment to the circulation. The tumour proved, on microscopical examination, to be scirrhus. There was no cancer elsewhere.

Curious Head, Neck, and Trochanters of a Femur: Resection.—Dr. BARTON exhibited a specimen of the head, neck, and trochanters of the femur of a child six years old. The child had been admitted into the Adelaide Hospital in the spring of this year, suffering from morbus coxæ, then in its second stage. After admission, the condition of the child very much improved, but subsequently became much worse; and in July it became apparent that an operation would alone afford a chance of life. Excision was consequently performed, with success. The upper parts of the femur had undergone considerable absorption, so as to be hardly recognisable. The acetabulum was greatly flattened, but there was no dislocation.

CORRESPONDENCE.

PHYSICIANS AND HYSTERIA,

SIR,—I cannot but think that we ought to feel deeply indebted to Dr. Tilt for coming forward with such frankness to admonish physicians and surgeons of their shortcomings. No doubt the lines,

"O wad some power the giftie gie us,
To see oursel's as others see us,"

have inspired his mind with a compassionate feeling, and, like a true friend, he has supplied our want. Yet it almost seems to me as if his zeal had outrun his discretion; and, for my own part, I am obliged to set him right on some points where he labours under a mistake.

1. He affirms that I, in common with others, "own that I know nothing about diseases of women." I am really at a loss to know on what he bases this affirmation. I deny it absolutely, and beg to assure him that I am quite as capable of dealing with any ordinary case of so-called "female disease" as he is of managing a common bronchial catarrh. In fact, Dr. Tilt's assertion seems to me one of the most extraordinary that I have ever heard.

2. In his representation of my views of hysteria, Dr. Tilt does me again very scant justice. I take particular pains to distinguish two conditions, which are both very commonly designated "hysterical", and where the surface-phenomena may be very much alike. In one, I hold the disorder to be chiefly of the mind—in the other, of the body; and I endeavour to distinguish between the two. To the latter, suitable drugs are very beneficial; to the former, they are useless. I insist that it is unjust to regard these classes in the same light; and I prefer to reserve the term "hysterical" for those who need moral, and not material, remedies. The others should be regarded in the same light as sufferers from any bodily ailment. If Dr. Tilt will read from p. 468 to p. 480 of my work, I think he will admit that it is very far from being true that I look upon hysteria as always implying a surrender of the patient's will to temper and deception. But that there are many instances in which such is the case, no man of unbiased judgment and adequate experience can, it seems to me, well doubt.

3. With Dr. Tilt's statement that hysteria requires two factors for its production—(a) a predisposing nervous state, (b) the stimulus of some determining cause—I can in great measure agree. But I assign much more importance than he does to the predisposing nervous state, and to the mental condition, which is apt to be closely related to it. Given a certain state of nervous system, a slight determining cause will produce in a young woman an attack of hysteria, just as it often will in a young girl an attack of chorea. A mental perturbation will do it, or various small irritations. That ovarian and uterine irritations are very effective, I do not doubt; but I cannot help thinking that not a few of those "mildest forms of anæmic ovarian uterine disease", which Dr. Tilt deems so potent as causes of hysteria, are simply neuroses, expressions of the primary nervous diathesis, and not at all stimulants which call the hysteria into play. Surely, when a young female falls into the state of collapse which often attends the effort of development of womanhood, and becomes anæmic and amenorrhœal, and therewith hysterical—liable to hysterical paroxysms—it is quite too much to ascribe the hysteria to the amenorrhœa. Both have come from failure of power, and both disappear under a well managed tonic regimen; and for the most part, I think, the amenorrhœa is not the first to give way. Yet do not such cases as these swell the lists where hysteria is made out to be dependent on disorders of the genital organs?

4. While I quite admit that, in obscure and refractory cases, and in those where evident symptoms of internal disorder are present, a tho-

rough exploration of the pelvic organs should not be omitted, yet I submit that young females ailing with ordinary hysterical disorders—*maux des nerfs*—are about the very last persons whom a right-minded physician willingly subjects to speculum-treatment. Dr. Addison, whom our good monitor quotes with just approval, confined his local measures to cold astringent washes, and seems to have found them sufficient. I doubt exceedingly whether he ordinarily made any digital examination. In a majority of hysterical cases we may, I fully believe, follow his example; and in the remainder, either alone or with Dr. Tilt's aid, we can search for flexures, malpositions, endometritis, subacute ovaritis, and all the possible excitants of hysterical disorder. Yet it may be as well to remember that Robert Ferguson (see prefatory essay to Gooch's Works) gives most unfavourable testimony as to the effects of local treatment in a very kindred condition. The sufferers "go from specialist to specialist, and generally, after years of trial and endless expense, subside into invalid habits unrelieved." I am, etc.,

December 1871

C. HANDFIELD JONES.

THE COMING RACE.

SIR,—I had expected that Mr. Berkeley Hill's letter, and your editorial comments in the JOURNAL of the 25th ult., would have provoked a reply from some of the London teachers; but, as none has appeared, will you allow me space for a few remarks?

I have not attended any of the examinations at the College of Surgeons, so that I cannot speak of them from personal observation; but I am satisfied that they are quite up to the attainments of those examined, and that there is scant cause for complaint as to the treatment which the candidates receive. Indeed, if I express my own feeling, it is that too much, rather too little, leniency is shown by the examiners; for I do not hesitate to say that I have never known students go up for their surgical examination so ill prepared and so unfitted for practice as at the present time. This is a lamentable statement to make; but I feel sure that most of my fellow-teachers at the London schools will confirm it.

To what, then, must we attribute this? Is it the fault of the students, of their examiners, or of their teachers? or must we seek the cause elsewhere?

1. I do not think that it is the fault of the students. At no time in my experience has the general body of students been so good, whether regarded from a social or an educational point of view, as now; and I do not consider them a whit more idle, or less in earnest, than formerly.

2. We are agreed that the examinations of the principal Examining Boards are not only fully up to, but well in advance of, the level of the candidates who present themselves; so the blame does not attach there.

3. You, sir, seem to think that it is the imperfect systematic teaching in our medical schools, and more particularly the clinical teaching, which is responsible for the shortcoming of the students; and Mr. Hill, by implication, does so too. But here I join issue with you; for, during the twenty years that I have been in London, there never was a time when clinical teaching, incomplete though it yet may be, was carried out nearly to the same extent as at present; nor when equal opportunities for learning his profession were offered to the student, by the varied appliances everywhere provided; by the activity of the demonstrators and other subaltern officers in the schools; by the appointment of a medical tutor almost everywhere, to assist the student in his studies, and prepare him for examination; and by the personal labour and attention bestowed by most hospital teachers upon any individual pupil who shows the slightest desire and aptitude for instruction. If there be a prominent fault just now in our manner of teaching, it seems to me that it lies rather in doing too much for the students, and that we are in danger of making education far too easy for them.

I do not think, then, that your panacea of publishing tables from the Colleges to show the numbers passed and rejected from each school would be of much service, though I am quite willing it should be tried. In my opinion, the teachers are doing their work fairly well; and we must look away from them for the real cause of failure. This, I believe, to be due to two things: 1, the very insufficient time now devoted to work in the hospital wards; and, 2, the pernicious practice which still obtains of employing mere lads as assistants who have had little or no preliminary study.

According to the present regulations, a student must be engaged for four years in the acquirement of professional knowledge, of which two and a half years must be passed at a recognised school and hospital; whilst the other eighteen months may be either spent in the same way, or with some legally qualified practitioner who holds a public appoint-

ment. The outcome of this is that the majority of our students pass only two and a half years at the hospitals, in which time they are expected to gain a sufficient amount of knowledge to fit them for the exigencies of practice. Of this very limited period, the first eighteen months are necessarily devoted almost exclusively to the acquirement of enough anatomy and physiology to pass an examination in these subjects; for, although the student may attend hospital practice and other lectures during his second winter sufficiently "to get signed", he really is too much impressed by the impending examination to pay attention to anything else. If successful in April or May, after a short holiday, which he has well earned and really needs, he returns to town and passes his second summer session in preparing for his primary examination at the College of Physicians or Society of Apothecaries, attending just enough lectures on midwifery and jurisprudence to obtain signatures to his schedule. A third winter session now remains—a period of six months—in which he has to acquire a sufficient knowledge of medicine, surgery, and midwifery, to undergo an examination in these subjects; and, if he pass this, he obtains a diploma and becomes legally qualified to gain practical experience at the expense of the public. So strongly is this responsibility felt by many of our best students, that, if they cannot get a public appointment, they take an assistantcy for a time to educate themselves in the practical part of their profession; whilst those who are less alive to their real position, or from circumstances are compelled to do so, boldly commence practice on their own account with the very limited knowledge at their disposal.

I have not drawn an exaggerated picture, but have simply given the hospital career of students who work hard and strive to command success; and can we then be surprised that, with only six months, or nine at the very utmost, in which to learn the science and art of medicine, surgery, and midwifery, they should go up for examination ill-prepared to pass, or that a deplorable want of practical knowledge should be exhibited by even the most intelligent and industrious of them? It is the system, then, that I consider responsible for the present unsatisfactory state of things, and not the students, the teachers, or the examiners as such, but only so far as they may be councillors of the several colleges and still permit such a reprehensible system to continue.

The remedy which I would suggest, with all deference, is, that at least five years of study be required of every man before he be allowed to become a registered practitioner, of which four full years should be passed at a recognised school and hospital. The first two of these should be devoted exclusively to the scientific subjects, especially anatomy and physiology; and an examination in these should be required before he is allowed to commence the other part of his curriculum. This test over, the last two years should be given up to the acquirement of the more purely professional subjects, such as medicine, surgery, midwifery, jurisprudence, toxicology, etc. Having passed an examination in these, he should receive, not a diploma, but a *licence to practise as an assistant*, and should be required to act either as house-surgeon to a hospital or some public institution, where he would be under the supervision of a qualified man, or else to become assistant to a general practitioner for twelve months; at the end of which time he should be submitted to a final examination in practical subjects, and then, if successful, he entitled to a diploma and to be placed upon the *Register*.

By this means we should gain that *sine quâ non*—an additional year of hospital study—and the student could direct his undivided attention to the subjects required of him in each period of two years spent there. The time now worse than wasted in a surgery before joining a medical school, would be profitably employed in practice under the surveillance of a responsible man after a full course of medical education; and the examinations could then be made more searching and more practical, whilst they would be really less difficult for the student.

The increased expense of education will, no doubt, be urged *inter alia* as an objection to this suggestion; but I say at once that I regard that as a point in its favour: the facilities for entering the medical profession are now too great, and the pecuniary one is not the least of them. Moreover, we should by this plan abolish altogether apprentices and unqualified assistants—*i.e.*, the objectionable practice of employing cheap unskilled labour to the detriment of the skilled educated man; and the demand, consequently, for assistants would be sufficient to enable those licensed, as I propose, to earn at least a livelihood during their last twelve months of practical study.

Many other advantages could be urged, but I have already exceeded all reasonable limits; and, with apologies for such a long communication, I am, etc.,

GEO. G. GASCOYEN.

London, December 16th, 1871.

. We have reason to believe that the letter addressed to us on this subject, purporting to be from a student of Guy's Hospital, was a forgery. Inquiries are on foot to detect its author.

THE POOR-LAW MEDICAL SERVICE OF GREAT BRITAIN.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

126, Gower Street, Dec. 13th, 1871.

SIR,—I shall feel obliged if you will insert the enclosed letter, which I have just received, in the BRITISH MEDICAL JOURNAL.

I am, etc., J. WICKHAM BARNES, Hon. Sec.

“Worcester, Dec. 12th, 1871.

“Dear Sir,—I enclose an extra subscription of five shillings, payable to Christmas 1871. I wish that every member would do the same, now that money is wanted for Mr. Corrance's Bill for next session, and an alteration is being made in the time at which subscriptions will become due. Under any circumstances, some odd shillings will have to be paid up to Christmas, and it would be but a graceful act on our part to at once forward five shillings each to enable those who are labouring in our cause and that of the sick poor to continue services which have truly been beyond all praise.—I am, dear sir, your faithfully,

“WILLIAM WOODWARD, M.D.

“To the Secretary of the Poor-law Medical Officers' Association.”

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND.

Address to the Poor-law Medical Officers.

THE Council beg to remind the members of the Association and all Poor-law medical officers that Mr. Corrance, M.P. for East Suffolk, will, in the early part of the ensuing session of Parliament, introduce a bill having for its object a very considerable reform in the administration of Poor-law medical relief, and one largely affecting the status of Poor-law medical officers.

It is most desirable that the hands of Mr. Corrance should be strengthened to the utmost, and that the whole of the Poor-law medical officers in England should join the Association and unite in bringing their influence to bear on this great question of Poor-law medical reform. The Council earnestly impress upon the country members the importance of placing themselves in communication with their respective Parliamentary representatives, in order that they may bring under their immediate notice the objects of the Association, and obtain their sympathy and support in the House of Commons on Mr. Corrance's Bill.

A considerable number of the Poor-law medical officers already belong to the British Medical Association; and it is suggested that the interests of the Poor-law medical service might be further advanced by all Poor-law medical officers joining the British Medical Association, and enlisting its powerful, social, political, and professional influence, so that questions of Poor-law administration may be brought before the several Branches for discussion at their numerous meetings.

The Council have, in conjunction with the Irish Poor-law Medical Officers' Association, received the warm support and influence of the BRITISH MEDICAL JOURNAL; and questions of the highest importance affecting the status and pay of Poor-law medical officers have been freely discussed in that widely-circulated periodical. Among the topics of interest have been the question of gratuities for vaccination and for extra services rendered during the epidemic of small-pox; the superannuation of Poor-law medical officers; the evident intention of the Legislature in reference to the right of claiming superannuation; the question of fees in cases of lunacy; the *modus operandi* to be adopted in order to secure payment for the same, also with reference to ordinary and difficult cases of midwifery, etc. It is important that the valuable facts and deductions contained in the reports of the Association should receive the widest publicity. This may be largely aided by having extracts inserted in the local journals, or by forwarding the reports when read to the editors of local journals, and calling their attention to passages of local importance.

The Council feel that the Poor-law medical officers are capable of rendering the highest service to the commonwealth. Their claims have hitherto been insufficiently recognised, but by pointed and well-directed efforts it is in their power to secure a high and proud position in the estimation of the public. The work of the Poor-law medical officers is honest and catholic, in a word national; by curing sickness and preventing disease they secure the wealth and strength of the country. Disease and poverty are so intimately connected that few can now fail

to recognise their inter-relationship as cause and effect. Surely our legislators cannot much longer fail to give to the health officers of the nation that position and remuneration which the fruits of their labours so richly entitle them to receive.

The Council trust that medical officers will kindly forward to Mr. Benson Baker, Corresponding Secretary, 42, Grove Road, St. John's Wood, London, cuttings from local journals, reports of Boards of Guardians, personal grievances, changes in appointments, vacancies, superannuations, gratuities, increase of salaries, obituary notices of colleagues, and notices of any parochial questions bearing on the medical service. Members will see the importance of having the above information published weekly. The names and addresses of correspondents will in no instance be revealed unless distinct permission be given, or when applied for the grounds of refusal.

The Council remind members that their subscription of five shillings will, by an alteration in the laws of the Association, fall due in January, and should be forwarded to the Treasurer, C. M. Frost, Esq., 47, Ladbroke Square, London. Poor-law medical officers desirous of joining the Association should communicate with J. Wickham Barnes, Esq., Honorary Secretary, Gower Street, W.C.

THE POOR-LAW MEDICAL SERVICE OF IRELAND.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION, IRELAND.

Address to the Dispensary Medical Officers.

THIS association, though still in its infancy, has already made its mark. It has numerous members in every county in Ireland, not only medical men connected with the Poor-law, but also other members of the profession. To those who have not already joined its ranks, we shall briefly state the objects which it has in view. Its primary intention is to unite the officers connected with the Poor-law medical service, in the various unions, counties, and provinces throughout Ireland, into an association, for the purpose of advancing their interests and redressing their grievances. Individual exertion or complaint possesses but little weight; but the outspoken opinion, on any subject within their province, of a body of men including half of the medical profession of Ireland, could hardly be ignored by any authority. This is the principal object in the formation of this association; and it was to promote it that we freely placed our columns at its disposal. The interests of other members of the medical profession (as far as they go) being identical with those of the Poor-law medical officers, it is not to be wondered at that many of these gentlemen have also joined the Association. Another desideratum is to raise the status of the medical officers, and thus increase their influence and power for usefulness, and to provide a channel through which all defects in the Poor-law medical service may be brought to light and discussed with a view to their removal or amelioration. For instance, one object is to obtain the whole payment of the salaries of medical officers from the State, thus making them to a certain extent a branch of the Civil Service, whereby promotion, increase of salary according to length of service, and compulsory superannuation, would take place. This would take from £60,000 to £70,000 a year off the rates, and might with great propriety be brought before the notice of the ratepayers and Boards of Guardians, as well as Members of Parliament, by the union and county representatives. It must be borne in mind that sickness is not local, but national; and it is but just that the expenditure caused by it should be national also. The principle of promotion is deserving of consideration; and the imposition of gratuitous medical duties must be watched with great jealousy. The want of such an association as the present enabled the passing of the Dangerous Lunatics Bill, by which all dispensary medical officers are obliged (when called upon to do so) to certify for dangerous lunatics “without fee or reward.”

The important work that has been performed by the Irish Poor-law Medical Officers' Association during the past year has been duly chronicled in the pages of this JOURNAL from time to time, but we will give a brief *resumé* of what has been done. Early in the present year, one of the first steps towards the principle of promotion amongst Poor-law medical officers in Ireland took place when Dr. Burke, of the Islandeany Dispensary, was appointed Poor-law inspector in place of the late Dr. Hill. On this occasion, at a meeting of the Dublin Branch of this Association, a resolution was passed that the Poor-law

Commissioners should be respectfully asked to consider the claims of the service in filling this important vacancy, which accordingly was done, with the best results. Lord O'Hagan's Lunacy Regulation (Ireland) Bill, as introduced in the House of Lords, contained a clause which would have imposed a very serious obligation on medical men in general in that country. Not only should they examine and certify for lunatics, but they should also send in to a central office a very elaborate report on each case within one week, under a penalty of £10. Provision was made in the Bill for the payment of all other persons concerned, with the exception of the medical men. This having been brought by the Association under the notice of Sir Dominic Corrigan, M.P. for Dublin, and Mr. Mitchell Henry, M.P. for Galway, who fought the battle in the committee-room of the House of Commons; and owing to their strenuous exertions and perseverance the obnoxious clause was ultimately withdrawn. In this instance, good and prompt service was also rendered by the Council of the Poor-law Medical Officers' Association of England, who forwarded, through their Chairman, Dr. Joseph Rogers, a petition to Dr. Lyon Playfair, M.P., for presentation to the House of Commons to the same effect. Circulars were also addressed, by the Secretary, to every Irish Member of Parliament, begging of them to be present in the House and see that justice was done to the medical profession on the occasion of the introduction of the Bill.

Shortly before the close of the last session, Sir Dominic Corrigan, M.P., Mr. McClure, M.P., and the Hon. D. Plunkett, M.P., introduced a Bill to amend the law relating to dangerous lunatics and dangerous idiots, and to make more effectual provision for the superannuation of the officers of district lunatic asylums in Ireland. This Bill was read for the first time and ordered to be printed; but, it being late in the session, and many important measures standing before it, it could not obtain a second reading. It will be brought forward again at an early period in the coming session. Under the Dangerous Lunatics Act (30 and 31 Vic., cap. 118), the justices may call to their assistance any dispensary medical officer, who shall examine any person asserted to be a dangerous lunatic without fee or reward. Up to the present time this may have pressed lightly on most of the dispensary physicians, but it must be borne in mind that they are all liable to be called upon to act at any moment; and within the past year several instances have occurred in which actions were taken against medical men who certified in cases of dangerous lunatics, and in more than one heavy damages were given against them.

There are many other grievances affecting the Poor-law medical service in Ireland to which the attention of the Association has been directed, and to which it is intended to draw attention at an early period, and to endeavour to remedy, if possible. Most of them have already been touched upon in these pages in the admirable and exhaustive papers by Mr. Benson Baker on the Irish Dispensary System, which appeared in the JOURNAL of October 28th and November 11th. To remedy these evils, however, it is necessary that there should be unanimity in the ranks of the service, and that every medical officer should assist in every way in his power to obtain those ends which we have already pointed out as the legitimate objects of the Association. We regret to find, however, that more than half of the Poor-law medical officers have not as yet joined the Association. It is true that in the weary hard-working life of dispensary practice many of them have little time for attending to other than their daily avocations; but it would give encouragement, afford aid, and set a good example, were they to enrol their names in the ranks of the Association, even should they do nothing else. When the time for action comes they can readily be advised as to what course to pursue. The events of the last few weeks leave but little doubt that in the coming session some comprehensive measure will be introduced, which will be likely to effect a complete regeneration and consolidation of our sanitary laws. This may be extended to Ireland, and may affect the Poor-law medical officers. We would counsel them to remember that there is a precedent in the Dangerous Lunatics Act that they should work "without fee or reward". The working members of the Association have already the subject under consideration; but they are few compared with the one thousand medical men scattered throughout Ireland, all of whom are, or ought to be, interested in the matter. The medical officers of each county ought to be in a position to address their parliamentary representative on the subject when the time arrives. In the meantime they should unite, look after their own interests, and enrol themselves in their own Association. The annual subscription (five shillings) is a trifling sum, yet it will be sufficient to cover the expenditure; and the advantages to be derived from united action can hardly be over-estimated. The Irish Poor-law medical officers may rely on the assistance of their English brethren and the hearty co-operation of the British Medical Association.

Members of the Irish Poor-law Medical Officers' Association will please bear in mind that the subscription for the year 1872 will become due on the 1st of January, and is payable to A. O. Speedy, M.D., General Treasurer, 28, North Frederick Street, Dublin.

THE "GUINEA FEE" IN IRELAND.

THE following letter refers to a subject of great importance to the members of our Association and of the profession generally in Ireland. Without identifying ourselves with the views expressed, we may invite for them the careful consideration and courteous discussion which the experience of our correspondent demands, and which the interest of the subject will probably suffice to secure.

SIR,—Being one of the oldest members of your Association, perhaps you would kindly afford me space to say a few words on the subject of "the guinea fee" in Ireland; and having long since retired from practice, I hope to be able to approach this matter in an impartial manner. I read in the JOURNAL of the 11th November last, that there are two causes which operate in producing the indiscriminate issue of dispensary tickets. The first is the difficulty of defining the term "poor person"; and the second is, that a guinea is asserted to be the doctor's fee in Ireland. Both these statements I believe to be strictly accurate. With regard to "the guinea fee", I have been long puzzled to understand how this absurdity ever obtained, and why it still does obtain, in Ireland. We all know perfectly well that the opinion of the most eminent physician or surgeon in Dublin, Belfast, Cork, or elsewhere throughout the country, can be obtained for a guinea. There are grades amongst Irish physicians and surgeons, of course, as to age, experience, superior attainments, special knowledge, and so forth. It is absurd, then, to imagine that the opinions of all are of equal value; yet we are told that the fee for all is the same. It will be said that the heads of the profession will only give one opinion for the "guinea"; whereas the less eminent will give four or five. This is beginning at the wrong end. The patient may require but one interview with the doctor. If he goes to the younger man, he considers that he throws away the difference. So, probably, he does not go to any medical man until his symptoms become aggravated, or a trivial disease has become a serious malady. If he do go, he makes up his mind to get full value for his money at once, and applies to the most eminent man in the neighbourhood, although he would have been perfectly satisfied with the junior man had he known that he would have taken a reasonable fee, say five shillings. This is simply ruinous to the hopes of practice of the younger members of the profession; nor is it an unqualified advantage to those at the top of the wheel, because, as things exist at present, it is not an uncommon occurrence for a sick person to go to the nearest apothecary, and get one of the assistants to prescribe some *placebo* "for the more trivial complaints", whereas the patient would gladly seek the advice of a qualified man if he was sure that his fee was not beyond his moderate means, and knew where to find it.

With all due respect to my old *confrères*, I assert that, with the exception of the well known heads of the profession, and some of the hospital physicians and surgeons, a guinea or a pound is not the fee, at least not the fee per visit, that they do receive in Ireland, and that five shillings is much nearer the actual amount. The assertion that the former is the fee is clearly injurious to the practice of the younger members of the profession; and, what is still worse, it is injurious to the health of the public; because, as demand will always create supply, a class of practitioners is springing up in every city in Ireland, many of whom, I grant you, are well qualified men, but a vast number, I fear, owe their non-appearance in the *Medical Directory* not exactly to extreme modesty. These practitioners make no secret that their fee is five shillings. As a rule, they have very fair practice, while well qualified and able young men have none, because, forsooth, they permit their would-be patients to labour under the delusion that they will not accept less than "the guinea fee." In fact, at present, the patient does not, as a rule, know what fee to offer; and the doctor, if asked, feels very uncomfortable; says, "My fee is a guinea, of course", and takes five shillings. I have often heard the following argument made use of: "demand a guinea from those able to pay that sum, and tone down your fee to suit the circumstances of the patient." This appears to me to be about as honest as that a merchant should charge a rich man more than a poor man for the same article.

Another important point to be considered is this: the demoralising effect that the hypothetical "guinea fee" has upon certain classes of the community. The facility for obtaining medical relief under the Poor-

law is very great, perhaps too great, in Ireland. Many persons avail themselves of this because they either believe, or say they believe, that a guinea is really the fee; and it always affords a plausible argument to be turned when necessary against the dispensary doctor who complains of the indiscriminate issue of tickets. Some years ago, a dispensary became vacant in this union; and we endeavoured to obtain a physician who would agree to take five-shilling fees; several of the candidates declared that it would be *infra dig.* to do so. I remarked that these were fresh from the schools, young men in the pride of their youth. The gentleman who holds the appointment now on this understanding, finds it to be very much to his advantage; and the more liberal members of the committee are now able to place some restriction on the indiscriminate issue of tickets, which they could not have attempted to do if the allegation could be brought forward that the doctor's fee was "a guinea." If every dispensary doctor in Ireland would make it known to his committee that he would take a fee of 5s., or in certain cases even 2s. 6d., it would, I have no doubt, very much curtail the issue of dispensary tickets, and I think that it would meet with the approval of the Commissioners also. Having a very fair knowledge of the working of country dispensaries, I am aware that in many districts it is not a thing unknown that the doctor should receive his fee in *kind*, the patient not liking to be attended for nothing, and not wishing to *insult* him by offering him less than a guinea.

I have for a long time thought of writing to you, sir, on this subject, in the hope that perhaps you might, if space permitted, publish these few words of advice to the younger members of the profession. I have heard that a feeling in this direction is springing up amongst them; but they do not as yet appear to have the hardihood to take any decided step in the matter. At present, it comes very much to this: in cities, the belief that the fee is a guinea keeps many patients from the young practitioner's study; if he insist on the guinea, he has none. In country districts, because of the hypothetical guinea, he must attend gratuitously, and under much greater responsibility, on the dispensary ticket.

Why not take at once the better and bolder course? adopt the fee they actually do receive, and cease to take any part in the farce of "the guinea fee." I am, etc., AN "EX-OFFICIO" GUARDIAN.

MEDICAL NEWS.

THE PROVIDENT SYSTEM OF MEDICAL RELIEF.

THE paper on the Medical Aspects of Pauperism, read by Mr. Fairlie Clarke at a meeting of the Metropolitan Counties Branch of the British Medical Association in March last, resulted in the formation of a Committee of the Society for the organisation of charity, to inquire into the working of the present system of gratuitous hospital relief, and to advise upon the best means of remedying those abuses of it which are believed to be injurious to the public and unjust to the medical profession. The Committee has prepared a series of rules which are suggested for the management of Provident Dispensaries. A large and important conference, presided over by Mr. W. H. Smith, M.P., and attended by Mr. Stansfeld, President of the Local Government Board, and by sundry influential physicians and others, was lately held under the auspices of the Society. The subjects discussed at the conference were, the excess in the numbers of those who seek gratuitous attendance in the out-door departments of our medical charities, and the best means of providing medical assistance for the industrious poor, at a rate within their means, and which shall avoid pauperising them. The meeting adopted resolutions which condemned the present indiscriminate relief, and recommended the more general adoption of medical assurance, of which the object should be to provide and pay for medical assistance during illness to the industrial classes, without resort to charity.

In order to afford further opportunities of eliciting the matured opinion of the medical profession on a subject which affects to a great extent the interests of large classes of the community, it is proposed to hold a meeting of the Metropolitan Counties Branch at the commencement of the parliamentary session, with the object of discussing once more the subject of the provident system of medical relief from a national as well as from a professional point of view. This meeting, if it be held, will be one of great importance to the profession and the public; and we understand that it is intended to invite the attendance of a number of influential members of Parliament, who have by their hospital connections and otherwise acquired a knowledge of this subject or proved their interest in it. Due notice of the meeting will be given. In the meantime, we commend the subject to the especial

attention and thought of the many thousand members of our Association and of the profession at large. It is desired to elicit not only the opinions and experience favourable to such changes as have been proposed, but all carefully formed opinions which bear upon the subject from every point of view. It may be useful in anticipation of the meeting, for those who have accumulated experience in any parts of the subject to communicate it by letter; and we shall willingly open our columns to such communications. They may bear either upon the working of the present system in hospitals, dispensaries, provident dispensaries, and sick-clubs, or upon any suggested methods of treating the difficulty which may vary from the proposed code of rules of the Committee of the Organisation Society, which we published in the JOURNAL of October 28th. Copies of these rules, which have been revised and separately printed, may be obtained from Mr. Lewis, publisher, Gower Street.

SMITH'S MEDICAL DIARIES.

THESE excellent diaries and visiting lists, which have for many years received constantly increasing professional favour, are this year still further improved by the addition of posological and other lists from the last edition of Squire's *Companion to the Pharmacopœia*, and by the incorporation of the new postal regulations. They are exceedingly convenient and well arranged.

THE ILLNESS OF H.R.H. THE PRINCE OF WALES.

THE following list of the bulletins issued is continued from the list which we published last week.

Dec. 14, 10 P.M.—His Royal Highness the Prince of Wales has passed a quiet evening, and continues in the same state.

Dec. 15, 1 A.M.—His Royal Highness the Prince of Wales is passing the night very quietly.

Dec. 15, 8 A.M.—His Royal Highness the Prince of Wales has passed a quiet night. The debility is great, but the general conditions are more favourable.

Dec. 15, Noon.—His Royal Highness the Prince of Wales has passed a tranquil morning. The symptoms are still favourable.

Dec. 15, 5 P.M.—His Royal Highness the Prince of Wales has passed a tranquil afternoon. The course of the symptoms continues favourable.

Dec. 15, 10 P.M.—His Royal Highness the Prince of Wales has passed a quiet evening. The conditions remain the same.

Dec. 16, 1 A.M.—His Royal Highness the Prince of Wales has had some quiet sleep.

Dec. 16, 8 A.M.—His Royal Highness the Prince of Wales has passed a tranquil night. The favourable course of the symptoms continues.

Dec. 16, 5 P.M.—His Royal Highness the Prince of Wales has passed a very tranquil day. The progress is in all particulars satisfactory.

Dec. 17, 9 A.M.—His Royal Highness the Prince of Wales has passed a quiet night, and continues to make satisfactory progress.

Dec. 17, 5 P.M.—His Royal Highness the Prince of Wales has passed the day tranquilly. No change since morning.

The reports of the physicians from this date indicate steady and satisfactory progress.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—At an extraordinary meeting of the College, on Monday, December 18th, the following was admitted a Fellow.

Bishop, Thomas, M.D. Aberd., Rue de Matignon, Faubourg St. Honoré, Paris

The following passed his primary professional examination.

Murphy, John Francis, Queen's College, Cork

The following gentlemen, having conformed to the bye-laws and regulations, and passed the required examination, were granted Licences to practise physic, including therein the practice of medicine, surgery, and midwifery.

Bailey, Francis James, M.R.C.S., Grove Street, Liverpool

Brabant, Thomas Hughes, M.R.C.S., North Audley Street

Carr, William Ward, M.B. Lond., Lee Grove, Blackheath

Coomber, Frank, M.R.C.S., Trinity Square, London

Davies, Arthur Evelyn, M.R.C.S., Penner House, Newport, Monmouthshire

Eardley-Wilmot, Robert, M.R.C.S., King's College Hospital

Franklin, George Cooper, M.R.C.S., Victoria Park Hospital

Fraser, John, M.D. Toronto, Strabane, Ontario, Canada

Graham, James Elliot, M.D., Toronto, Canada

Hemming, John Lamond, M.R.C.S., Southwick Place, Hyde Park

Jalland, William Hamerton, M.R.C.S., Guy's Hospital

Langridge, George Thomas, M.R.C.S., Myddelton Square

Lees, Frederic Arnold, M.R.C.S., Meanwood, near Leeds

Parker, Walter Augustus, M.R.C.S., Cathcart Road, Brompton
 Rees, Howell, M.R.C.S., Ystalyfera, Swansea
 Rowland, Edward Roger, M.R.C.S., St. George's Place
 Ryley, Henry, L.R.C.P. Edin., Fulbourn, Cambridge
 Sergeant, Edward, M.R.C.S., St. Thomas's Hospital
 Todd, William James, M.R.C.S., Gloucester Road, Regent's Park
 Younger, Edward George, M.R.C.S., Holly Mount, Blackheath Hill
 Duke, Douglas William, who passed his examination in medicine, July 1871, and has obtained a recognised qualification in surgery.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 14th, 1871.

Bosworth, John Routledge, Sutton, Surrey
 Grayson Francis Dorrell, Henley-on-Thames
 Harris, John Delpratt, Exeter
 Hopkins, Frederick Fraser, Henley-in-Arden
 Millner, Edward, Birmingham
 Moseley, William Arthur, Nassau, Bahamas
 Pitt, Isaac, Birmingham

The following gentlemen also on the same day passed their first professional examination.

Cave, Alfred Ernest, London Hospital
 Eady, George John, King's College
 Gard, William John, Guy's Hospital
 Griffith, Alfred Vavassour, Queen's College, Birmingham
 Joynes, Francis James, King's College
 Parkes, William Edmund, Queen's College, Birmingham
 Vincent, Henry Bird, St. Bartholomew's Hospital

As an Assistant in compounding and dispensing medicine.

Jones, Morgan, Chipping Sodbury

MEDICAL VACANCIES.

THE following vacancies are announced:—

BALFOUR HOSPITAL, Kirkwall—Medical Officer.
 BALLINROBE UNION, co. Mayo—Medical Officer for the Ballinrobe Dispensary District: £100 per annum.
 BATTERSEA, Parish of—Medical Officer of Health for the Eastern District: £50 per annum.
 BRIGHTON and HOVE DISPENSARY—Two Surgeons.
 BRIGHTON and SUSSEX EYE INFIRMARY—Consulting Surgeon.
 CARMICHAEL SCHOOL OF ANATOMY, MEDICINE, and SURGERY, Dublin—Lecturer on Anatomy.
 CARNARVONSHIRE and ANGLESEY INFIRMARY and DISPENSARY, Bangor—House-Surgeon: £80 per annum, board and lodging.
 CORK UNION—Medical Officer for the Blackrock Subdistrict of the Cork Dispensary District: £100 per annum.
 DORSET COUNTY HOSPITAL, Dorchester—Physician.
 EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN—Physician.
 EAST SUSSEX, HASTINGS, and ST. LEONARD'S INFIRMARY—Physician; Assistant-Physician.
 GOREY UNION, co. Wexford—Medical Officer and Public Vaccinator for the Kellena and Wells Dispensary District: £100 per annum, and fees.
 JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer: £100 per annum, furnished rooms, attendance, coal, and gas.
 KEIGHLEY UNION, Yorkshire—Medical Officer for the Bingley District: £50 per annum.
 KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY—Resident Medical Officer: £100 per annum, furnished rooms, £45 per annum for a dispenser and servant, coal and gas.
 KILRUSH UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cragaknock Dispensary District: £100 per ann., and fees.
 KING'S COLLEGE, London—Professor of Forensic Medicine.
 LANCASHIRE LUNATIC ASYLUM, Prestwich—Medical Superintendent: £600 per annum, house (partially furnished, and free of rates and taxes), coal, gas, and washing.
 LISMORE UNION, co. Waterford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Lismore Dispensary District: £100 per annum, and fees.
 LIVERPOOL DISPENSARIES—Assistant Resident House-Surgeon: £108 per annum, furnished apartments, coal, gas, and attendance.
 LLANFYLLIN UNION, Montgomeryshire—Medical Officer for the Llanrhaiadr District: £60 per annum.
 MEATH HOSPITAL and COUNTY OF DUBLIN INFIRMARY—Surgeon.
 METROPOLITAN FREE HOSPITAL, Devonshire Square—Hon. Surgeon.
 MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Medical Superintendent of the Female Department: £600 per annum, furnished house, rates and taxes free, coal and gas.
 NEWARK HOSPITAL AND DISPENSARY—Resident Medical Officer and Secretary: £100 per annum, board and lodging.
 NORTH BIERLEY UNION, Yorkshire—Medical Officer for the Idle District: £15 per annum, and extra fees.
 NORTHERN HOSPITAL, Liverpool—Physician.
 NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £80 per annum to commence, rooms, board, and washing.
 NUNEATON UNION—Medical Officer and Public Vaccinator for the Nuneaton District: £55 per annum, and extra fees.
 OXFORD—Medical Officer of Health.
 RIFORD UNION, Yorkshire—Medical Officer for District No. 3: £30 per annum.
 SOUTH STAFFORDSHIRE AND WOLVERHAMPTON HOSPITAL—Secretary: £100 per annum, board and residence.
 STOCKWELL FEVER HOSPITAL—Resident Medical Superintendent: £400 per annum, unfurnished residence, coal, and gas.
 SUDBURY UNION, Suffolk—Medical Officer for the First District: £55 per annum, and extra fees.
 SUFFOLK GENERAL HOSPITAL, Bury St. Edmunds—Physician.

SUNDERLAND INFIRMARY—Junior House-Surgeon: £80 per annum, board, lodging, and washing.
 THOMASTOWN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc.: £95 per annum, and fees.
 TROON—Medical Inspector of Seamen.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BANKART, James, M.B., appointed Surgeon to the Devon and Exeter Hospital, vice *P. C. Delagarde, Esq., deceased.
 *BEACH, Fletcher, Esq., appointed House-Surgeon to the Children's Hospital, Great Ormond Street, vice W. O. Sankey, Esq., resigned.
 BRUCE, John, M.B., appointed Medical Officer and Public Vaccinator for the Parishes of Birkwall and St. Ola, Orkney.
 *COLES, George Charles, Esq., elected Assistant-Surgeon to the Central London Ophthalmic Hospital.
 LOWE, John, M.B. and C.M., appointed Assistant Medical Officer to the Durham County Asylum, Sedgfield, Ferryhill.
 SAUNDERSON, Dr. Charles, elected Medical Officer, etc., for the Kiltormer Dispensary District of the Ballinasloe Union, co. Galway.
 THOM, Alexander, L.R.C.P. Edin., appointed Medical Officer for the Parish of Crieff, Perthshire.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

BEADLES.—On December 20th, the wife of *Arthur Beadles, Esq., Surgeon, Forest Hill, of a son.
 CHAMBERS.—On December 6th, at Sutherland Street, the wife of *Thomas Chambers, M.R.C.P.
 CLOUSTON.—At Garlands, Carlisle, on December 13th, the wife of *Thomas S. Clouston, M.D., of a daughter.

MARRIAGE.

MITCHELL, Harrison, M.D., of Wigton, to Alice, eldest daughter of Joseph FLEMING, Esq., of Cockermouth, on December 14th.

DEATHS.

*COWDELL, Charles, M.D., Physician to the Dorset County Hospital, at Dorchester, aged 56, on December 15th.
 *HUGHES, William Lewis, Esq., Surgeon, of Llanrhaiadr-yn-Mochnant, at Liverpool, aged 29, on December 10th.
 RAINES, Charles, Esq., Surgeon, at Hull, aged 22, lately.
 SINGLETON, William, M.D., late Surgeon of Her Majesty's 47th Regiment, at Cap-paduff, co. Mayo, on December 5th.
 SYKES, Reuben, Esq., Surgeon, at Doncaster, aged 46, on December 9th.
 TINNION, John, M.D., at Templehill, Troon, N.B., aged 56, on December 11th.

ROYAL COLLEGE OF SURGEONS.—At the preliminary examinations for the diplomas of fellowship and membership of the Royal College of Surgeons, which was commenced on Tuesday last and only brought to a close yesterday. Two hundred and eighty-eight candidates presented themselves, viz.: 68 for the first-named distinction, and 220 for the latter. The result of the examination, which is conducted by a staff from the College of Preceptors, under the superintendence of Dr. Jacob, cannot be known until early in the ensuing year.

THE next Actonian Prize or prizes offered by the Royal Institution, will be awarded in the year 1872 to an essay or essays illustrative of the wisdom and beneficence of the Almighty. The subject is "The Theory of the Evolution of Living Things." The prize fund is two hundred guineas, and it will be awarded as a single prize, or in sums of not less than one hundred guineas each, or withheld altogether, as the managers in their judgment shall think proper. Competitors for the prize are requested to send their essays to the Royal Institution, Albemarle Street, on or before June 30th, 1872, addressed to the Secretary, and the adjudication will be made by the managers in December 1872.

BEQUESTS, DONATIONS, ETC.—The General Hospital, Birmingham, has received £500 under the will of Mrs. Sutton, and become entitled to £100 under the will of Mr. Thomas Munden.—The South Staffordshire General Hospital, Wolverhampton, has received £450 from Mrs. Cobbe, of Leamington, in accordance with the wish of her late sister, Miss Mary Ann Mitton; £100 under the will of Mr. H. B. Whitehouse; and £100 (towards the enlargement fund) from Mr. John W. Sparrow.—The Forfar Infirmary has received £200 under the will of Mr. William Roberts, Town Clerk of Forfar.—The Brechin Infirmary has received £100 under the will of Mr. James Carnegie Arbuthnott, of Balnamoon.—Miss Wood, of Upper Hermitage, Edinburgh, has bequeathed £2000 to the Edinburgh Royal Infirmary.—The Whitehaven and West Cumberland Infirmary has received a legacy of £50 under the will of Mrs. Eleanor Dixon, and £75 subscribed by her relatives, both which amounts are to be invested, and to form an "Eleanor Dixon Memorial Fund", and the interest to be applied in providing clothing and bedding, when necessary, for convalescent patients on leaving the Infirmary.

OPERATION DAYS AT THE HOSPITALS.

MONDAYMetropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAYGuy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY...St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopaedic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY...St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FOR replies to questions concerning Poor-law medical questions, see Poor law Medical Department, under charge of Mr. Benson Baker, London, and Dr. Maunsell, Dublin.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

W. S. (Great Grimsby).—Dr. C. B. Radcliffe, Dr. Russell Reynolds, Dr. Ramskill, and Dr. Hughlings Jackson, have written ably upon these subjects.

WE have in hand, for early publication, lectures by Dr. Brunton on the Physiological Action of Medicines, Clinical Lectures by Dr. Barnes, Mr. Prescott Hewett, Dr. A. T. Waters, Mr. Campbell De Morgan, Dr. Priestley, Mr. Jonathan Hutchinson, Dr. Fuller, etc.; and papers by Dr. Swayne, Mr. Samuel Wood, Mr. Francis Mason, Dr. Shapter, Dr. L. Atthill, Dr. C. Gibb, Dr. Marcet (Nice), etc.

EARLY in the year will be commenced courses of lectures by Dr. Murchison, Dr. Braxton Hicks, F.R.S., and Dr. Morell Mackenzie. The important letters of Dr. Rumsey and of Dr. C. J. B. Williams, F.R.S., will be published next week.

A CONSTANT READER (Bristol).—Dr. Ferrier will next week answer the question as to Pasteur's solution in the zymotic test.

DR. A. W. EDIS (London).—The advertisement was received under misapprehension, and will not be continued after expiration of contract. We are glad to have had our attention called to the facts.

THE LATE ACTION AGAINST A MEDICAL MAN.

SIR,—Will you allow me through your columns to acknowledge the following subscriptions on behalf of the Testimonial Fund now being raised for Dr. D. H. Watson, of Stockton, whom it will be remembered was honourably acquitted of a charge of unskilful treatment, recently brought against him by a Miss Hutchinson, in the management of a difficult case of inverted uterus. Although getting a verdict and an order for costs against the plaintiff, Dr. Watson is still called upon to discharge a very heavy amount incurred during the conduct of his case, and which, from the inability of the plaintiff to meet the costs which have been incurred, he will have to pay. I have received the following sums:—

| | £ | s. | d. | | £ | s. | d. |
|----------------------------------|---|----|----|---------------------------------|---|----|----|
| Dr. Warburton Begbie, Edin. | 2 | 2 | 0 | E. H. Hughes, Esq., Stockton | 1 | 1 | 0 |
| Dr. Wm. Oliver, Stockton | 1 | 1 | 0 | A. Stocks, Esq., Stockton | 1 | 1 | 0 |
| Dr. George Oliver, Redcar | 1 | 1 | 0 | Dr. Tinniswood, Norton | 1 | 0 | 0 |
| Dr. B. Meadows, London | 1 | 1 | 0 | A Friend (R. L.), Stockton | 1 | 0 | 0 |
| A. Davison, Esq., Cramlington | 1 | 1 | 0 | E. Mandall, Esq., Stockton | 1 | 0 | 0 |
| S. W. Rayne, Esq., Newcastle | 1 | 1 | 0 | Dr. Cuthbertson, Stirling, N.B. | 0 | 10 | 6 |
| Dr. G. H. Hume, Newcastle | 1 | 1 | 0 | — Pybus, Esq., Stockton | 0 | 10 | 0 |
| C. G. Woodd, Esq., Penge, Surrey | 1 | 1 | 0 | W. J. Watson, Esq., Stockton | 0 | 10 | 0 |
| J. Barugh, Esq., Stockton | 1 | 1 | 0 | Mr. Hudson, Stockton | 0 | 10 | 6 |
| | | | | Anon., Stockton | 0 | 10 | 6 |
| | | | | Mr. S. Bowen, Stockton | 0 | 10 | 0 |
| | | | | Mr. J. Walton, Stockton | 0 | 5 | 0 |

Further subscriptions will be thankfully received by Dr. W. Oliver, Stockton-on-Tees; Dr. G. H. Hume, Westgate Street, Newcastle; or by
Yours faithfully, GEORGE S. BANHAM, Hon. Sec.
Stockton-on-Tees, December 18th, 1871.

C. J. (Barnstaple), and D. M. (of the same place).—The result of the examination in Arts at the College of Surgeons cannot be known until about the middle of January, owing to the large number of papers to be read from upwards of three hundred candidates.

MR. M. (Exeter).—It is a common superstition in Devonshire and Cornwall to inquire of any one riding on a pyeball horse of a remedy for the whooping-cough; and whatever may be named is regarded as an infallible specific.

MR. WILLIAMS, General Secretary, respectfully requests the honorary Branch Secretaries to forward to him, as soon as possible after the 31st instant, all subscriptions received by them up to that date, being subscriptions for 1871 in arrears for previous years. The Secretary again appeals to members who have not yet paid for 1871 to do so without delay.

DOUBLE MONSTERS.—Teratologus will find a very interesting lecture on the Ohio Twins, by Dr. Goodell, in the *Philadelphia Medical Times* of June 15th, 1871; and large bibliographical and critical references in papers on Diploteratologus, by Dr. J. G. Fisher, in the *Transactions* of the Society of the State of New York, 1865, 1866, 1867, and 1868; and a letter by the same author, in the *Philadelphia Medical Times* of July 15th, 1871.

INGENIOUS CACOGRAPHY.—Druggists need to be skilful in deciphering hieroglyphics under the most unfavourable circumstances. The following specimens of orthographical ingenuity were recently successfully deciphered. In one case, an order for "3 Peneth of Crotch Needle from chemest", on inquiry, proved to be cochineal; and in another, on a small slip of paper, which was accompanied with a bottle and twopence, were inscribed the words: "Ek peke quke anna wine."—In a list of articles ordered from a country druggist which we have seen, the following occur: "saver latin"; "1 ouns of Kye an peper"; "2 ouns of white murkeram"; "4 ouns of perm an isity"; "2 pounds of venes turtine". *

PRIZE ESSAYS.

SIR,—Would you be so good as to say (1) what, if any, prizes are open to the profession at present, irrespective of subjects; (2) with whom essays are to be lodged; (3) if previous publication of an essay in whole or in part debars it from being entered in competition.
I am, etc., ALIQUIS.

PSYCHOLOGIST (Manchester).—Sir Walter Scott notices a practice in Perthshire, where several wells and springs are dedicated to St. Fillan, and are places of pilgrimage and offerings even among the Protestants.

"Thence to St. Fillan's blessed well,
Whose spring can frenzied dreams dispel,
And the crazed brain restore."—*Marmion*.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The North Devon Herald, Dec. 14th; The Liverpool Weekly Albion, Dec. 16th; The Leeds Mercury, Dec. 14th; The Liverpool Daily Post, Dec. 12th; The Birmingham Daily Post, Dec. 15th; The Northampton Herald, Dec. 16th; The Scarborough Gazette, Dec. 11th; The Shield, Dec. 16th; The North British Daily Mail, Dec. 20th; The Salopian, Dec. 16th; The Brighton Daily News, Dec. 18th; The Eastern Morning News and Hull Advertiser, Dec. 11th; The Glasgow Herald, Dec. 19th; The Tralee Chronicle; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. George Johnson, London; Mr. William Stokes, Dublin; Dr. G. Burrows, London; Dr. Wolfe, Glasgow; Mr. T. H. Bartleet, Birmingham; Dr. Lombe Atthill, Dublin; Dr. W. Aitken, Woolston; Mr. W. H. Domville, London; An Associate; Dr. J. G. Wilson, Glasgow; Dr. James Finlayson, Glasgow; Mr. De Berdt Hovell, London; Mr. J. Liddell, Newcastle-upon-Tyne; Mr. Jonathan Hutchinson, London; Mr. Gilder, Derby; Messrs. Blackwood, Edinburgh; The Secretary of the Royal Medical and Chirurgical Society; Dr. C. J. Gibb, Newcastle-upon-Tyne; Mr. E. C. Board, Clifton; Dr. H. Maudsley, London; Our Liverpool Correspondent; Dr. Dickinson, London; A. P.; Aliquis; The Secretary of the Harveian Society; Mr. Spencer Smith, London; Dr. F. T. Roberts, London; Dr. Langdon Down, London; Dr. Fitzgerald, London; Mr. A. E. Durham, London; Mr. James Hinton, London; Dr. Hawksley, London; Our Vienna Correspondent; Dr. Woodhouse, Reading; Mr. G. S. Banham, Stockton-on-Tees; Mr. H. Arnott, London; Dr. Morton, Glasgow; Dr. Kelburne King, Hull; Mr. G. G. Gascoyen, London; Mr. W. Mac Cormac, London; Dr. McIntyre, Odiham; Mr. J. Marshall, London; Mr. F. C. Annesley, Jersey; Dr. B. W. Foster, Birmingham; Mr. George C. Coles, London; Mr. Frankland, Ripon; Dr. Percy Boulton, London; Mr. W. Allison, East Retford; Dr. Mark Long, London; Dr. Edis, London; Mr. P. H. Holland, London; Mr. J. C. O. Will, Aberdeen; Dr. C. Handfield Jones, London; Dr. C. F. Moore, Dublin; Dr. R. Liveing, London; Dr. Robertson, Glasgow; Dr. Paul, London; Dr. S. Felce, London; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Mr. Holthouse, London; The Secretary of the Royal College of Physicians; Mr. P. Grubb, Warminster; Mr. W. Gilder, Margate; Dr. Brunton, London; Dr. Ferrier, London; Dr. R. Barnes, London; Dr. Liebreich, London; Mr. Gant, London; Mr. E. Sandwell, London; Mr. Feltoe, London; The Secretary of the Fever Hospital, London; Mr. Thomas Cooke, London; Dr. Silver, London; Mr. Hulke, London; Mr. H. Morris, London; etc.

BOOKS, ETC., RECEIVED.

The Medical Guide to Scarborough; giving an Account of its Climate and Vital Statistics; with Directions for Sea-bathing and Taking the Waters. By C. B. Brearey, M.D. Fourth Edition. Newcastle-upon-Tyne: 1871.

Memoranda on Poisons. By the late Thomas Hawkes Tanner, M.D., F.L.S. Third and completely revised Edition. London: 1872.

A Manual of Zoology for the Use of Students: with a General Introduction on the Principles of Zoology. By Henry Alleyne Nicholson, M.D., M.A. Second Edition, revised and enlarged. Edinburgh and London: 1871.

Transactions of the Odontological Society of Great Britain. Vol. iv, No. I. New Series. London: 1871.

LECTURES

ON THE

EXPERIMENTAL INVESTIGATION OF THE ACTION OF MEDICINES.

BY T. LAUDER BRUNTON, M.D., D.Sc.,

Joint Lecturer on Materia Medica, and Casualty Physician, at St. Bartholomew's Hospital; etc.

IV.—DETERMINATION OF THE EXACT STRUCTURES THROUGH WHICH DRUGS AFFECT THE HEART AND VESSELS.

Comparison of the Effects of Drugs on different Animals in different Doses.—Mode of determining the Exact Cause of Symptoms.—Mode of raising Blood-pressure.—Modes of counting the Beats of the Heart.—Causes of Quickened Pulse.—Direct Stimulation of the Sympathetic.—Stimulation of Cardiac Ganglia.—Paralysis of the Vagus-roots and Fibres, and of its ends in the Heart.—Causes of Slow Pulse.—Irritation of Vagus-roots.—Mode of supplying the Head and Body with different kinds of Blood.—Indirect Irritation of Vagus-roots through the Blood-pressure: mode of lowering and raising it.—Reflex Irritation of Vagus-roots.—Indirect Irritation through the Respiration.—Irritation of Vagus-fibres.—Increased Conducting Power of Fibres.—Stimulation of Vagus-ends.—Paralysis of the Sympathetic.—Paralysis of the Cardiac Ganglia.—Part of the Ganglionic Apparatus Affected.—Nervous System in the Heart.—Motor Ganglia.—Stimulating Ganglia.—Inhibitory Ganglia.—Connecting Apparatus.—Action of Drugs on the Inhibitory Apparatus—Nicotia, Muscaria.—Antagonism of Atropia and Physostigma: bearing of this on Therapeutics.—Paralysis of Co-ordinating Apparatus.—Paralysis of the Muscular Fibres of the Heart.—Blood-pressure: mode of determining whether changes in it are due to alterations in the Heart or Vessels.—Elimination of the Action of the Heart: Division of its Nerves.—Irritation of Vagus.—Ligature of Aorta.—Artificial Circulation; in Mammals, in the Frog.—Observation of Vessels.—Action on Vaso-motor Centre; on Vascular Walls.—Influence of the Action of Parts surrounding the Vessels upon them.—Action of the Pulmonary Circulation on the Blood-pressure.—Use of the Sphygmograph.

ACCELERATING GANGLIA IN THE HEART.—We infer the presence of quickening ganglia in the heart, from the effects produced by irritating the vagus after its inhibitory power has been destroyed by the administration of nicotia or atropia. When irritation is then applied to the nerve, it no longer produces retardation, but, on the contrary, a decided acceleration of the cardiac pulsations. This shows that the vagus contains fibres which quicken the heart, and that these are unaffected by the drugs which have paralysed the others. The quickening, however, does not take place till some time after the application of the irritant; and, if it be applied only for a short time, no acceleration may take place till after its removal; but, after it does occur, it remains for a considerable time. If we irritate the heart directly, instead of irritating the nerve, its beats are quickened at once, and the acceleration does not last long after the irritation is discontinued. This shows that, when we stimulate the quickening nerves, we do not act directly on the motor ganglia M (Fig. 12), as we do when we irritate the heart itself, or as we should do if the quickening fibres ended directly in them; and we therefore infer the existence of the accelerating ganglia Q between the quickening nerves s and the motor ganglia M. The accelerating apparatus seems to be stimulated by veratria; for we find that the cardiac pulsations are increased by its administration to mammals in which the spinal cord, vagi, sympathetics, and depressors, have all been divided, or when it is applied to the excised heart of a frog.

IS QUICKENING OF THE EXCISED HEART DUE TO PARALYSIS OF INHIBITORY OR STIMULATION OF ACCELERATING GANGLIA?—It is possible that the quickening may be due to paralysis of the inhibitory ganglia in the heart, and not to stimulation of the quickening ganglia. This can be decided by paralysing the inhibitory ganglia by means of atropia, before administering veratria. If the latter poison exercise a stimulating action on the quickening ganglia, it will quicken the heart after atropia has been applied. If it simply paralyse the inhibitory ganglia, it will have no further effect after the power has been destroyed by atropia. In the diagram, I have figured intermediate structures C and D between the quickening nerves and ganglia, so as to correspond with those of the inhibitory apparatus; but whether they really exist or not, we cannot at present say.

IS THE CO-ORDINATING APPARATUS OF THE CARDIAC GANGLIA

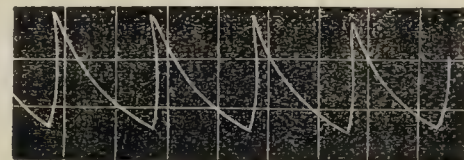
PARALYSED?—Regarding this apparatus we know almost nothing. When the heart is dying, its rhythm is often disturbed, and two or three contractions of the auricles may occur for every contraction of the ventricle. When laudanum is poured into the heart, the rhythm is quite reversed; for after each pause the ventricle contracts first, and contraction of the auricle follows it. Digitalis and some other poisons cause peristaltic movements in the ventricle; and occasionally some spots in the ventricle continue to pulsate while the rest of it remains firmly contracted and motionless. These effects are probably due to disturbance of the apparatus which connects the different motor ganglia in the heart and causes them to work in unison.

ARE THE MUSCULAR FIBRES OF THE HEART PARALYSED?—We test this by applying an irritant to them directly, and seeing whether or not they contract. If the motor ganglia be uninjured, the application of an irritant generally produces a rhythmic contraction of the whole heart; but, if they be paralysed while the muscular fibre is healthy, the irritation only causes a local contraction of the part to which it is applied.

BLOOD-PRESSURE.—The blood-pressure depends on two things—1, the activity with which the heart pumps the blood into one end of the arterial system; 2, the rate at which it flows out at the other end into the veins. The rate is regulated by the small arteries and capillaries, which dilate and contract so as to quicken or slow it. The power of contraction is denied to the capillaries by many physiologists; but Stricker has, I think, conclusively shown that they do possess it.

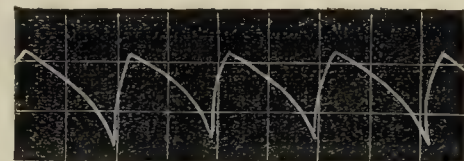
The rapidity with which the blood flows through them does not depend entirely on the width of the capillaries, but also on the pressure on the arteries which is forcing the blood into them. The higher this is, the more rapidly does the blood flow; and in proportion as it diminishes, does the current become slower. From this circumstance we can judge of the force of the heart-beats from the form of the curve which we obtain with the sphygmoscope. When the heart contracts with great force, it drives the blood out of the ventricle into the arteries so quickly that there is no time for much to escape from the capillaries while the systole lasts; and so the tension rises high. This increased tension makes the blood run quickly out of the capillaries, and we have a fall of pressure, rapid at first, but gradually becoming slower as the tension diminishes. This is shown in Fig. 13. When the heart

Fig. 13.



contracts less forcibly, it sends in the blood more slowly, and there is time for a greater quantity to escape by the capillaries during the systole; and the tension does not rise so high. From the tension being lower, the outflow of blood is not so quick; and the pressure therefore sinks more gradually than in the former case. This is represented in Fig. 14. Both of these figures were obtained by connecting a sphyg-

Fig. 14.



moscope with a schema of the circulation such as I have already described, and compressing the India-rubber ball which represented the heart with greater or less force and suddenness; care being taken, however, to empty it completely each time, so that the amount of air sent out should always be alike.

As variations in the blood-pressure may be due to alterations in the activity of the heart or the size of the capillaries, or to both together, we cannot say when it is due to the one and when to the other, unless we can keep one of them constant while we allow the other to alter, or unless we examine them both separately.

ELIMINATION OF THE ACTION OF THE HEART.—We may keep the action of the heart tolerably constant, and thus ascertain with considerable exactitude the action of any drug on the exit-tubes—whether they be arterioles or capillaries matters not—by separating the heart from the nerve-centres, and then injecting the drug into the circulation.

DIVISION OF CARDIAC NERVES.—This separation can be effected to a considerable extent by dividing the sympathetics, vagi, and depressors in the neck; but it is done much more effectually by dividing

* Concluded from page 689 of number for December 16th.

the nerves near their entrance into the heart by a fine wire heated by means of a galvanic battery.

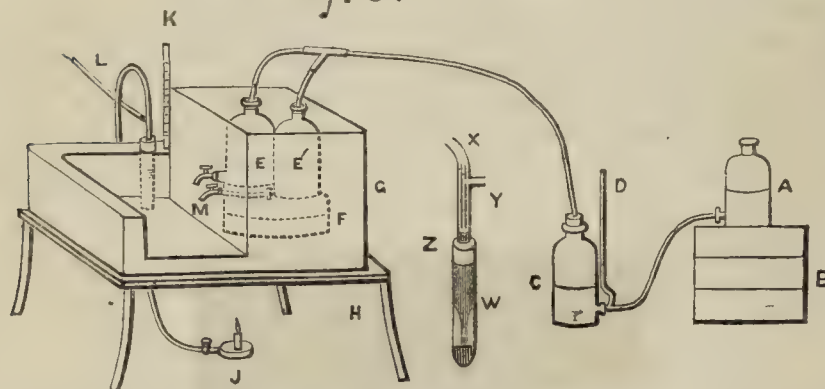
As poisons generally produce their most marked effects on the heart of mammals through the nervous centres whose connexion with the heart we have thus severed, alterations in the blood-pressure will be due to changes in the vessels, except in so far as the drug may have affected the cardiac muscle or ganglia. But, just as we obtained the most exact results when we examined the heart altogether apart from the blood-vessels, so we shall probably come to the most satisfactory conclusions regarding the vessels by observing them apart from the heart. You will remember that, during the diastole, the circulation is carried on entirely independently of the heart by the pressure of the blood in the arteries; and, if we can prolong the diastole sufficiently, we shall be able to tell whether the vessels are dilated or contracted by simply seeing whether the pressure sinks quickly or slowly.

If we prevent any blood from being pumped into the aorta by the heart, the arterial system will come to resemble a bottle with a hole in it, from which the fluid which it contains is running. The larger the hole, the more quickly will it run out and the bottle become empty, and *vice versa*; and, in the same way, the more dilated the capillaries are, the quicker will the blood run out of them into the vein, and the pressure sink in the arteries; the more contracted the capillaries are, the more slowly will the blood flow through them, and the more gradual will be the fall of pressure. In the case of many poisons, we may do this by irritating the vagi before poisoning, and seeing how quickly the pressure falls while the heart is standing still; and then repeating the experiment after injecting the poison. If the pressure fall more quickly in the second case, we know that the vessels have become dilated; and if more slowly, that they have contracted. Of course, only those parts of the tracings in which the pressure has been the same are to be compared with each other; but, if we stop the heart long enough, we can always get parts in both which are capable of comparison.

When the poison paralyses the vagus, as atropia does, this method fails; and then we must open the thorax, perform artificial respiration, and put a ligature round the aorta.

ARTIFICIAL CIRCULATION IN MAMMALS.—As an animal quickly dies when the aorta is ligatured, it is better to carry on artificial circulation by a syringe through a cannula inserted into the aorta, as Hering and Horvath have done in their researches on the connexion between arterial movement and respiration. This method I have already described. After the blood has circulated once, it may be defibrinated, shaken with air warmed to 40 deg. Cent., and reinjected. Instead of using a syringe, the cannula in the aorta may be connected with the nozzle M, Fig. 6, and the blood put in the flask 3. It can thus be kept at a constant temperature more

Fig. 6.



easily than when a syringe is employed. The pressure may be alternately increased and diminished so as to imitate the beats of the heart by raising and depressing the flask A. This may be done by passing a string over a pulley, and attaching one end to the flask and the other to a treadle worked by the foot. Warm blood has the disadvantage, that it undergoes change and becomes decomposed quickly; and cold blood may, therefore, be sometimes preferred. When cold blood is employed, only the flask which contains the blood is necessary; and it may be raised or lowered in the same way as the other.

ARTIFICIAL CIRCULATION IN FROGS.—Artificial circulation may be kept up in frogs by simply inserting a cannula into the aorta, and allowing blood to flow into it from a raised reservoir, as done by Rollett. By using two, as in the experiments on the frog's heart, normal blood may be allowed first to circulate through the vessels; and, the web being put under the microscope, their diameter may be measured; and then poisoned blood may be allowed to flow through them, and any change in their diameter noticed.

OBSERVATION OF VESSELS.—The parts best adapted for observing

changes in the size of vessels in mammals are the ear in rabbits and the mesentery. When the mesentery is chosen for observation, the abdominal parietes should be divided; but the peritoneum should not be opened, as changes in the diameter of the mesenteric vessels may be observed through it, and they are thus protected from the disturbing element which the irritation produced by the access of air to them would introduce into the experiment. The vessels in the rabbit's ear are readily measured by a micrometer used with one of Brücke's magnifiers, which is simply a telescope with an extremely short focus. The ear should be held up so as to allow the light to shine directly through it, and the magnifier placed horizontally.

The area of the capillaries may be lessened, and the flow of blood through them retarded in two ways; 1, by contraction of their walls; 2, by pressure exerted on them from without. They may be made to contract by irritation, 1, of the vaso-motor centres, 2, of the vaso-motor nerves, or, 3, of their muscular walls; and pressure may be exerted from without by the motions of muscles or of organs composed of involuntary muscular fibre such as the intestines. The movements of respiration also, as already mentioned, exercise an important influence on the pressure.

ELIMINATION OF RESPIRATION AND MUSCULAR MOVEMENT.—The influence both of respiration and of muscular movement may be eliminated by giving the animal curare, and keeping up artificial respiration, before beginning to experiment with the drug whose action we wish to examine.

ELIMINATION OF VASO-MOTOR CENTRE.—For the purpose of ascertaining whether the drug has acted on the vascular walls or on the vaso-motor centre, we divide the vaso-motor nerves going to a part before injecting it, and see whether it acts as it would have done had they been undivided. Thus, when we are observing the rabbit's ear, we divide the sympathetic in the neck; and, when looking at the mesentery, we cut the splanchnics before the injection, and see whether the vessels contract or dilate as we have previously seen them do under influence of the poison in animals in whom the nerves were intact.

For the purpose of ascertaining whether the drug acts on all the vessels in the body in the same way that it does on those of the ear or mesentery, we first cut the vagi, sympathetics, and depressors; and then divide the spinal cord between the occiput and atlas, or atlas and axis, so as to sever the connexion between the vaso-motor centre and vessels, and begin artificial respiration. We next note the blood-pressure, inject the poison, and see what alterations it produces. Experiments may also be made by irritating the vagus or ligaturing the aorta.

ACTION OF SURROUNDING PARTS.—It sometimes happens, as in the case of physostigma, that the drug produces no contraction in the vessels of the ear or mesentery when their nerves are cut—a fact which shows that it acts on them through the vaso-motor nerves, and not directly on their walls; and nevertheless, when injected into a vein after the cord has been cut, it may cause the blood-pressure to rise very considerably. At first sight, this would seem to indicate that the drug acted on the walls of some vessels in the body, if not on those of the ear or mesentery, directly, and not through their vaso-motor nerves. On examination, however, it is found that the obstruction to the flow of blood through the capillaries does not depend on their contraction, but on the occlusion of a large number of them in the intestine by spasmodic contraction of the intestinal walls in which they are imbedded.

INFLUENCE OF THE PULMONARY CAPILLARIES.—It has lately been pointed out by Holmes that when a drug such as ergot, which acts on the walls of the vessels and causes them to contract, is injected into the jugular vein, it has to pass through the pulmonary capillaries before it reaches the systemic ones; and, by contracting them, it will lessen the amount of blood sent into the aorta from the left ventricle, and will at first produce a fall in the arterial pressure, succeeded by a great rise when time has elapsed for the drug to reach the systemic capillaries and cause them likewise to contract.

USE OF THE SPHYGMOGRAPH.—For a description of the sphygmograph and the mode of applying it, we must refer to the special works on that subject, such as those of Marey and Sanderson. The indications which it gives are the following. 1. The greater or less pressure which is requisite to compress an artery and stop its pulsations enables us to estimate approximately the amount of pressure within it. The amount of pressure and the rapidity of the pulse help us to form conclusions regarding the motor and inhibitory apparatus of the heart, in the same way as in the experiments already mentioned, though, of course, to a much more limited extent and with much less certainty. 3. The form of the curve, like those in Figs. 13 and 14, shows, in the same way as those of the sphygmoscope, Figs. 13 and 14, the rapidity with which the pressure falls during the diastole; and from this curve and the amount of blood-pressure we can judge of the size of the capillaries.

REMARKS

ON

THE INSTRUMENTS DESIGNED FOR EXPLORING
GUN-SHOT WOUNDS,WITH A VIEW TO DETECT BULLETS OR OTHER FOREIGN
BODIES SUSPECTED TO BE LODGED IN THEM.

By T. LONGMORE, Esq., C.B.,

Professor of Military Surgery at the Army Medical School, Netley.

To obviate these difficulties and sources of fallacy, a surgeon of the French army, Dr. Lecomte, invented an instrument, to which he gave the name of "probe-nippers" (*stylet-pince*). His design was not merely to indicate the presence of a leaden bullet, by bringing away a stain or mark of its presence, but by bringing away a small portion of the lead itself. Such an instrument could not only be used for bringing away a scale of lead, but also a minute portion of paper, cloth, wood, or any other foreign body capable of being cut in a similar manner. If the supposed foreign body were a fragment of bone, it would equally bring away a particle of it. It was evident that, in addition to its other qualities, the *stylet-pince* would require to have its nippers smaller in size than the porcelain knob of Nélaton's probe, with a stem of sufficient length to be passed along narrow sinuses, and at the same time solid enough to bear a certain strain in use. I have ascertained by practical experience that the *stylet-pince* does possess the qualities aimed at by Dr. Lecomte.

The instrument consists of two portions. The first is a central steel rod of small diameter, fixed in an ivory handle at one extremity, and cleft at the other into two small branches, each of which terminates in a little cup-like blade or curette; the second is a slender cannula, which glides backward and forward, but only within a limited distance, along this rod. The central rod is fixed in the handle by means of a side-screw, which can be loosened at pleasure by the surgeon, so as to increase the length of the exposed part of the stem, or to enable it to be removed altogether to be cleaned. The two steel curettes have very fine and sharp edges. They separate from each other by the elasticity of the two little steel branches, of which they are the terminations; but they are easily brought together by a slight pressure, such as that exerted by causing the cannula to glide along the central stem up to them. When they are thus brought together, the two curettes so fit one to the other that, united, they form a small smooth steel knob or rounded extremity, about one-third of the usual size of the china knob of a Nélaton probe.

It will be apparent, from the description, that the gliding of the cannula determines the opening and closing of the curettes: when it is slipped back, the curettes open; when it is pushed forward, they are closed, and form a little hollow globe. There is no difficulty in the manipulation of the instrument. It is inserted with the curettes closed, and it may be used then precisely as the long silver probe in a surgeon's capital case of instruments. When about to be employed for determining the nature of the substance with which it is put into contact, the cannula is drawn towards the surgeon, at the same time that the extremity is retained with an equable and steady pressure against the substance. This movement has opened the curettes. The same even pressure is sustained while the cannula is pushed home, and this causes the curettes to be brought together again; their edges, as they close towards each other, nipping off a small particle of the substance over which they are moved. The instrument is then withdrawn, and, supposing it to have been brought into contact with an ordinary bullet, a small scale of lead will be brought away enclosed within the cavity of the rounded extremity formed by the two curettes. The glistening surface of the freshly cut shaving of lead will sufficiently indicate its nature. If any difficulty should occur in distinguishing the particle which has been brought away, it can be removed from the curettes, and observation under an ordinary magnifying lens will show what the substance is. The *stylet-pince* is thus a most useful explorer for deciding doubtful cases of lodgment of foreign bodies; it responds as an indicator with even more distinctness than the Nélaton probe in all cases in which that test would be of service, while it answers for a variety of other cases in which the Nélaton probe would give no indication at all.

Electricity was some years ago suggested as a means of detecting lodged bullets and other metallic substances in wounds; and some very ingenious apparatus depending on this agent have been lately contrived for the same purpose. One of the first to experiment upon an electric ap-

pliance of this kind was a French military surgeon, M. Fontan, assisted by M. Favre of Marseilles. A description of the somewhat complicated apparatus employed in these experiments is to be found in the *Gazette des Hôpitaux* of the 29th November, 1862.

The improvements which have taken place in the modern applications of electricity have paved the way for more simple and yet more sensitive bullet explorers. One of these is the invention of Mr. De Wilde, a civil engineer, and is very compactly arranged in a box of small dimensions. The electric action is excited in a suitable cell; the electricity there developed is increased in intensity by the intervention of a multiplying coil; an exploring probe is connected by insulated wires with the apparatus; and the indication, when the circuit is completed by contact of the two points of the probe with a leaden bullet or piece of iron, is given by the striking of a hammer against an alarm-bell. The bell sounds at each interruption and renewal of contact of the points with metal. The exploring probe consists of a long slender tube of smooth vulcanite, containing two insulated needles, the points of which can be withdrawn within the tube, or be made to protrude, at the pleasure of the operator. Altogether it is an effective appliance as an exploring instrument, owing to the strength of the electric current developed, and the marked manner in which the indications are given by the sound of the bell when a bullet or other metallic substance is met with. There is also attached to the instrument a bullet extractor, the two arms of which are insulated, and so arranged that, when they are connected, in the same way as the explorer, with the battery, they indicate the grasping of the foreign body similarly by the sound of the bell. Unless the metal be firmly grasped by both blades, without any other substance intervening, the indication will not of course be given.

Another instrument of a similar nature has been made by Messrs. Krohne and Sesemann of London. The indications of contact with a lodged bullet or other metal are in this instrument afforded by the movements of a galvanometer, and of a fine needle working upon a dial-plate, in the same manner as is seen in the ordinary single needle telegraph. I have experimented with both these instruments, and have found them equally effective in their indications. Attached to the latter instrument is not only a bullet-extractor as well as the explorer, but also a pair of acupuncture needles, for use in cases where metallic bodies are supposed to be lodged in soft tissues, away from any means of approach by a wound or sinus.

A rough but sufficiently effective electric instrument for facilitating the discovery of metallic substances lodged in gunshot-wounds has been made in the following way. The magnet of an ordinary pocket-compass, which has had some turns of wire covered with thread wound round it as an induction coil, is employed for the electric indicator while a piece of copper sheeting, bent round a small plate of zinc, but separated from it by flannel padding saturated with the usual diluted acid, forms the voltaic pile. The exploring instrument is formed by two insulated wires, bound together, but with the points left free. These parts being connected, when the circuit is completed by contact with metal, the indication is given by movement of the magnet of the compass.

Lastly, the endoscope has been suggested for use in exploring for foreign bodies in wounds. Dr. Fenger of Copenhagen, in 1869, made some experiments with the instrument on horses, and came to the conclusion that pieces of cloth in wounds, or bullets driven into bones, could be seen by its means. Dr. Fenger has stated that during the late war he was enabled in several instances, on examining wounds some weeks after they had been inflicted, to see their interiors distinctly by means of the endoscope, without causing pain, hæmorrhage, or any subsequent irritation, in consequence of the introduction of the instrument. I have no experience of such an application of the endoscope, and can hardly think that, with so many other effective appliances available, it is likely to be turned to much practical account in this direction.

It must be sufficiently obvious that several of the exploring instruments just described are not suited for use in the field. The circumstances of gunshot-wounds themselves, as they are ordinarily presented shortly after their infliction, do not render such instruments necessary; nor are some of them—as the electric explorers for example, which may be easily disarranged—suitable for use in the places where the wounds resulting from battle are usually treated during their earliest stages. But it has not been the purpose of these remarks to discuss either the nature or circumstances of the wounds in which instruments of this kind may be specially serviceable; their object has been only to describe the instruments available for exploring for foreign bodies in cases where the exploration is decided to be advisable. It is only right to remark, however, in conclusion, that even in such cases there must be a limit to search. This limit must depend on the circumstances of each particular case, and must be decided by the judgment and tact of the

responsible surgeon. As a general rule, it may be stated that, whatever may be the reasons for concluding that a bullet or any other foreign body has lodged in or near a gun-shot wound, if, after search by the finger in cases where a digital examination is practicable; after external manipulation and observations made in varied postures of the part of the body concerned; after attention has been given to indications derived from the patient's sensations; effects of pressure upon, or injury to, nerves; and, lastly, after a moderate but careful exploration by one or other of the exploring instruments just described, if, after these steps have been taken, the site of the lodgment be still not ascertained, more especially if the patient be suffering pain, or is in an exhausted condition, the exploration should be at once discontinued. The continuance of the search will not merely add to the weariness and distress of the patient, but, if the several proceedings above-named have been properly carried into execution, it is not likely to be attended with a successful issue. The foreign body will probably have passed beyond or out of the field of exploration, or have become deeply impacted in bone, or entangled among tissues, where it could only be discovered by an unjustifiable amount of meddlesome and injurious disturbance of the structures implicated. We must rest in hope that, either during the process of suppuration, or under the influence of muscular actions, or by gradual approach toward the surface, the escape of the foreign body, whatever its nature, whether hard or soft, smooth or rough, organic or inorganic, may be eventually effected without such risks; or, if it be of a favourable kind and form, such as a leaden bullet is when its normal shape is retained, and if it be not in contact with a nerve, bone, or other important organ, that the wound may heal favourably, notwithstanding its presence, the foreign body becoming encysted, and remaining lodged without causing either pain or mischief for many years afterwards.

HYDRATE OF CHLORAL IN PUERPERAL CONVULSIONS.*

By J. G. SWAYNE, M.D.,

Physician-Accoucheur to the Bristol General Hospital.

CASE I.—On October 26th, 1870, Mr. Taylor requested me to see Mrs. H., living in Kingsdown, Bristol. She was a primipara, and from his account, had had albuminuria with oedematous extremities for about three weeks. For this he had purged her and given diuretics up to the time when symptoms of labour set in, accompanied with convulsions. I saw her first at 7.30 P.M. She had then had two convulsive attacks—the first at six, and the second at seven o'clock. Mr. Taylor had given her calomel and jalap, and applied a sinapism to the back of the neck. The breathing was slightly stertorous, but she was not wholly unconscious. Before the fits came on, she said that she saw "beautiful green things floating in the air." On examining, I found the os uteri dilated to the size of a crown-piece, and the head presenting. The membranes were unruptured, and there were scarcely any labour-pains. We bled her to fourteen ounces. Immediately after this, at eight o'clock, another fit came on. When it was over, we injected into the rectum thirty grains of chloral dissolved in three ounces of water. The pulse, which had previously been about 70, was now about 120. She was at first rather restless, but soon became more conscious, said her headache was better, and fell into a tranquil sleep. We then left her, with instructions that if any fresh symptom came on, Mr. Taylor was to be summoned immediately. Next day, I received a note from Mr. Taylor, in which he stated that she remained in the tranquil state in which we left her for nearly an hour, when labour-pains set in with regularity, and went on until 3 A.M., when he was sent for; and, on examining, found the head in the pelvic cavity, and a fairly good pain; but with the second pain after his arrival, she had a convulsion as severe as that we witnessed. He immediately applied the forceps and delivered her as quickly as possible, when he found, to his surprise, that there was a second infant. However, a foot presented, which he soon brought down, and promptly delivered the child. There was a considerable hæmorrhage at the removal of the placenta, but she was not very much exhausted, and he left her feeling comfortable. Mr. Taylor added that, "she is to-night cheerful, with a pulse of 100. So far, we may congratulate ourselves on the termination of a somewhat unpromising case. Your chloral had a most decidedly soothing effect, and I fancy its topical irritant quality may have had a reflex influence on the pelvic nerves." I may add that the patient went on favourably, and ultimately made a good recovery.

CASE II.—On March 26th, 1871, I saw, in consultation with Mr. Wine, Mrs. R., aged 25, living in Bread Street, St. Philip's, Bristol.

She had had two children previously with easy labours. About five days before the present labour, she was frightened very much (because one of her children was nearly run over), and felt no foetal movements afterwards. Mr. Wine saw her first at 3 A.M. on March 25th. The os was then slightly dilated, and the pains feeble. She then had a convulsion for the first time, and afterwards dozed off into a snoring sleep. Mr. Wine went home for three grains of calomel, which he gave her. He came again at 10 A.M., and found that she had had six fits since he last saw her. On examining the bed, he found that she had given birth to a dead child, which was quite rigid. About 11 P.M. on March 25th, she had a very bad epileptiform convulsion. After that (about twelve o'clock) she had some fits of a more hysterical character, accompanied with screaming. When I saw her at 1 P.M. on March 26th, she was lying in an almost insensible state. The pupils were scarcely affected by light; but the breathing was not stertorous. Pulse 86. We drew off about twelve ounces of dark coffee-coloured urine. This was highly albuminous, and became almost solid when heated. We gave her thirty grains of chloral by injection. At 10 P.M. I saw her again, when Mr. Wine told me that she had another fit about half an hour after the chloral was administered, and then another very long one about half an hour after that, and then none for two hours until 6 P.M., after which she had seven rather violent ones. Although her pulse was rather weak, we bled her at 10.30 P.M. to twelve ounces. She had a fit about twenty minutes before the bleeding, and another about an hour afterwards. There was then a complete cessation of them for three hours until a quarter to 3 A.M. on March 27th. From that time up to 8 A.M., the fits returned, and she had as many as twelve. I saw her at 11.30 A.M. on March 27th. She had then been quiet, and had slept for more than three hours without any fits. The pulse was 136. The urine now showed no trace of albumen. The pupils were slightly affected by light, and she was able to take a little milk and brandy, though scarcely sensible. We ordered her thirty grains of chloral, to be repeated if necessary in six hours. She took the first dose at 2 P.M., and (by a mistake of the woman in attendance) the second dose at 4 P.M., and thus one drachm of chloral was administered in two hours. I saw her at 10.30 P.M. There had been no return of the fits, but she was lying in a very prostrate condition, with a pulse of 144, and respirations 36 in the minute. I was summoned early in the morning of the next day (March 28th), because Mr. Wine, from certain symptoms, apprehended an attack of abdominal inflammation. The abdomen was tympanitic and somewhat tender to the touch. There had been no more fits, but she was lying in a very prostrate condition, and was scarcely sensible. Pulse 125; pupils slightly affected by light. As she had not yet had much stimulus, we ordered her a dessert spoonful of brandy every two hours. She was able to take strong beef-tea and milk very well. On March 29th, she was much better, able to answer questions, and becoming conscious. Pulse 108; appetite good. I did not see her after this, but Mr. Wine reported to me that she made a good recovery, with the exception of considerable headache, which lasted about a week.

REMARKS.—I have brought forward these two cases of convulsions rather with the view to record my own experience, as far as it goes, with respect to the use of a comparatively new medicinal agent in this formidable disease, than because they furnish any very conclusive proof of the value of the remedy. I have the highest opinion of the efficacy of bleeding in puerperal convulsions, and have shown from time to time that it has a greater power than any other remedy in removing the albuminuria which is probably at the root of this affection. I did not, therefore, in either of the two cases just mentioned, feel justified in relying solely on hydrate of chloral and omitting to bleed; and, on this account, the cases are not so conclusive as to the value of chloral as one could wish. In the first case, however, the chloral, when given after bleeding, seemed to have a very tranquilising effect, and the result, perhaps of both, was that there were no more fits for about eight hours, when they came on again with the more severe expulsive pains of the second stage, and were at once relieved by delivery. The great distension of the uterus from the presence of twins had probably some share in causing the convulsions. In the second case, the convulsions appeared to be chiefly due to the very unnatural condition of the urine; for they were not relieved, but rather became worse after delivery. Chloral was then given to the amount of thirty grains, and there was a cessation of the fits for about two hours. The woman was bled after the fits returned, and they then ceased again for three hours, though not immediately after the bleeding. After that the fits returned, nearly one in every hour, and then appeared to cease spontaneously as soon as the urine was free from albumen. Soon afterwards, she took, partly by mistake, a double dose of chloral (about one drachm in two hours), and there was no return of convulsions; but this powerful dose of chloral appeared to add very much to the previous prostration.

* Read before the Bath and Bristol Branch, October 1871.

From this, however, she soon recovered, and ultimately did well. From what I have seen of the action of chloral in puerperal convulsions, I am disposed to think that its action is similar to that of chloroform, but that it is more steady and persistent in its effects, and that it is much more manageable, because we can regulate the dose with much greater nicety. Although it ought not to supersede bleeding, it is yet a most valuable adjunct to it, and is, in fact, the best antispasmodic we can employ in such cases. I believe that the dose required to produce a decided effect must be large—at least forty grains at a time—and this may be repeated in three or four hours. I lately saw a case of puerperal mania, accompanied with much excitement and entire loss of sleep. This restlessness was quite unrelieved by full doses of opium, and was very little affected by thirty grains of chloral. We then gave forty grains of chloral, and repeated it in two hours, and the result was that the woman had six hours of tranquil sleep, after which she immediately began to improve until she made a good recovery.

ABSTRACT OF A CLINICAL LECTURE ON A CASE OF PURPURA, FOLLOWED BY CONVULSIONS, IN A YOUNG CHILD.

Delivered at King's College Hospital, November 30th, 1871.

By W. O. PRIESTLEY, M.D.,

Professor of Obstetric Medicine in King's College; Obstetric Physician to King's College Hospital.

GENTLEMEN,—We have had some interesting cases in the Children's Ward since my last lecture. One little child has died after an illness with a somewhat curious and instructive history. She was thirteen months old, and suffered from purpura. This affection, which commonly occurs in cachectic children, very closely resembles the blood-disease called scurvy, from which sailors suffer when, during long voyages, they are deprived of fresh vegetables. There are large or more minute deep purple spots in the skin scattered over the surface of the body. The little child, the notes of whose case have been taken by Mr. Eardley Wilmot, was named Maud Isabel Gingall, and she had been in the Pantia Ralli Ward suffering from the same condition in the latter part of August, and, after a course of chalybeates, was discharged cured. On September 21st she was again brought to the hospital covered with fresh purpuric spots, and with extensive ecchymosis over the left eyelid and cheek, and also of the vulva. These latter injuries were supposed to have resulted from a fall from a perambulator. About the joints particularly were large patches and many little dark spots, as if they had been pricked with a needle, and thus blood extravasated. She was placed on generous diet, with wine, and to have the following draught three times a day.

R Ferri sulph. gr. iij; acid. sulph. dil. ℥ ii; syr. simp. ℥ x; inf. calumb. 3j.

It is necessary to distinguish the spots of purpura from the ecchymosis produced by a blow or a fall. When a child in ordinary health has received a blow, the place may blacken in consequence; but, ere long, gradual changes of colour take place in the spot; the discoloration becomes ultimately purple, green, and yellow, and gradually disappears, the part perfectly recovering its flesh-tint in some days. In this child the deep colour did not pass away in the ordinary fashion, but remained persistent—thus proving that, if the child had been bruised at all, there was some faulty condition of health which interfered with the recovery of the ecchymosed parts. As the large doses of sulphate of iron did not seem to be producing any good results, on the 9th October a drachm of lemon-juice was ordered to be given three times daily. Lemon-juice is given to sailors suffering from scurvy, and proves to them of the greatest service, answering as well as green vegetables. Dr. Budd, it is true, has pointed out that there are some important differences between purpura as we see it on land and sea-scurvy, and that the former is less benefited by lemon-juice; but it was thought desirable to try the effect of lemon-juice in this case by way of experiment. On October 14th there was, however, no improvement; a fresh crop of spots had appeared on the legs and abdomen; and the child was ordered 5 minims of tincture of perchloride of iron, 2 minims of dilute hydrochloric acid, with syrup and water, three times daily. In the evening of that day she was seized suddenly with very violent unilateral convulsions; the left side, leg, arm, and face, being thrown into violent spasmodic action. The left pupil remained normal, while the right contracted. She remained in an unconscious state for fourteen hours, taking no food or medicine; the temperature was 103 deg. Fahr., and the pulse 150. One ounce of brandy was ordered daily, and a purge to clear out the bowels. For the next four days the child remained in a semi-con-

scious state, taking very little food and sleeping little. The eyes were fixed and turned inwards, and the pupils were now dilated and immoveable. On the 19th October she had another fit, similar to the preceding, but less violent. On October 23rd, diarrhoea, with bloody stools, set in, after which she gradually regained consciousness, and seemed much better, though still very weak, and her appetite was defective. It was then observed that no paralysis remained in the side affected. She continued much the same to November 11th, but was obviously losing flesh and growing weaker. Her weight was only 13½ lbs. She was ordered one drachm of cod-liver oil three times daily. On the above date a third fit came on, and the diarrhoea increased. The temperature was 102 deg. Fahr. From the effects of this fit the child never rallied. As a further complication, bronchitis set; the chest became full of moist *râles* and coarse crepitation; but there was no dulness present. Some new purpuric spots appeared on the legs. She was ordered quinine, and the brandy was doubled. On the 16th November she was evidently much weaker, and seemed to be sinking. Her weight now was only 12¾ lbs. The pulse was almost imperceptible, and the lungs were choked with mucus, the child having no power to cough. The breath was very offensive, and there was occasional vomiting, although she took very little food. The brandy was increased to three ounces. She died on the 19th October, at 12.45 P.M.

Now, gentlemen, some may naturally ask, What relation has the purpura in this case to the occurrence of the convulsions at the later period? The investigation of this point becomes an interesting pathological study. I may state at once that I believe this child had the convulsions as the result of cerebral hæmorrhage. This is not altogether infrequent in young children; and yet it is very rarely followed by paralysis, as in the adult. When an adult is stricken with apoplexy, the immediate effect is a convulsive seizure, followed by permanent and incurable paralysis; but the hæmorrhage in the adult is commonly into the substance of the brain rather than into the membranes, and, as a consequence, destruction of nervous substance is the greater. In young children, on the contrary, although we get cerebral hæmorrhage as in the adult, yet the bleeding much more frequently takes place into the arachnoid cavity than into the brain-substance.

Sunstroke is a common cause of cerebral hæmorrhage in young and healthy children. When a child is much exposed to the sun in this country, and more especially in warm climates, it is sometimes seized with giddiness and convulsions, and probably dies. It has been found that in these cases there has been a large amount of congestion in the blood-vessels of the brain and its membranes, leading to extravasation of blood. But we also find cerebral hæmorrhage occurring in children of very feeble condition, imperfectly nourished, and cachectic. There can be very little doubt that, in the case of the little child whose history I have read to you, what occurred in the capillaries of the skin took place to a greater degree in the interior of the cranium. Blood was poured out also on the surface of the mucous membrane of the intestine, and caused bloody stools. When the convulsions took place, small vessels were probably ruptured on the surface of the brain, and extravasation took place into the cavity of the arachnoid. More than one rally took place, and the child might possibly have recovered but for the fresh complications which sprang up. When chest-symptoms were developed, the child could not cough up the mucus, and the bronchial tubes became so choked that she rapidly sank. It is much to be regretted that the friends would not permit a *post mortem* examination, else we might have been able to confirm the diagnosis of cerebral hæmorrhage made during life.

I may here say a few words to you in reference to the diagnosis of cerebral hæmorrhage, and warn you that you must not jump to the conclusion that cerebral hæmorrhage has occurred in all cases where there are convulsions. Convulsions come on from teething and other reflex sources of irritation. When there is no cerebral hæmorrhage and no true organic disease of the brain, and in cases of strumous meningitis or inflammation of the membranes of the brain—an affection which in some part of its course is pretty sure to be attended by convulsions—we have the antecedent history to guide us. In those instances where cerebral hæmorrhage takes place from exposure to the sun, we have the fact of the exposure and the suddenness of the attack almost diagnostic. Then, absence of teething, and of the history of acute hydrocephalus, is also valuable as further evidence. In strumous meningitis there is, generally, preliminary and persistent vomiting; the bowels are either confined or very much relaxed for some time previously to the attack; the child has headache, grows fretful and impatient; the fontanelle, if open, is prominent and throbbing, and the vessels of the conjunctivæ and scalp are probably notably congested. There is in most instances, indeed, though not in all, a gradual development of the symptoms, convulsions being among the latter phenomena. In the case before us there were no such symptoms; but there were indications of previous

cachexia, with spontaneous extravasations of blood in the form of purpuric spots over the surface of the body; and the sudden supervention of convulsions, without previous signs of brain-mischief, pointed clearly to the inference, that, just as blood had previously escaped into the meshes of the skin, so now it has been in greater or less quantity poured out on the surface of the brain.

In treating this child, the all-important indications from the first were, so to improve its general health and effect those salutary changes in the composition of its blood, that the tendency to purpuric extravasation should be removed. With this view it was warmly clad, well and carefully nourished, and full doses of sulphate of perchloride of iron were given; these preparations, besides being powerful tonics, having also the character of being styptic remedies. The addition of lemon-juice did not seem to have any marked effect on the blood-spots. When cerebral hæmorrhage was believed to have taken place, there was not much to be done beyond keeping the head cool, the bowels open, and the giving of such food and stimulant as could be swallowed.

When a child, otherwise healthy, and whose pulse is full and bounding, is stricken with symptoms which you believe to be due to cerebral hæmorrhage, you need have no hesitation about employing a few leeches to the scalp, and applying ice to the head. In children reduced by previous illness, or rendered cachectic, as in Gingall's case, great care must be exercised that more strength is not expended by bleeding, and that further depression is not produced by too great cold. Rather we must endeavour to keep the circulation quiet by less potent measures, and support the strength by food and stimulants in such a way that, while no fresh and strong impulse is given to the circulation in the direction of the points where blood has escaped, we may yet give the little patient a chance of rallying, if it escape the immediate effect of the shock which has in the meantime overwhelmed it.

CASE OF POISONING BY VERMIN-POWDER CONTAINING STRYCHNIA.

By FREDERICK T. ROBERTS, M.D., B.Sc.,
Assistant-Physician to University College Hospital.

I WAS hastily summoned on Monday afternoon, November 13th, to the University Hotel, where a man had been found dead in bed. He had been staying there about a week, living very irregularly; and had come in on the previous evening about half-past eleven, and immediately retired to bed. It was his custom not to get up until late; but, as he had not appeared by 2.30 P.M., the waiter went to call him, and discovered that he was dead.

When I saw the body, I noted the following appearances and conditions. It was that of a well-made muscular man, rather stout, and apparently about thirty-five years of age. He was lying on his back, with a perfectly calm expression of face, the lips being slightly apart, the chest partly exposed, and the hands clutching the bedclothes, which, however, were tucked in, and scarcely at all disturbed. The trunk was still warm, but the extremities and face were quite cold. There was universal and marked rigidity, the limbs being quite straight—the condition, in fact, being just that produced by a strong rigor mortis. Some evidences of congestion were observed in dependent parts; but the face and uppermost parts of the limbs and trunk exhibited no discoloration. The pillow presented a patch as if of dried perspiration, where the head lay, and for some distance around it. There were no signs of any vomiting. On searching the room, I found a tumbler on the washing-stand containing a little moist sediment, of a bluish-green colour; and a slight white crystalline-looking film could be seen lining its upper part. In the fire-grate were some envelopes, marked “vermin-killer” and “muricidane”, but containing nothing. There were, however, with these some pieces of newspaper, in which was a light blue powder. Nothing else was discovered, except plenty of evidence that the man had been in distress. Of course I took the glass and papers away with me, and immediately sealed them up.

A *post mortem* examination was made on Wednesday, November 15th. The body was much decomposed, but rigor mortis still existed in the legs and hands. *Post mortem* congestion was very marked. The muscles were dark and well nourished. On opening the head, the veins and sinuses were seen to be overloaded with fluid blood; and the brain itself was congested, with some excess of sanguineous serum in the ventricles, evidently *post mortem*. The lungs were much congested posteriorly, but otherwise healthy. The heart was flaccid and flabby, its right cavities containing a very little fluid blood. The blood generally showed no tendency to coagulate. The stomach contained about

two ounces of a thick brown liquid, and two or three small fragments of meat and potato, with no particular odour. The contents were removed, and sealed up in a bottle. The stomach and intestinal mucous membrane appeared very pale, and gave no evidence of any irritation. The other organs were simply congested.

An inquest was held, and adjourned, in order that a chemical analysis might be made, as it was impossible to give any opinion as to the cause of death from what had been observed. Professor Barff, of the Royal Academy and University College, performed the analysis, and subjoined are the notes, furnished by himself, of the processes he made use of, and their results.

“The residue in the tumbler was treated with hydrochloric acid, filtered, and the filtrate submitted to the action of sulphuric acid and bichromate of potash. The colour-reaction for strychnine was immediately produced. When tasted, the filtrate was intensely bitter; and a portion of it produced tetanic convulsions in a frog after two minutes, and caused death in less than five minutes. Emprostotonos was well marked, the back being arched upwards, and the frog resting on his toes and mouth. Relaxation took place before death. Half the contents of the stomach were submitted, after acidulation with hydrochloric acid, to dialysis. The liquid outside the dialyser was evaporated, and gave indications of the presence of strychnine with the colour-test. The other half was divided into two parts, one being treated by Stas's method; the other by my own, which consists in warming over a water-bath for about an hour with dilute hydrochloric acid; then filtering, and shaking up the filtrate with alcohol, and saturating with normal carbonate of potash. The alcohol containing the alkaloid floats to the top, and is drawn off with a pipette. After evaporation, the colour-tests were applied, and the results were obtained much more distinctly than by Stas's process. From experience I can state that the use of tartaric acid to dissolve the alkaloid out of the organic mass is very objectionable, as, at the temperature of 100 deg. C., that acid is, in the presence of the substances contained in the stomach, decomposed, and forms caramel, easily detected by its smell. I should mention that, in performing the reaction with alcohol and potassic carbonate, the mixture should be warmed for a time in a water-bath; and time should be allowed—say three or four hours—for the solid matters to settle out of the alcoholic solution. There were three papers, containing a light blue powder; and in one of these ample evidence of the presence of strychnine was obtained. The other two, however, did not contain any.”

REMARKS.—It has appeared to me desirable to publish this case, more on account of its medico-legal interest than anything else. There is not the least doubt that death resulted from poisoning by strychnia, as this was discovered in the tumbler in abundant quantity, also in the stomach-contents, and in one of the powders; while the *post mortem* examination revealed nothing in any of the organs that could account for sudden death. Nor was there any reason to suspect otherwise than that the man had taken it himself. Had there been any suspicion of foul play, there were some points about the case which might have given rise to a difficulty. First, it might have been a question whether it were possible for a man to endure the severe pains which attend the tetanic spasms of strychnia-poisoning without making some disturbance and seeking for help; secondly, whether these could have occurred without producing more displacement of the bedclothes, etc. That such may be the case, is proved by this instance; and the probable explanation is, that he took a large dose, which, owing to the empty state of the stomach, was rapidly absorbed, and led to a correspondingly rapid death, so that his sufferings were of short duration. It is to be noted, also, that the expression of the face was quite calm; and that there was no distortion of the body, which, however, was extremely rigid. This, of course, was due to the relaxation of the muscles, which occurs soon after death in cases of strychnia-poisoning, and the subsequent speedy setting in of rigor mortis. A congested appearance is stated to be present in various parts—in these cases, the result of the spasms; but I only observed it in dependent parts, and it appeared to me to be merely *post mortem*, which had come on rather rapidly, owing to the fluid condition of the blood. The patch of dried perspiration on the pillow was of some importance, as there is free sweating in connexion with the spasms caused by strychnia. The *post mortem* examination revealed nothing more than the absence of any organic lesions, or signs of irritant poisoning; with a somewhat congested state of the organs generally, and a fluid state of the blood; the heart, however, being nearly empty and flaccid.

I would call special attention to the observations of Professor Barff on the analysis of the contents of the stomach, as this gentleman has devoted himself particularly to this subject.

CASE OF FÆCAL ACCUMULATION (NOTWITHSTANDING DAILY EVACUATION), CAUSING VIOLENT NEURALGIA IN RIGHT LOIN.*

By C. J. GIBB, M.D.,

Consulting-Surgeon to the Newcastle Infirmary.

ABOUT a month ago, a gentleman living in the country requested me to visit his wife, a very healthy middle-aged lady, who had been seized suddenly, three days before, with severe pain in the right loin as she sat at dinner. The pain lasted through the greater part of the night, and left her quite well, as, indeed, she had always been for years before. It recurred, and left again as suddenly, on three other occasions during the two succeeding days; and on the last occasion, the night preceding my visit, it had continued during the whole night in a very excruciating form, without relief from the hot applications and mustard poultices which had previously given her relief.

I found her in bed, to all appearance quite well, as the pain had left her a few hours before. There was no constitutional disturbance. Her tongue was clean, and pulse 68. The pain had been most acutely felt to the right side of the backbone at the last rib, and had shot about from there down the lumbar muscles to the crest of the ilium. It had been of a dull, aching, sickening character, with occasional paroxysms of a more acute lancinating kind. The skin was blistered of a scarlet redness by mustard, the mustard having remained upon the skin for some hours without her even feeling its presence, so acute had been the internal pain. Firm pressure detected under the rib a slight tenderness; but in all other respects the region in which the pain had existed was to all appearance quite normal. The urine was pale, and had passed freely; and, concluding that the kidney could not therefore be the source of the pain, I requested permission to examine the abdomen. There I found slight tympanitic distension, extending from the right iliac bone and groin below to the umbilicus above; but no heat, nor any tenderness or uneasiness on pressure. Indeed, she was not aware that there was anything unnatural the matter with her in the tympanitic region. Questioned as to the condition of her bowels, she stated that they were quite natural; that, although she had taken two opening pills every night since her illness commenced, she had only had the one usual daily morning evacuation which she had been accustomed to have all her life; indeed, that she never required to take the least medicine, as her bowels always acted after breakfast, and the pills had made no difference. That morning's motion had been removed, but was reported to have been healthy. In answer to the inquiry of the husband, I said the cause of the pain appeared to me to be obscure. From its intermittent character, it must be a form of neuralgia, as there was no evidence of the least inflammation; and, although there was no irregularity of the bowels, there was probably some irritation of the head of the colon, from the tympanitic distension that existed there; and the pain in the lumbar nerves might arise from it. I ordered her to remain in bed; to continue the warm poultices; to take two more aperient pills; and, in the absence of castor-oil, to secure free evacuation by Seidlitz powders or an enema, if necessary.

On the following morning, I found that the pain had twice recurred for two or three hours together. There had been two slight motions, loose, but not watery, which, contrary to order, had been removed. In other respects she was the same. She was ordered again to take the pills, and follow them up with castor-oil.

The next morning—the fifth of the attack—she had again been exceedingly ill with the pain for many hours. The oil had caused sickness, and repeated vomiting of a bitter yellow bilious fluid had followed. The skin was cold; and the pulse rather weak, but otherwise natural. There was no tenderness of the abdomen, and the slight tympanitic distension remained about the same. She had taken six pills, and used a soap-and-water enema. The enema had brought away about half a pint of loose dark chocolate-looking faecal matter, with a few small hard pieces intermixed, the whole having a most pungent and foul putrid smell. She was ordered a calomel purge, to be followed by repeated enemata, champagne, and effervescing drinks; and opium to secure her sleep, if the pain should recur at night.

On the sixth morning she was, on the whole, somewhat better. The vomiting had only recurred two or three times; the pain twice severely. One grain of opium, thrice repeated, had secured her some sleep during the night. The tympanitic state of the right iliac region remained; and she had passed nearly a chamber-potful of the same foul dark knotty motions. She was ordered to repeat the castor-oil and enemata, and again to use the opium at night, if necessary; all food

to continue liquid; and the warm applications to be repeatedly applied.

On the seventh day, she was greatly relieved. There had been no sickness; and, although the pain had slightly recurred during the previous afternoon, and again during the night, two grains of opium had given speedy relief. The bowels had been frequently moved; and there was a chamber-potful of the same dark offensive-smelling liquid, but no formed pieces. The tympanitic distension was sensibly less. She was ordered a couple of aloetic pills at night, a Seidlitz powder in the morning, and liquid food.

On the eighth day, she was rather weak, but otherwise well. There had been no return of the pain—only some slight uneasiness the previous afternoon, quickly relieved by a poultice. The tympanitic distension was quite gone; and the watery motion, which had followed the Seidlitz powder taken in the morning, had quite lost all that pungent putrid odour of the preceding days, and was of the ordinary yellow straw-colour that ensues after repeated loose motions. She was now told to consider herself well, and gradually to return to her ordinary diet, etc. Some pills of aloes and nux vomica were ordered to be taken every other night for a week or two; and she was enjoined for the next few months to take care to secure free relief from the bowels at least once a week by some gentle aperient medicine.

It is curious in this case that the collection of faecal matters should become putrid and set up the irritation and pain, without any noticeable change of health or constipation of the bowels. It is singular, likewise, that violent relapsing neuralgic pain in the loin should have been the only perceptible symptom for the first few days. No doubt the pain was a colic pain of the colon, reflected into the loins. At any rate, it continued as long as the colon was required to contract on the putrid faecal mass, and disappeared at once as soon as the straw-coloured evacuations proved the colon to have completely emptied itself of the irritant matter.

A NOTE ON THE USE OF ALCOHOL IN HEALTH AND DISEASE.

By J. W. EASTWOOD, M.D. Edin., M.R.C.P. Lond., Dinsdale Park Retreat, Darlington.

To those who, like myself, have been trying for years to oppose the indiscriminate use of alcohol medicinally and dietetically, it is very gratifying to find that many influential medical men have been induced to adopt views similar to those which I have long advocated. It has been very discouraging to the few to find how lukewarm the profession has been on this subject, and this I can say from long personal experience. In August 1870, I read a paper on "Intemperance in its Medical and Social Aspects" at the annual meeting of the Association at Newcastle, which was printed in the JOURNAL for January 28th, 1871, and I endeavoured to obtain a committee to inquire into the value of alcohol as a medicine and an article of diet. I did not succeed in this, though Dr. Rumsey, Dr. A. P. Stewart, Dr. Morgan, Dr. Ransome, and others were willing to take part in such an inquiry. At the Plymouth meeting I had promised another paper on the subject, but was prevented from attending. This was the less to be regretted, as Dr. Rumsey would not be present, and Mr. Dalrymple, M.P. was in America. Dr. A. P. Stewart made some useful remarks on the question in his address at the Public Medicine Section. I hope at the next meeting at Birmingham more good will be done, and a large number of those interested in so important a subject will be brought together. I have already prepared a general statement of the question, with numerous facts from our hospital and asylum reports, to show how widely different is the practice of the leading medical men in the use of alcohol; and I shall be glad of any information which will assist the object in view. Until a majority of the profession take up the matter, we cannot expect to see any alteration in public opinion; and I quote a paragraph from the paper alluded to, as to the scope of an inquiry such as I propose. "The subject of intemperance should be fully examined in a scientific and humanitarian spirit, and the public should be taught, on medical authority, what is the true position of alcoholics in relation to health and disease."

I can only repeat that, in my opinion, total abstinence has failed in producing any considerable amount of good, which has been confined to individual instances. Unless the profession act in the matter, the public will be beforehand with us, and compel us to do something more than what isolated individuals are capable of performing. It is desirable that copies of the declaration already made be sent to every member of the profession for signature, and I will willingly commence a subscription for the purpose by contributing a guinea. I shall also be glad to be at any trouble in collecting a suitable fund.

* Communicated to the Northumberland and Durham Medical Society.

CLINICAL MEMORANDA.

COMPLETE AMAUROSIS AFTER CONVULSIONS
OCCURRING DURING BRONCHITIS.

SARAH ANN H., aged 3 years, rather plethoric, and suffering from slight bronchitis, was seized on October 27th last with severe convulsions. Upon my arrival, I found her lying apparently dead, there being no pulse, and no impulse of the heart perceptible, nor respiration. I immediately adopted Silvester's method of resuscitating asphyxiated persons; and, after some time, succeeded in restoring her. When consciousness returned, she was found to have slight paralysis of the right arm, and total loss of vision. There were no other signs of pressure. The use of the arm was regained in a few days; but the amaurosis remained complete and without any improvement until December 3rd, when it was perceived for the first time that the child noticed the light of the gas. Since that date, vision has been gradually increasing. No alteration was made for the first week in the treatment, which was directed to the chest-symptoms. As soon as these subsided, she was placed under a course of solution of bichloride of mercury, iodide of potassium, and tincture of nux vomica in small doses, with repeated small blisters behind the ears. On December 16th, the pupils continued rather dilated; they were equal, and acted feebly under strong light, as from the first; but she could now discern any object placed near her.

E. BUCKNILL, M.D.

Rawtenstall, Manchester, December 22nd, 1871.

OBSTETRIC MEMORANDA.

EARLY RUPTURE OF THE MEMBRANES.

ALL men engaged in obstetric practice must have observed cases similar to those reported by Mr. S. M. Bradley and Mr. E. Norton, where the membranes have ruptured some long time before the full period of utero-gestation. It has occurred to me that one explanation of them may be an alteration in the normal axis of the gravid uterus—it being more nearly vertical than horizontal in the upright position of the body. The uterus makes with the horizon an angle of about 30 degrees. If this be altered during pregnancy from any cause—*e.g.*, increased resistance offered by the abdominal parietes—then the lower part of the organ (to quote Dr. J. M. Duncan), “the part least supported, and perforated by the os, would be liable to be subjected to the pressure of a column of liquor amnii of about twelve inches in height, or equal to the longest diameter of the uterus. By inclining the organ from the vertical position, the vertical height of the column of water is diminished, and with it the amount of the fluid pressure on every part of the walls of the uterus”.

THOMAS SAVAGE, M.D., F.R.C.S.,

Surgeon to the Birmingham Hospital for Women, and
to the Birmingham Lying-in Charity.

PARALYSIS DURING PREGNANCY.

DR. MADGE will find in the *Obstetrical Transactions* for 1867, p. 12, a case which I reported, peculiarly like that appearing in the *JOURNAL* for December 16th. In my case, Dr. Eastlake and I were able to satisfy ourselves by means of auscultation that pregnancy existed; and I would suggest that, in all cases of doubt, the stethoscope should be used in search of a foetal heart.

The opinions of Dr. Radcliffe in Dr. Madge's case, and of Dr. Sieveking in mine, are peculiarly coincident; and the similarity between the cases holds in many other respects. My patient was a Mrs. S., aged 38, stout and robust. There was never any albumen in the urine. She was delivered of a dead child, and perfectly recovered *without any galvanism*.

These cases are rare, interesting, and not thoroughly understood. We require more light on the subject; and nothing can so well clear up such difficulties as publication and comparison of cases. It seems pretty certain that albuminuria is not a *distinguishing* feature, as Dr. Churchill supposed. It is probable that the strychnine in my case, and the ergot in Dr. Madge's, was the cause of the death of the foetus *in utero* and premature delivery. I consider that these are cases of reflex paralysis, the irritation extending from the uterus to the nervous centre; and that the recovery of the patient is due to removal of the exciting cause by delivery in most cases, while in a few relief or modification has been obtained by treatment, or could be accounted for in other ways.

PERCY BOULTON, M.D.

Seymour Street, December 17th, 1871.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN
THE HOSPITALS OF GREAT BRITAIN.REPORT ON THE TREATMENT OF SCROFULOUS
ABSCESS OF THE CERVICAL GLANDS.

[Continued from page 728 of number for Dec. 23rd.]

THE LONDON HOSPITAL.

Mr. MAUNDER says that the indications are twofold, general and local. The general are, to improve the health by every means—change of air, liberal diet, and tonic medicines, cod-liver oil and the syrup of the iodide of iron being especial favourites. The local indications are, to prevent burrowing of pus and destruction of a large extent of skin, and consequent exhausting suppuration and ugly scarring. The abscesses should, therefore, be opened early with a fine knife; and, if the discharge be tolerably healthy, the walls of the cavities should be carefully kept in apposition by means of compresses and strapping around but not over the aperture. In this way reaccumulation of secretion is prevented, and healing by granulation is encouraged. Should the contents of the abscess be very unhealthy, the cavities should be stimulated to wholesome secretion for a few days by the injection of an iodine lotion—half an ounce of the compound tincture of iodine in eight ounces of water; and then compresses, as above explained, are to be used. Occasionally an exposed gland must be removed, either by enucleation or evulsion with the finger, or potassa fusa may be applied. Should the abscesses coalesce and degenerate into obstinate sinuses, they should be slit up; and the thinned skin on either side of the incision must often be cut away with scissors, to prevent the further formation of sinus. If this latter operation be resorted to, an open wound, almost level with the integumental surface, is formed, and, with care, can be induced to heal from its margins. Persons liable to swelling of the cervical glands should always keep the neck protected from currents of air. Mr. Maunder thinks that exposure of the neck to a variable temperature is a fruitful source of glandular swellings. Poultices should rarely be used.

In cases such as those which are ordinarily seen in hospital practice, Mr. JAMES E. ADAMS says that glandular abscesses in strumous subjects pursue most widely different courses in different subjects; and even the same patient may present them in various conditions at different times. Those which resemble in their course ordinary abscesses, by quickly attaining considerable size, and producing thinning and reddening of the skin, and being painful, require early and free incision; and, if the integuments be in the condition above mentioned, our knife-wound makes no worse a scar than the natural destruction of tissue would if the abscess were left. In other cases, we meet with considerable-sized collections of pus, commencing in the interior of glands, covered with thin but otherwise normal skin, very chronic and painless. In these, Mr. Adams has adopted the plan suggested by a recent writer, of emptying the cavity through a small puncture, and applying pressure. It often requires repetition, but in some cases produces a very favourable result as regards the scar. Those which are small in size, painless, thick-walled, and deeply seated, he generally leaves; and, under favourable conditions, they diminish in bulk, and occasionally disappear altogether. In all cases, he believes benefit is to be derived from the use of some one of the preparations of iron, cod-liver oil, and prolonged residence at the seaside; sea-air being almost an essential for those cases in which unhealthy sinuses or ulcers have followed the opening or breaking of the abscess.

WESTMINSTER HOSPITAL.

The principle at which Mr. HOLTHOUSE always aims is to prevent a breach of surface, either by the spontaneous breaking of the abscesses or by the knife of the surgeon. The few cases which have come under his observation in hospital in-patients have been in connexion with extensive scrofulous ulceration of the skin consequent on the breaking of these abscesses; and his treatment has been directed to stop the further destruction of skin, to heal the ulceration, and to “disperse” such abscesses as may not already have broken. With this view, Mr. Holthouse usually prescribes from five to ten minims of the tincture of the perchloride of iron in half an ounce of water, with the same quantity (half an ounce) of cod-liver oil floating on it, three times a day; and the patient has the full diet of the hospital, with half a pint or a pint of porter daily, if not contraindicated. Unless the skin be *much* discoloured over the abscesses, he leaves them alone, and has often been gratified in

watching the gradual return of the skin to its natural hue, even in cases where at first sight it seemed almost beyond recovery; the final absorption of the contents of the abscess usually follows. If an abscess remain stationary, and it appear doubtful whether it will advance or recede, he poultices it with linseed-meal, which either acts as a discutient or hastens the progress of the matter towards the surface. If an abscess slowly enlarge in spite of treatment, and its eventual bursting seem certain, he opens it before the skin has become much discoloured, presses out the contents, and seals the wound hermetically; the fluid frequently re-collects, and requires again letting out; but with care there will be no loss of skin and scarcely an appreciable cicatrix. The ulceration which is left after much destruction of skin, Mr. Holthouse has seen rapidly heal under the iodide of lead ointment as a local application, and the internal exhibition of the remedies before pointed out.

The treatment of all scrofulous affections must be first of all constitutional. As it would be a mockery to prescribe good air, nutritious food, cleanliness, agreeable exercise, etc., to the class of patients who frequent our London hospitals, we must entirely fall back in their case on those therapeutical agents, half medicinal, half alimentary, that it is in our power to dispense—cod-liver oil and steel. Of cod-liver oil, Mr. THOMAS COOKE gives one ounce three times a day to an adult. Steel he gives, not in the astringent form of tincture of perchloride of iron, but in the very soluble and non-astringent forms of potassio-tartrate of iron, or citrate of iron and ammonia, which can be given in much higher doses without creating constipation. Fifteen grains of either of the above chalybeate salts, with fifteen minims of chloric ether to an ounce of water, form a most delicious mixture, which he gives the adults in ounce doses three times a day, with admirable results. Respecting local treatment, if he have to deal with a chronic abscess the integument covering which is still healthy, or with a more acute variety still in its incipient stage, he tries to avoid both the drain upon the system which is incurred by a suppurating sore, and the ugly cicatrix resulting therefrom. To this effect he covers the part with emplastrum ammoniaci cum hydrargyro, which he renews every three or four days. This application, which is very similar to "emplatre de Vigo cum mercurio", much used in France, he finds more effectual than iodine paint. If resorption do not take place, or if from the first the integument be thinned and livid, and the abscess on the point of bursting, he opens it largely, as much as possible in the direction of the folds of the neck. He then fills the cavity of the abscess, and covers the parts superficially with lint or tow dipped in a lotion composed of half methylated spirits and half water. He covers the whole with a piece of gutta-percha tissue, applies a bandage, and orders the dressing to be renewed morning and evening. He always obtains by this means a rapid union and a linear cicatrix.

CHARING CROSS HOSPITAL.

With regard to the treatment of scrofulous abscess of the glands of the neck, Mr. BELLAMY thinks that the first thing to be done is to endeavour to improve the patient's health by the administration of cod-liver oil and iron, either alone or combined with iodine, as in the syrup of iodide of iron, if there be considerable anæmia. The local application of iodine paint appears to be in these cases of very little use. When pus has formed, the abscesses should be opened by a free incision; and when they are indolent, stimulating injections of iodine, or zinc, or copper lotions are frequently of service. Sea-air and sea-bathing are as beneficial as anything.

Mr. FAIRLIE CLARKE points out that the first thing is to place the patient in favourable hygienic conditions—to see that he is well clothed, and that his diet is plain but nutritious, and taken at regular hours. The next thing is to prescribe those remedies which are of use in such cases, e.g., cod-liver oil or the syrup of the iodide of iron. As local applications it will probably be necessary "to ring the changes" upon various stimulating and antiseptic lotions, such as sulphurous acid or weak carbolic acid lotions. Mr. Fairlie Clarke has lately been trying a lotion composed of ten grains of common salt and five grains of nitrate of potass, added to a pint of water; and he finds that it acts as an excellent antiseptic, checking suppuration, but promoting granulation and cicatrization. But, whatever lotion is used, it ought to be brought thoroughly into contact with the whole surface of the abscess. If the disease take the form of a sinus, the surgeon should bear in mind Mr. Hilton's admirable remarks in his lectures on *Pain and Rest*, and endeavour to give the part physiological and mechanical repose by studying its position, and, if need be, keeping it still by means of a pad and bandage. In this way, the surfaces will be most likely to unite, and there will be no strain upon the young and tender tissues.

THE HOSPITAL FOR SICK CHILDREN.

Mr. WARRINGTON HAWARD points out that, in considering the treatment of scrofulous glandular abscess of the neck, it is necessary to

remember that a great many of the cases of inflammation and abscess of the glands of the neck have nothing to do with scrofula, although the epithet "scrofulous" is frequently applied to them. The majority of such, among the poorer classes, are due to sores upon the head, which are often overlooked, or thought by the patient of secondary importance to the glandular swellings; and even among the upper classes, eczema and other eruptions on the scalp are a frequent cause. But when the affection is really scrofulous, and there is a general vulnerability of the lymphatic system, the inflammation is slow, though pertinacious, and the result is more often a caseous degeneration of the cells of the alveoli of the gland than the formation of ordinary pus. When, however, the latter forms, or the caseous material softens and liquefies, a very small puncture should be made in the skin, and the contents of the abscess gently squeezed out, pressure being made by a pad of lint on each side of the opening. The puncture may require to be occasionally reopened with a probe; but by this means, adopted early, the integrity of the skin is preserved, and the unsightly scars and puckerings often seen in such cases are prevented. The health should be at the same time improved by cod-liver oil, iron, and sea-bathing, the general treatment being quite as important as the local. While the glands are only swollen and tender, and before suppuration has taken place, they should be left alone, or merely covered with cotton wool. Mr. Haward has no doubt that poulticing and painting with iodine only do harm.

ABERDEEN ROYAL INFIRMARY.

In treating scrofulous abscess of the glands of the neck, Dr. A. OGSTON has lately obtained most satisfactory results from repeatedly drawing off the pus by small cannulæ. As soon as fluctuation is evident, a minute trocar is introduced, and the abscess is emptied as completely as possible through the cannula. The cannula is then withdrawn, and the wound heals at once. This proceeding is repeated as soon as the matter has re-collected; the abscess is again emptied, and every time it refills the same steps are had recourse to, before the fluid collects to such an extent as to cause tension. It has usually to be repeated many times, but eventually the fluid becomes rather watery than purulent, and at length ceases to be formed. Abscesses treated in this way can be readily cured without scar or deformity; and, even when their site is very superficial, and they burst during the treatment, the small opening they give rise to heals without a scar—a temporary discoloration of the skin remaining for a few months, and then entirely vanishing. When such a superficial abscess threatens to point, Dr. Ogston is in the habit of opening it with a minute lance-shaped needle, about one *millimètre* in breadth. The pus is squeezed out, and the little wound heals by first intention. He finds that the treatment by collodion invariably fails. In cases of open scrofulous glandular sores of the neck, with undermined edges or hypergranulation, he finds cauterisation with potassa fusa furnish the best results—the elevated white scar produced being a smaller deformity than the depressed natural cicatrix or the scars of other escharotics.

GLASGOW ROYAL INFIRMARY.

Dr. MORTON follows the following method of treatment. When all attempts to prevent suppuration have failed, and when it is fully established, it is his practice to open the abscess thoroughly with the knife, in such a direction that the natural folds of the skin may cover or obscure the slight scar left, preferring, when it corresponds with this, the long diameter of the abscess. He then uses a tent of lint dipped in camphorated oil, and covers the part with an oil- or water-dressing. The use of the tent is not continued after the first or second dressing. This plan promotes rapid healing, with less scar than we usually see. Such is Dr. Morton's experience in both hospital and private practice. He has used the liquor epispasticus of the *Pharmacopœia*, applied by a camel's hair-pencil to the interior of the abscess; but he never uses caustics. The latter, in Dr. Morton's opinion, tend to increase the size of the scar or cicatrix; and in several instances, chiefly in private practice, he has excised a dark stain, produced by the use of nitrate of silver, and with the most satisfactory results. Probably excision of unsightly scars might be more frequently performed, and with benefit, upon the necks of fair patients.

GREAT NORTHERN HOSPITAL.

AMPUTATION AT THE HIP-JOINT.

AMPUTATION at the hip was performed by Mr. Carr Jackson at this hospital, on December 13th, on a man aged 20. The patient appears likely to do well. The case is one of interest, and we shall report it at greater length. Mr. Jackson had, many months previously, excised the head of the femur, but augured unfavourably of the result, on

account of the soft and diseased state of the bone at the point of section; and so sinus after sinus formed, and the only alternative lay in removing the limb. The large surface of the wound was washed over with pure sulphurous acid, and the resulting suppuration has been very slight.

BRITISH MEDICAL JOURNAL.

SATURDAY, DECEMBER 30TH, 1871.

THE following appeared in our second edition last week, and in 4000 copies of our first edition.

Friday, 8 P.M.

The character of the symptoms attending the convalescence of His Royal Highness the Prince of Wales was, up till yesterday afternoon, such as to warrant the best founded and most sanguine anticipations. At that time we were able to state that "the defervescence is complete; there are no visceral troubles, and the Prince is regaining strength". During the night, however, and in the course of to-day, it was stated in a Windsor telegram that there was an increase of fever, and that there was great anxiety as to the Prince's condition. From inquiries which we have made in the most authentic quarters, we are glad to learn that the report is unfounded—that the Prince at a late hour this (Friday) evening was better than hitherto, and that there is no increase of fever. The convalescence from typhoid fever is always a process of tedious character and never without anxiety; and we can but express our great satisfaction—which we feel sure will be universally shared—that the Prince is continuing to do well, and that his symptoms still give promise of a happy and uncomplicated recovery.

THE HEALTH OF THE PRINCE OF WALES.

THE *sequelæ* of typhoid fever are numerous, and it is comparatively rare that a patient who has passed through a severe attack of the fever altogether escapes some kind of local trouble after emerging from the fever. These are not, of course, essential characters of the fever, or connected with its process; from all grave complications of that kind the Prince has happily escaped, and he is passing through the stage of convalescence under favourable general conditions. As he has providentially escaped all organic visceral lesion, we need not conjure up the long list of ills which sometimes impede recovery after typhoid fever. That which is now a source of trouble to the Prince belongs to the class of local and superficial sequelæ of the fever, which in the experience of surgeons are very common—more common, perhaps, than even experienced physicians suspect, or than some of the best textbooks would lead us to suppose. At the close of last week, the Prince began to suffer from a somewhat variable, but at intervals a very severe, pain over the upper edge of the hip-bone—the posterior part of the crest of the ilium. Such tenderness might, it was then thought, arise from the pressure of long recumbency—although, thanks to careful nursing, there has been a remarkable absence of trouble on this score, and there has not been any bed-sore—or it might be due to a local periostitis, or the inflammation precursory to the formation of a superficial abscess. On Sunday, Sir James Paget was in attendance at Sandringham. There was not then any proof of more than the local tenderness, which might well be merely indicative of pressure and local nerve-disorder. The pain, however, has persisted, and the symptoms are now indicative of a local inflammation of the structures over part of the hip-bone, such as is not uncommon after typhoid fever. With this there has been an access of

feverishness and some disturbance of rest, such as this local trouble readily explains. Sir James Paget has been called again to Sandringham to enter into the counsels of the Prince's physicians, and it is probable that his stay will be prolonged for some days. There is nothing in the Prince's condition to create alarm.

SHOULD HOSPITALS TAKE PAYMENT?

AT the present time, when our Association is doing much, and successfully, to introduce reforms and to impress the public mind with the necessity of remedying abuses in the out-patient department of hospitals, it is well that every fact should be weighed, that every claim should be considered, and that we should make up our minds fully not only as to the class which it is our desire to relieve, but also as to the principles upon which admission should be granted.

The main abuse which is at present complained of, is that many persons resort to our hospitals who are well able to pay something for medical advice. Those who are above the level of charity are doing an injustice to themselves and to medical practitioners, by suffering themselves to join the great and growing mass of charity-seekers. Now there is at some few hospitals a system which may be thought in some degree to remedy this abuse; and it is this to which we desire to-day to draw the attention of our readers. By the system to which we allude, the patient contributes something to the funds of the hospital, and thus it is supposed that he no longer abuses the charity. At some hospitals admission may be obtained by shilling or halfcrown tickets, which are available for a month or more; at others a weekly payment is exacted for medicines; at others, again, a body of workmen club together and constitute themselves governors of the hospital. These are some of the ways in which it is sought to make the applicants pay something for their medical treatment. But are these plans wise or just? Is it wise that the hospital should thus undertake to sell advice and medicine? Is it just towards the profession that any section of the public should be taught to believe that they can purchase skilled treatment by the payment of half-a-crown, which, according to Dr. Guy's statistics, is just about what the medicine alone costs per case?

The view of the free hospital or dispensary to which we incline is, that it should be purely charitable; that it should take nothing from those whom it relieves; but that its relief should be restricted to such persons as are fit objects for charity. We take it for granted that, if an applicant be in a position to be able to pay a general practitioner, he will be rejected altogether; but if, on the other hand, he can only afford a small payment, still such payment ought to be made to a medical man through the provident dispensary or sick club. The money which is expended on the purchase of tickets is not given from charitable motives, but is paid for value received, and that value consists chiefly in professional advice, the cost of the medicines being comparatively insignificant. When such money is added to the general income of the hospital, we may fairly consider that it is taken out of the pockets of medical men, and that, so far, an injustice is done to our profession. If a hospital see sufficient reason for making provision for a grade of patients who are above the level of charity, it ought to be done by the formation of a provident department, as at Devonport. Perhaps it is more desirable that the provident dispensary should be affiliated to the hospital, than that it should form an integral part of the charity. It is thus most likely to become ultimately self-supporting. But in either case the principle followed out is the same—*i.e.*, a large number of persons form themselves into a sort of mutual assurance society, and, by small but regular payments, make provision against a time of sickness: and inasmuch as their payments are made on a commercial footing, and not from any motives of charity, the money subscribed, after deducting 20 or 25 per cent for drugs and working expenses, is divided among the medical men with whom the contract is formed.

It would appear, therefore, that the system of admission to hospitals by payment is open to various objections. In the first place, persons of the middle class, who could well afford to pay the small fees of a

local practitioner, think that they are perfectly justified in availing themselves of the hospital. In proof of this, we may mention that we have repeatedly known persons to travel long distances and incur heavy expenses, and then, instead of consulting a physician or surgeon privately, take advantage of these shilling tickets to obtain first-class advice. Secondly, the scale of professional remuneration is lowered; for, if the applicant have obtained for a shilling a month's skilled attendance and medicine, it is not very probable that he will afterwards be content to pay a general practitioner even five shillings a visit. It thus becomes evident that money so paid to the hospital is in reality subtracted from the income of medical men; added to which we may say that, though advice thus obtained is not entirely gratuitous, and therefore does not tend directly to pauperise the middle classes, yet it cannot fail to diminish their independence, as it leads them to expect money's worth for less than money's value, while it does not foster those habits of forethought and self-reliance which it is so desirable to encourage. We call attention to the proposed further action of the Metropolitan Counties Branch upon this whole subject, to which we invite the most earnest attention of the profession.

CERTIFICATION OF MIDWIVES.

THE attention of the Council of the Obstetrical Society has been directed to the extreme ignorance prevalent amongst women who practise as midwives, and a committee of the Council has had the subject under prolonged consideration. The result has been a report to the Council, recommending the establishment of a Board of Examiners, for the purpose of examining such women as may choose to present themselves, and granting to them a certificate of competency to attend natural labours. The scheme is embodied in the proposed additions to the Bye-laws and Regulations. The Council recommend it for adoption, feeling sure that it will prove a boon both to patients and to practitioners, since it is only the ignorant and uninstructed midwife who is rash enough to undertake the sole charge of cases in which the advice and assistance of the regularly qualified practitioner ought to be sought. We entirely concur in this course, which is, indeed, the fulfilment of a suggestion which we have repeatedly made, and which has been urged from other sources. We have reason to know that the Government would not be averse to giving official sanction to some such scheme, if this were thought desirable; but a tentative process may be most advisable in the first instance.

Plan for the Examination of Midwives recommended by the Council for the adoption of the Society.

BYE-LAWS—CHAPTER XVI.

I. That an Examining Board be formed, consisting of six members; viz., a chairman, three ordinary members, and the honorary secretaries (*ex officio*). (The two non-official members of the Board longest in office to retire annually.) [The Council recommend the following gentlemen to form the first Examining Board: Dr. J. Hall Davis, chairman; Dr. Aveling, Dr. Meadows, Dr. Leonard Sedgwick, and the Honorary Secretaries.] II. That Examinations be held at the Society's Library, on the second Wednesdays of the months of January, April, July, and October, at eight o'clock P.M., or at such times as the Board of Examiners may from time to time determine. III. That candidates for the admission to the Examination be required to submit to the Honorary Secretaries of the Society certificates of the following qualifications at least fourteen days before the date of the Examination:—(a) A certificate of moral character. (b) A certificate showing that the candidate is not under twenty-one years of age, and not over thirty years of age; but that up to the year 1877, candidates above thirty years of age be admitted to Examination under special circumstances satisfactory to the Board of Examiners. (c) Proof of having attended the practice of a lying-in hospital or charity for a period of not less than six months; or of having personally attended not less than twenty-five labours under supervision satisfactory to the Board of Examiners. (d) Proof of having attended a course of theoretical teaching by lectures or tutorial instruction, the details of which must be submitted to, and receive the approval of, the Board of Examiners. IV. That the candidates be required to pass: (1) a written examination; (2) an oral and practical examination upon the following subjects: (a)

the elementary anatomy of the female pelvis and generative organs; (b) the symptoms, mechanism, course, and management of natural labour; (c) the indications of abnormal labour, and the emergencies which may occur in practice; (d) a general knowledge of the puerperal state; (e) the management of new-born children and infants; (f) the conditions as to air, food, cleanliness, etc., necessary for health; (g) the duties of the midwife with regard to the patient, and with regard to the seeking of medical advice. V. That, on satisfying the Board of Examiners as to her qualifications, the midwife should receive a diploma certifying that she is a skilled midwife, competent to attend natural labours. VI. That the fee for this diploma be one guinea; and that unsuccessful candidates be required to pay a fee of five shillings.

DR. ROBERT BEALES, Congleton, has been appointed a magistrate for the county of Chester.

It is proposed to erect a Dispensary and Hospital at Berwick, and a piece of ground is to be purchased for a site.

A DETAILED and important series of instructions to vaccination officers, signed by Mr. Simon, have been issued by the Local Government Board.

SIR HENRY HOLLAND has seen many men and many countries—the men and the countries best worth seeing in his time; and his *Recollections of Past Life*, which issues this week from the press, will be found of very great interest.

MR. CORRANCE, M.P., read an interesting paper before the Farmers' Club at Framlingham last week, on Poor Relief, Medical and General. We shall probably be able to notice it at greater length on a subsequent occasion.

THE number of cases of small-pox in the Vienna hospitals was on the increase on the 22nd instant. During the previous week, seventy-four cases had been admitted. From the 12th to the 22nd, there were twenty-five deaths from small-pox.

THE FIRE IN CHICAGO.

DR. GUSTAV SIMON, Professor of Surgery in Heidelberg, and Dr. O. Becker, Professor of Ophthalmology, have issued an address to the medical profession in Germany, soliciting aid in behalf of a hundred and twenty-five medical practitioners in Chicago, whose property was destroyed by the fire in that city. They have been informed by their correspondent in Chicago, that money is of less importance than books and instruments; and they solicit contributions of these.

NEW MEDICAL COLLEGE FOR WOMEN.

A MEDICAL College, subject to the supervision of the University of New York, has been opened in that city. The College is, it is stated, designed to give a "perfect medical education without expense to the recipient"; but, as the term of study is apparently limited to thirty-two weeks, much cannot be said of the movement.

PROSECUTION UNDER THE MEDICAL ACT.

AT Shrewsbury, on December 21st, Thomas Andrews, of that town, was charged, at the instance of the Shropshire Ethical Branch of the British Medical Association, with an infringement of the Medical Act, by falsely assuming the title of M.D. It was proved that the defendant, who had been for some years a druggist in the town, had recently sent out a bill for professional attendance, had attached M.D. to his name, and had M.D. painted underneath his name on a lamp in front of his door. For the defence, it was shown that he had received a diploma of the Medical University of Pennsylvania—a discreditable establishment, whose scandalous sale of diplomas has recently been fully exposed in the American papers, as stated in the BRITISH MEDICAL JOURNAL a few weeks ago; and Mr. Motteram, barrister, who appeared for the defence, contended that, even if the College had no power to grant the diploma, if the defendant believed that it had the charge must fall to the ground. He called Mr. George Lever to swear to the

authority of the diploma, which he did. Being asked to read it (it was in Latin), the witness declined to do so, and subsequently said that the knowledge of Greek and Latin was looked upon as a secondary consideration in the Medical University alluded to. He visited the University, and attended lectures; but he believed diplomas, after an examination by a duly authorised board in this country, were granted. He had no idea, however, what the nature of the examination was. The farce enacted, of a supposed examination, has already been fully exposed in the papers of Philadelphia, New York, and Boston. The bench fined the defendant £20, but granted a case for the superior courts.

TYPHOID IN NEW DISTRICTS.

THE *South London Courier* says: "If report be correct, the drainage system of South London is far from perfect, and this being so, the lengthened reign of typhoid and other fever in the district is not to be wondered at. We are in a position to state that a very large number of new buildings, even in the principal thoroughfares, are not connected with the street sewer. A heavy responsibility rests upon those who let houses with a knowledge of this state of things, and it behoves all persons taking newly-built houses to look to their drains."

DIAGNOSIS FROM AFAR.

AN amusing and highly ingenious diagnosis has been made of the Prince's illness by some of the Berlin physicians. They have, by some reasoning not very evident, come to entertain the idea that the outbreak at Londesborough Lodge was not one of typhoid, but of trichinosis—a disease which has been very prevalent in some districts of Prussia for the past few years. The character of the outbreak at Scarborough, the slow abatement of the temperature, and the bronchial affection in the Prince's illness, afforded perhaps *à priori* grounds for the strange opinion of the Berlin physicians; but it need not be said that trichinosis neither produces the specific spots, nor does it present the typical variations of the temperature of typhoid fever, which were so well marked in His Royal Highness' illness.

PROFESSIONAL ETIQUETTE.

A GOOD deal of discussion has naturally been raised in professional circles by the publication in the *Times* of a sort of short *communiqué* from Sandringham, paying a very glowing and earnest tribute to the devotion and personal services of Dr. Gull to the Prince of Wales. This paragraph was gracefully and even elegantly worded, and expressed no doubt with accuracy the feelings of those for whom it spoke. On the other hand, it was so couched as to run counter to the most valued traditions of the profession, which prescribe the utmost modesty and reserve in the discussion of personal medical services in public prints, and is justly jealous of the effusive expression in such places of the verbal thanks of grateful friends, for which there are other acceptable modes of recognition. In the ordinary spheres of life, such grateful expressions of personal feeling occasionally find their way into the papers, almost invariably to the annoyance of the medical man who is the object of them. They are always observed with regret, and have so frequently been visited with censure by the medical profession and the medical press, that every medical man of any position is nervously anxious to avoid them, and that the effect of general discouragement has been to repress them, with rare exceptions: and this is well for the dignity of the profession and well for the public interests, which are best safeguarded by a delicate observance of such admirable professional traditions. It would be highly inconvenient if the metropolitan and provincial press were flooded with encomiums on the personal character, skill, and services of medical men, conveying the estimate formed at the time by their grateful patients, and the families of those patients. This would not be the best means of arriving at the knowledge of modest worth, or the truest gauge of professional merit. The precedent, therefore, thus set is not one to be followed. It must, undoubtedly, have caused somewhat mixed emotions of obligation and annoyance to the physician whose private services it recog-

nised. And while, under the surrounding circumstances, silence was the course which probably best became him, in the confidence that his personal character and position could not leave any misapprehension, it is none the less, perhaps rather the more, our duty to indicate the objections to what has occurred, and the necessity of permitting no relaxation in the strictness of a rule of public modesty which is important to the character of our profession and to the public interests.

A DISGRACEFUL PROCEEDING.

WE have before us some particulars of a disgraceful and disgusting affair at Bridgewater. A baker was convicted of selling bread from his shop; his son, who was employed in making the bread, being actually at the time suffering from small-pox, and covered with the pustules. The disgusting and wicked offence was proved, and a fine of £10 was inflicted. But we find that at a meeting of the Bridgewater Guardians shortly afterwards, this same man had the effrontery to tender to supply the workhouse-bread; and that, notwithstanding the protest of a minority, his tender was accepted; Mr. J. R. Smith stating in defence of the baker, "that he had the misfortune, and in his ignorance, to allow certain things to be done; but his was not the only case of the kind. He knew of a small shop in the town where precisely the same thing had been done, but, unfortunately, it was discovered too late to proceed against the offender". It is almost surprising that this man was not also sought out to give him a share in the contract. Owing to the long-standing neglect of vaccination by the Guardians, Bridgewater has suffered fearfully this year from small-pox. This last act is an outrage upon decency, and in contempt of the respect due to the law.

CLUB-FEES.

THE following document has been favourably received by the medical practitioners of Norwich. We should be glad that so good a precedent should become universal.

"We, the undersigned, medical practitioners residing in Norwich, fully endorse the following resolutions, and pledge ourselves heartily to co-operate with our medical brethren in carrying out the same:—That the payment for attendance and medicine by each member of a benefit society be not less than four shillings *per annum*; that midwifery, vaccination, and dentistry, be considered extras; that no member residing more than three miles from his club-house be entitled to attendance at his own residence; that no contracts be entered into for attendance on the wives and families of members of clubs in which such an arrangement does not already exist; that the fee for attendance on the wives of members of clubs in their confinements be not less than one guinea; that the fee for examination of candidates for admission and re-admission to benefit societies, and for all certificates (except the ordinary certificate of ability or inability to work), be one shilling; that the fee for a certificate of death for a burial club be two shillings and sixpence.—Sturley Payne, John Crook, R. Cremer, A. M. F. Morgan, Robert Thompson, J. B. Pitt, F. C. Bailey, John Brownfield, Wm. Summerhayes, Michael Beverley, M.D., Phineas Pitts Langford, John F. Watson, Wm. Guy, M.D., Joseph Allen, Henry Ward, David Penrice, Charles Williams, Thos. W. Crosse, R. E. Gibson, Charles Evans Muriel, Haynes Robinson, Alfred Master, William H. Day, William Woodhouse, W. Cadge, R. Septimus Davenhill, Frederick Sutton, W. Bransby Francis."

COUNTER-PRACTICE.

A CASE of quackery, which resulted in the death of a little boy three years old, was investigated by Mr. Richards, the deputy coroner for East Middlesex, a few days ago. The child's mother gave the following evidence. "The deceased was taken ill on Monday last with a severe fit of coughing and choking, and I took him to the 'hall,' in Goldsmith's Row. I was there told that he was suffering from whooping-cough, and I obtained from the doctor there a bottle of physic to induce vomiting, for which I paid. They painted the deceased on the chest, throat, and back, and I took him home and gave him some of the medicine, but he was not at all sick. On Tuesday he ate his dinner, but appeared sleepy afterwards, and at six o'clock that evening was seized with a fit of choking. My husband took him to Dr. Bryant,

but he died ten minutes after that gentleman saw him. The people in Goldsmith's Row promised to give me a certificate to enable me to bury the deceased, but somehow it was stopped, although it had been written out." Dr. Bryant said that the child presented no sign of whooping-cough. He died from croup, and if any proper medical man had been called in he had not the least doubt that the child would have been alive. The coroner, referring to these observations, said:—The extent to which chemists infringe the provisions of the Act is something frightful, having regard to the fact that the lives of many persons are annually sacrificed through the ignorance of these unqualified medical practitioners. The consequence is that at the last moment a real doctor is called in, and he refuses to certify, the result being a coroner's inquiry and the waste of the county money. The want of a public prosecutor is here most manifest; but until this crying evil becomes thoroughly exposed through the medium of the public press, we may look in vain for any proper measures being taken to check the frauds which are daily perpetrated upon the true medical profession by men who know as much of the human anatomy as my inkstand.

HARVEIAN SOCIETY OF LONDON.

THE following are the officers and Council proposed for 1872:—*President*: C. Handfield Jones, M.B., F.R.S. *Vice-President*: M. Berkeley Hill, Esq.; W. Hickman, M.B.; J. B. Curgenvin, Esq.; W. H. Broadbent, M.D. *Treasurer*: H. W. Fuller, M.D. *Secretaries*: H. C. Lawrence, Esq.; G. Eastes, M.B. *Council*: J. Hall Davis, M.D.; T. Carr Jackson, Esq.; T. Morton, M.D.; A. H. Nowell, Esq.; W. B. Owen, Esq.; E. E. Sass, Esq.; J. G. Westmacott, M.D.; F. B. White, Esq.; G. Benson Baker, Esq.; Thomas Raynor, Esq.; Thomas Thorman, Esq.; E. Parker Young, Esq. The election will take place at the Society's rooms, on Thursday, January 4th, 1872:

PRIZES OF THE ROYAL COLLEGE OF SURGEONS.

FOR the Jacksonian Prize on the Treatment of Wounds after Operations, essays on which were to be sent in before Christmas-day last, the unusual number of six have been received. The essays for the Collegial Triennial Prize on the Structure and Functions of the Medulla Oblongata, including the connexions of the Central Nerve-Roots, must be sent in before Christmas-day 1873.

PATHOLOGICAL SOCIETY OF LONDON.

THE following are the officers and council proposed for election for 1872, at the annual meeting to be held on January 2nd:—*President*: J. Hilton, Esq. F.R.S. *Vice-Presidents*: E. Crisp, M.D.; W. H. Dickinson, M.D.; R. Quain, M.D.; S. Wilks, M.D.; J. Cooper Forster, Esq.; John Gay, Esq.; Jonathan Hutchinson, Esq.; John Wood, Esq., F.R.S. *Treasurer*: C. Murchison, M.D., F.R.S. *Honorary Secretaries*: W. Cayley, M.D.; J. W. Hulke, Esq., F.R.S. *Council*: W. H. Broadbent, M.D.; W. Cholmeley, M.D.; W. S. Church, M.D.; J. Langdon H. Down, M.D.; A. B. Duffin, M.D.; C. H. Fagge, M.D.; T. H. Green, M.D.; J. H. Jackson, M.D.; R. Martin, M.D.; C. R. Nicoll, M.D.; F. W. Pavy, M.D., F.R.S.; F. Robinson, M.D.; H. Arnott, Esq.; T. J. Ashton, Esq.; J. Couper, Esq.; J. Croft, Esq.; E. D. Hacon, Esq.; A. B. R. Myers, Esq.; W. Potts, Esq.; W. Squire, Esq.

THE NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

WE have received a copy of the *Transactions* of this Society, which are to be issued monthly, and will contain reports of the papers read and pathological specimens shewn at the meetings of the Society, with the discussions thereon. The contents of the first number augur well for the future success of the undertaking. They consist of a report on pathological specimens and three papers—one, by Mr. H. E. Armstrong, on a case of Corymbo-Crystalline Small-pox in a person not Vaccinated; a case of Fæcal Accumulation, by Dr. C. J. Gibb; and Observations on Albinism, by Mr. Christopher Jeaffreson.

SCOTLAND.

SMALL-POX is on the increase in some of the more northern towns of Scotland. In Edinburgh, however, it is rather on the decrease.

THE GLASGOW OPHTHALMIC INSTITUTION.

AN account of this institution, which was originated by Dr. Wolfe three years ago, appears in a recent number of the *Glasgow Daily Herald*. The premises which were opened by the directors in 1870 have now become too limited; and a fresh appeal is to be made to the public for subscriptions to enable them to build or buy a house of much larger dimensions.

THE EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION.

AT the annual general meeting of this Association, held on the 20th instant, it was intimated that the Syme Fellowship had been placed on a permanent foundation. The following motion, proposed by Lord Neaves and seconded by Professor Sir Robert Christison, was adopted unanimously:—"That the Association views with great satisfaction the completion of the Syme Surgical Fellowship; that it congratulates the University on the acquisition of so valuable and appropriate a memorial of one of its greatest teachers; and again expresses its thanks to Dr. Charles Murchison, and the Committees in London and elsewhere, for their earnest and successful endeavours to found and endow the Fellowship."

THE GLASGOW MATERNITY HOSPITAL.

THE House Committee of the Directors of the Maternity Hospital have drawn up a statement, which has been forwarded to us, containing the results of an investigation into the case of the woman who was delivered outside the hospital, and whose case we last week noticed. It is affirmed by the Committee, that the woman was delivered before any application was made for admission at the hospital, and that all the requests made on the woman's behalf were immediately granted. They defend entirely the conduct of the nurse and matron. Some of the statements of the Committee are, perhaps, somewhat feebly apologetic.

THE MEDICAL POLICEMAN.

THE authorities of the counties of Haddington and Berwick have adopted a system of sanitary inspection to be carried out by the police, who are to keep a record of all cases of infectious disease, act as inspectors of nuisances, and generally superintend the sanitary condition of the various districts. Such a system may be cheap and satisfactory to the parochial boards; but, although the police may, under some circumstances, make good health-inspectors, there is at the same time a charming absurdity in the idea of the police-constable undertaking the sanitary control of his district and many other duties which should properly devolve on a medical officer of health.

THE EDINBURGH UNIVERSITY COURT AND THE LADY-STUDENTS.

THE University Court has already met on two occasions, during the past ten days, to consider the lady-student question. The first meeting took place on the 21st instant. The object of the meeting was to hear an appeal by Professors Masson, Bennett, and Calderwood, against the following resolution of the Senatus Academicus.

"The Senatus Academicus represent to the University Court the propriety of rescinding their regulations with reference to the admission of women to medical education in the University, but without prejudice to the rights and interests of those ladies who have already entered upon a course of study, and without prejudice to the rights of professors to give separate instruction to ladies in such classes as the University Court may from time to time think fit and approve."

The majority of the Senatus who carried the resolution were represented by Professors Muirhead, Turner, and Lister. This resolution, Professor Masson stated, had been carried, in consequence

of the absence of certain members of the Senatus, by a majority of fourteen to thirteen; but out of the thirty-six professors composing the Senatus, eighteen had since signed the protest now presented by him against the resolution. Moreover, two of the remaining eighteen, he believed, would not declare themselves on either side. He presented the further legal opinion of the Lord Advocate and Sheriff Fraser as to whether, in the first constitution or charter of the University, or in any of the subsequent statutes, there is anything which limits the benefits of the University to male students. It was to the effect that the University Court, by Sec. 12 (2), are now vested with all the powers of internal management and regulation formerly possessed by the magistrates and Council; they have done what the latter never did, although they lawfully might. They have, by their resolution of November 1869, given to women the right to demand, equally with male students, admission to the University. At the same time a letter from Miss Louisa Stevenson was submitted, with lists of the Executive, the Edinburgh, and General Committees for Securing a Complete Medical Education to Women. The list contained 943 names. The Court adjourned until Tuesday, when the matter was again considered; but they arrived at no resolution. The Court meets again on Tuesday. We understand that the following plans have been suggested to enable lady-students to obtain a medical education at the University: 1. That the ladies should be admitted to the ordinary classes; 2. That the medical professors should be required to deliver to them separate courses of lectures; 3. That special lecturers should be appointed by the University to teach them in separate classes; 4. That the ladies should be allowed to obtain instruction from any recognised extramural teacher, and subsequently admitted to the ordinary examination for the University degree. Thus there are many alternative measures offered to the University Court, by which they might meet the demands of the ladies for medical education, without incurring the objections and inconveniences attaching to mixed classes.

THE CONTAGIOUS DISEASES ACTS.

THE following memorial has been addressed to the Right Hon. H. A. Bruce, M.P., Secretary of State for the Home Department, signed by the Presidents of the London Colleges, the medical officers of the Royal family, and a number of the most distinguished members of the profession.

Sir,—We, the undersigned, beg to express to you the deep and continued interest we feel in the subject of legislation for the diminution of contagious venereal disease.

Firmly convinced as we are, of the deteriorating influence exercised by this form of disease on the public health, and painfully familiar with the serious suffering which it entails on large numbers of innocent individuals, we are most anxious that, in any forthcoming measure, nothing should be done to weaken the beneficial sanitary operation of the Acts at present in force, which can be shown to have reduced the more serious form of disease by considerably more than one-half in the districts where they are in operation. (See the evidence of Dr. Balfour before the Royal Commission.)

We especially wish to protest against the erroneous supposition that a personal examination is deemed by the women themselves either so degrading or repulsive as has been represented. We know, by long experience of this class, that they will flock in crowds to our public hospitals for admission, although the presence of a number of medical students renders the exposure far greater than in the private chambers of an institution appropriated for this purpose by the Acts.

There is no difficulty in obtaining their voluntary attendance for even public examination when sick and incapable of further struggle with disease; but we know that, with rare exceptions, they cannot be induced to seclude themselves for treatment in the earlier and less painful stages of their complaints, when, for obvious reasons, they are most actively instrumental in communicating infection.

We therefore believe it to be absolutely essential to the success of any Act of the legislature on this subject, that it should provide effectually for the earliest possible detection and treatment of disease in public women; and we are unable to see how this can be accomplished otherwise than by a system of periodical examinations.

If then, sir, we are warranted by recorded facts in our belief that the temporary seclusion of these diseased women in a more healthy moral atmosphere has been found to contribute in no unimportant proportion of them to their restitution to the paths of virtue; if, both physically and morally, they have been thereby raised in the scale of humanity, we trust you will not listen to a factious opposition, founded on a most imperfect knowledge of the character and altered nature of these women, and of the extent of the evils to be remedied.

We conclude, sir, with the expression of a most earnest hope that, in any future legislation on this subject, the main principles of the Acts of 1866 and 1869 may remain unaltered.

We have the honour to be, sir, your obedient servants.

To this the following reply has been received.

Whitehall, December 21st, 1871.

Sir,—I am directed by Mr. Secretary Bruce to acknowledge the receipt of your letter of the 18th instant, with accompanying memorial from the leading members of the medical profession on the subject of legislation for the diminution of contagious diseases; and I am to inform you that the statements contained in the memorial will be weighed by Her Majesty's Government with the care due to the opinions of men of their professional eminence, in their bearing on the important and difficult subject to which they relate.

I am, sir, your obedient servant,

(Signed)

A. F. O. LIDDELL.

To H. Spencer Smith, Esq., 9, Queen Anne Street, W.

EPIDEMICS AT WEST NEWTON.

IN reply to a communication which we addressed to him on this subject, Mr. A. E. Barrett of Grimston has been good enough to draw up for us the following memorandum concerning recent epidemics at West Newton, the home village of the Sandringham estate.

Scarlet fever commenced at the beginning of August, and has continued to the present time. Almost the whole village has suffered. There have been five deaths from scarlatina maligna.

It is perhaps worthy of remark, and may throw some light on the causes of diphtheria and scarlet fever, that when diphtheria occurred here in 1868, the exudation-membrane was so constantly absent, that I and those who were assisting me in my practice gave it the name of the "Sandringham sore-throat", to distinguish it from ordinary diphtheria; and that it was most fatal at the higher parts of the village.

At the same time, at an elevated spot called Harpley Dams, nearly four miles east in a straight line from West Newton, and similarly exposed to northerly winds, a precisely similar sore-throat appeared, and was equally fatal. The cases occurred in a cottage belonging to the Earl of Leicester, well built, roomy, and apparently free from all possibility of contagious or malarious influences. Only four cottages stand on this hill, and they are semidetached, and, though new, have stood at least eleven years; they obtain their water from a deep well in the chalk.

When scarlatina maligna appeared in West Newton this year, it appeared almost at the same time on this isolated hill, and proved fatal to two strong farm lads, and attacked severely three or four other persons.

With regard to the typhoid in West Newton, it may be observed that the first epidemic commenced in September 1860, after a most remarkably wet summer; that the first cases began at a position below the churchyard; and that, the soil of the place being of a very porous nature, and the decaying humanity being only separated from the upper water-bearing stratum by five or six feet, there is a possibility of the whole water-supply being polluted from that source.

In 1860, typhoid fever attacked two families containing respectively 10 and 9 members. In the first, there were 10 cases and 1 death; in the second, 5 cases and 1 death. In 1870-71 the disease prevailed in three families. In one, each of the ten members of which it consisted was attacked, and two died; in the second (8 members) there were 4 cases with 2 deaths; in the third (2 members) there was one case, which died.

BRITISH MEDICAL ASSOCIATION.

OFFICERS AND COUNCIL FOR 1871-72.

President—JOHN WHIPPLE, F.R.C.S., Consulting Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

President-Elect—ALFRED BAKER, F.R.C.S., Surgeon to the General Hospital, Birmingham.

Permanent Vice-Presidents.

JAMES HEYGATE, M.D., F.R.S., Derby.
 GEORGE S. JENKS, M.D., F.R.C.P., Bath.
 JAMES R. W. VOSE, M.D., F.R.C.P., Liverpool.
 C. RADCLYFFE HALL, M.D., F.R.C.P., Torquay.
 ALFRED LOCHÉE, M.D., F.R.C.P., Canterbury.

GEORGE BURROWS, M.D., F.R.C.P., F.R.S., London.
 EDWARD WATERS, M.D., F.R.C.P., Chester.
 CHARLES CHADWICK, M.D., D.C.L., F.R.C.P., Leeds.
 FRANCIS SIBSON, M.D., D.C.L., F.R.S., London.
 EDWARD CHARLTON, M.D., D.C.L., Newcastle-on-Tyne.

President of the Council—WILLIAM D. HUSBAND, F.R.C.S., Surgeon to the County Hospital, York.

Treasurer—RANDLE WILBRAHAM FALCONER, M.D., F.R.C.P., D.C.L., Bath.

General Secretary—(for 1871) T. WATKIN WILLIAMS, F.R.C.S., Birmingham; (for 1872) FRANCIS FOWKE, Esq., 37, Great Queen Street, London, W.C.

Editor of the British Medical Journal—ERNEST HART, Esq., London.

Members of the General Council elected by the Branches.

Bath and Bristol Branch.

R. S. FOWLER, Esq., *Sec. for Bath.*
 E. C. BOARD, Esq., *Sec. for Bristol.*
 F. BRITTAN, M.D.
 E. L. FOX, M.D.
 C. HARPER, Esq.
 C. LEONARD, Esq.
 F. MASON, Esq.
 E. SKEATE, Esq.
 C. STEELE, Esq.
 J. G. SWAYNE, M.D.

Birmingham & Midland Counties Branch.

T. H. BARTLEET, M.B., *Secretary.*
 ALFRED BAKER, Esq.
 M. H. CLAYTON, Esq.
 A. FLEMING, M.D.
 B. W. FOSTER, M.D.
 J. S. GAMGEE, Esq.
 J. MANLEY, Esq.
 C. A. NEWNHAM, Esq.
 O. PEMBERTON, Esq.
 JAMES RUSSELL, M.D.
 J. V. SOLOMON, Esq.
 F. TURTON, Esq.
 T. UNDERHILL, M.D.

Cambridge & Huntingdon Branch.

J. B. BRADBURY, M.D., *Secretary.*
 MICHAEL FOSTER, Esq.
 W. R. GROVE, M.D.
 P. W. LATHAM, M.D.

Cumberland and Westmorland Branch.

HENRY BARNES, M.D., *Secretary.*
 T. S. CLOUSTON, M.D.
 R. ELLIOT, M.D.
 J. M. FOTHERGILL, M.D.

East Anglian Branch.

B. CHEVALLIER, M.D., *Secretary.*
 W. CADGE, Esq.
 E. COPEMAN, M.D.
 R. FAIRCLOTH, Esq.
 W. E. IMAGE, Esq.
 J. KIRKMAN, M.D.

East York & North Lincoln Branch.

R. H. B. NICHOLSON, Esq., *Sec.*
 F. B. ANDERSON, Esq.
 R. M. CRAVEN, Esq.

Gloucestershire Branch.

A. FLEISCHMANN, Esq., *Secretary.*
 E. CRIPPS, Esq.
 W. H. O. SANKEY, M.D.

Lancashire and Cheshire Branch.

R. HARRISON, Esq., *Secretary.*
 T. DAVIES-COLLEY, M.D.
 L. E. DESMOND, M.D.
 W. HALL, Esq.
 W. HOWITT, Esq.
 T. MELLOR, Esq.
 G. W. MOULD, Esq.
 D. W. PARSONS, Esq.
 W. ROBERTS, M.D.
 T. L. ROGERS, M.D.
 H. SIMPSON, M.D.
 G. SOUTHAM, Esq.
 L. SPENCER, M.D.
 A. B. STEELE, L.K.Q.C.P.
 J. R. W. VOSE, M.D.
 A. T. H. WATERS, M.D.
 E. WATERS, M.D.
 M. A. E. WILKINSON, M.D.

Metropolitan Counties Branch.

A. P. STEWART, M.D., *Secretary.*
 J. H. AVELING, M.D.
 SAMUEL DAY-GOSS, M.D.
 STAMFORD FELCE, M.R.C.P.Ed.
 C. H. ROGERS-HARRISON, Esq.
 ERNEST HART, Esq.
 C. HEATH, Esq.
 A. HENRY, M.D.
 BERKELEY HILL, Esq.
 GEORGE JOHNSON, M.D.
 HENRY LEE, Esq.
 C. F. J. LORD, Esq.
 WILLIAM MARTIN, Esq.
 JOHN MURRAY, M.D.
 RICHARD QUAIN, M.D., F.R.S.
 G. P. RUGG, M.D.
 JOSEPH SEATON, M.D.
 E. J. TILT, M.D.
 A. W. WILLIAMS, M.D.

Midland Branch.

JOSEPH WHITE, Esq., *Secretary.*
 J. W. BAKER, Esq.
 J. BARCLAY, M.D.
 H. GOODE, M.B.

G. MITCHINSON, L.K.Q.C.P.

T. PAGET, Esq.
 T. SYMPSON, Esq.
 JOSEPH THOMPSON, Esq.

Northern Branch.

G. H. PHILIPSON, M.D., M.A., *Sec.*
 J. B. BRAMWELL, M.D.
 S. W. BROADBENT, Esq.
 M. BURNUP, M.D.
 J. W. EASTWOOD, M.D.
 C. GIBSON, M.D.
 H. G. HARDY, M.B.
 G. Y. HEATH, M.D.
 JOHN JOBSON, Esq.
 R. S. PEART, M.D.
 C. TROTTER, Esq.
 G. WELFORD, Esq.
 R. WILSON, M.D.

North Wales Branch.

D. KENT JONES, Esq., *Secretary.*
 T. TAYLOR GRIFFITHS, Esq.
 A. E. TURNOUR, M.D.
 E. WILLIAMS, M.D.

Reading Branch.

R. C. SHETTL, M.D., *Secretary.*
 J. W. WORKMAN, Esq.

Shropshire Ethical Branch.

J. STYRAP, L.K.Q.C.P.I., *Sec.*
 A. G. BROOKES, Esq.
 J. R. HUMPHREYS, Esq.
 J. W. PROCTER, Esq.

Shropshire Scientific Branch.

S. WOOD, Esq., *Secretary*
 J. D. HARRIES, Esq.
 H. JOHNSON, M.D.

South Eastern Branch.

G. F. HODGSON, Esq., *Secretary.*
 J. ARMSTRONG, M.D.
 R. L. BOWLES, M.D.
 J. C. BURROWS, Esq.
 J. M. BURTON, Esq.
 A. CARPENTER, M.D.
 W. CARR, M.D.
 F. FRY, Esq.
 A. HALL, M.D.

C. HOLMAN, M.D.

S. MONCKTON, M.D.
 A. NAPPER, Esq.
 T. HECKSTALL SMITH, Esq.
 J. R. STEDMAN, Esq.
 N. TYACKE, M.D.
 E. WESTALL, M.D.

South Midland Branch.

J. M. BRYAN, M.D., *Secretary.*
 R. CEELY, Esq.
 D. J. T. FRANCIS, M.D.
 A. D. MACKAY, M.B.
 H. TERRY, jun., Esq.
 R. W. WATKINS, Esq.

South Wales and Monmouthshire Branch.

A. DAVIES, Esq., *Secretary.*
 T. J. DYKE, Esq.
 J. G. HALL, Esq.
 W. TAYLOR, M.D.
 D. YELLOWLEES, M.D.

South Western Branch.

STONARD EDYE, Esq., *Secretary.*
 A. BAKER, M.D.
 C. RADCLYFFE HALL, M.D.
 T. E. OWEN, Esq.
 W. P. SWAIN, Esq.
 J. WOODMAN, Esq.

West Somerset Branch.

W. M. KELLY, M.D., *Secretary.*
 W. H. AXFORD, M.B.
 W. L. WINTERBOTHAM, M.D.

Yorkshire Branch.

W. PROCTER, M.D., *Secretary.*
 C. CHADWICK, M.D.
 R. T. E. COOKE, L.R.C.P.Ed.
 J. C. HALL, M.D.
 J. D. HEATON, M.D.
 SAMUEL HEY, Esq.
 S. HOLDSWORTH, M.D.
 W. D. HUSBAND, Esq.
 W. MATTERSON, M.D.
 R. H. MEADE, Esq.
 G. SHANN, M.D.
 T. P. TEALE, Esq.
 C. G. WHEELHOUSE, Esq.
 J. H. WRIGHT, Esq.

THE PRESIDENT OF THE GENERAL COUNCIL.
THE PRESIDENT OF THE ASSOCIATION.
THE PRESIDENT-ELECT.
THE VICE-PRESIDENTS.
THE TREASURER.

Committee of Council.
ONE SECRETARY FROM EACH BRANCH.
M. H. CLAYTON, M.R.C.S., Birmingham.
J. M. FOTHERGILL, M.D., Leeds.
CHRISTOPHER HEATH, Esq., London.
T. H. SMITH, F.R.C.S., St. Mary Cray, Kent.
G. SOUTHAM, F.R.C.S., Manchester.

A. B. STEELE, L.K.Q.C.P., Liverpool.
T. UNDERHILL, M.D., Great Bridge.
A. T. H. WATERS, M.D., Liverpool.
C. G. WHEELHOUSE, F.R.C.S., Leeds.
M. A. E. WILKINSON, M.D., Manchester.

DISTRICT BRANCHES OF THE ASSOCIATION,

WITH THE NAMES OF THEIR OFFICERS.

Bath and Bristol Branch.

President.
C. BLEECK, Esq., Warminster
President-Elect.
CROSBY LEONARD, Esq., Bristol
Secretaries.
R. S. FOWLER, Esq., Bath
E. C. BOARD, Esq., Bristol

Birmingham and Midland Counties Branch.

President.
OLIVER PEMBERTON, Esq., Birmingham
President-Elect.
THOMAS EBBAGE, Esq., Leamington
Treasurer.
T. W. WILLIAMS, Esq., Birmingham
Secretary.
T. H. BARTLETT, M.B., Birmingham

Cambridge and Huntingdon Branch.

President.
PETER EADE, M.D., Norwich
President-Elect.
R. MURIEL, Esq., Ely
Secretary.
J. B. BRADBURY, M.D., Cambridge

Cumberland and Westmorland Branch.

President.
ROBERT ELLIOT, M.D., Carlisle
President-Elect.
T. S. CLOUSTON, M.D., Carlisle
Secretary and Treasurer.
HENRY BARNES, M.D., Carlisle

East Anglian Branch.

President.
PETER EADE, M.D., Norwich
President-Elect.
R. MURIEL, Esq., Ely
Secretaries.
B. CHEVALLIER, M.D., Ipswich
J. B. PITT, M.D., Norwich

East York and North Lincoln Branch.

President.
J. A. LOCKING, Esq., Hull
President-Elect.
J. F. HOLDEN, Esq., Hull
Secretary.
R. H. B. NICHOLSON, Esq., Hull

Gloucestershire Branch.

President.
THOMAS EVANS, M.D., Gloucester
Secretary.
A. FLEISCHMANN, Esq., Cheltenham

Lancashire and Cheshire Branch.

President.
L. E. DESMOND, M.D., Liverpool
Vice-President.
W. H. MANIFOLD, Esq., Liverpool
HENRY SIMPSON, M.D., Manchester
President-Elect.
THOMAS MELLOK, Esq., Manchester
Vice-Presidents-Elect.
JOHN CAMERON, M.D., Liverpool
ARTHUR RANSOME, M.D., Bowden

Secretary.

R. HARRISON, Esq., Liverpool
Local Secretaries.
S. M. BRADLEY, Esq., Manchester
C. JOHNSON, Esq., Lancaster
R. C. BROWN, M.B., Preston

Metropolitan Counties Branch.

President.
J. RUSSELL REYNOLDS, M.D., F.R.S., London
President-Elect.
SIR W. FERGUSON, Bart., F.R.S., London
Vice-Presidents.
GEORGE JOHNSON, M.D., London
T. HECKSTALL SMITH, Esq., St. Mary Cray
Treasurer.
ROBERT DUNN, Esq., London
Secretaries.
A. P. STEWART, M.D., London
ALEXANDER HENRY, M.D., London

Midland Branch.

President.
WILLIAM OGLE, M.D., Derby
President-Elect.
W. T. ROBERTSON, M.D., Nottingham
Secretaries.
JOSEPH WHITE, Esq., Nottingham
T. BLUNT, M.D., Leicester
ARTHUR H. DOLMAN, Esq., Derby
C. HARRISON, M.D., Lincoln

Northern Branch.

President.
J. B. BRAMWELL, M.D., North Shields
President-Elect.
C. TROTTER, Esq., Stockton-on-Tees
Secretary and Treasurer.
G. H. PHILIPSON, M.D., Newcastle

North Wales Branch.

President.
JOSIAH R. JENKINS, M.D., Ruthin
President-Elect.
R. C. ROBERTS, Esq., Ruabon
Secretary.
D. KENT JONES, Esq., Beaumaris
Treasurer.
G. T. JONES, Esq., Denbigh

Reading Branch.

President.
GEORGE MAY, Jun., Esq., Reading
President-Elect.
R. C. SHETTLE, M.D., Reading
Secretary.
R. C. SHETTLE, M.D., Reading

Shropshire Ethical Branch.

President.
A. G. BROOKES, Esq., Shrewsbury
President-Elect.
J. W. PROCTER, Esq., Shifnal
Vice-Presidents.
S. B. GWYNN, Esq., Wem
F. H. HARTSHORNE, Esq., Broseley
Secretaries.
J. STYRAP, L.K.&Q.C.P.I., Shrewsbury
E. ANDREW, M.D., Shrewsbury

Shropshire Scientific Branch.

President.
J. D. HARRIES, Esq., Shrewsbury
President-Elect.
JOHN JONES, Esq., Llanfyllin
Secretary.
SAMUEL WOOD, Esq., Shrewsbury

South Eastern Branch.

President.
N. TYACKE, M.D., Chichester
Vice-Presidents.
JOHN S. BOSTOCK, Esq., Horsham
HENRY COLLET, M.D., Worthing
President-Elect.
ALFRED CARPENTER, Esq., Croydon
Vice-Presidents-Elect.
ALLEN DUKE, M.D., Norwood
F. HETLEY, M.D., Norwood
Secretary.
G. F. HODGSON, Esq., Brighton
District Secretaries.
F. J. BROWN, M.D., Rochester
C. PARSONS, M.D., Dover
H. T. LANCHESTER, M.D., Croydon
JOHN MORTON, M.D., Guildford
T. TROLLOPE, M.D., St. Leonard's

South Midland Branch.

President.
W. CLARK, M.D., Wellingborough
President-Elect.
A. D. MACKAY, M.B., Stony Stratford
Treasurer.
J. M. BRYAN, M.D., Northampton
Secretaries.
J. M. BRYAN, M.D., Northampton
W. MOXON, Esq., Northampton

South Wales and Monmouthshire Branch.

President.
GEORGE PADLEY, Esq., Swansea
President-Elect.
T. J. DYKE, Esq., Merthyr Tydfil
Secretaries.
ANDREW DAVIES, Esq., Swansea
ALFRED SHEEN, M.D., Cardiff

South-Western Branch.

President.
President-Elect.
Secretary.
STONARD EDYE, Esq., Exeter

West Somerset Branch.

President.
W. M. AXFORD, M.B., Bridgwater
President-Elect.
E. C. GARLAND, Esq., Yeovil
Secretary.
W. M. KELLY, M.D., Taunton

Yorkshire Branch.

President.
R. H. MEADE, Esq., Bradford
President-Elect.
C. G. WHEELHOUSE, Esq., Leeds
Secretary.
W. PROCTER, M.D., York

ORDINARY MEMBERS.

BEDFORDSHIRE.

Number of Members..26.

Branch..South Midland.

Balding, Charles C. Esq. Shefford
 Benson, James, L.R.C.P.Ed. Luton
 Blake, Ethelbert, M.D. Bedford
 Branchwaite, H. Esq. Leighton Buzzard
 Burnett, Charles, M.D. Biggleswade
 Carter, Jabez, Esq. Surgeon to the Dispensary, Bedford
 Coombs, Rowland H. Esq. Bedford
 Evershed, Arthur, Esq. Amptill
 Goldsmith, G. P. Esq. Surgeon to the Infirmary, Bedford
 Hawkins, B. L. L.R.C.P.Ed. Woburn
 Hicks, Charles C. M.D. Dunstable
 Hilliard, Henry G. M.D. Shefford
 Johnson, W. G. Esq. House-Surgeon to the Infirmary, Bedford
 Kerr, N. S. M.D. Markyate Street
 Lawford, E. M.D. Leighton Buzzard
 Milligan, William W. Esq. Cranfield
 Morris, Pryce J. L. Esq. Bedford
 Prior, Charles E. M.D. Senior Surgeon to the General Dispensary, Bedford
 Raynes, Henry, Esq. Potton
 Rew, James, Esq. Luton
 Robinson, G. Esq. Surgeon to the Dispensary, Bedford
 Shaw, James, Esq. Bedford
 Spriggs, Charles, M.D. Great Barford
 Trew, Thomas N. M.D. Aspley Guise
 Veasey, Henry, Esq. Woburn
 Woakes, Edward, M.D. Luton

BERKSHIRE.

Number of Members..31.

Branch..Reading.

Baker, Slade I. Esq. Surgeon to the Dispensary, Abingdon
 Barford, James G. Esq. Wokingham
 Brown, John B. M.B. Ascot
 Bunney, Joseph, M.D. Newbury
 Crisp, N. Esq. Swallowfield, Reading
 Davis, G. H. Esq. Mortimer
 Ellison, James, M.D. Surgeon to Her Majesty's Household, Windsor
 Harrinson, Isaac, Esq. Reading
 Hewitt, T. S. M.D. Winkfield
 Holland, Loton, Esq. Windsor
 Kidgell, S. W. Esq. Pangbourne
 Lowsley, Oded, Esq. Reading
 Marshall, John H. Esq. Wallingford
 Maurice, Oliver C. M.D. Surgeon to the Royal Berkshire Hospital, Reading
 May, George, Esq. Consulting Surgeon to the Royal Berkshire Hospital, Reading
 May, George, jun. Esq. Surgeon to the Royal Berkshire Hospital, Reading
 Montgomery, E. C. Esq. Maidenhead.
 Moore, Adam J. Esq. Reading
 Noad, G. W. M.D. Wokingham
 Orange, William, M.D. Superintendent of the Criminal Lunatic Asylum, Broadmoor
 Playne, Alfred, M.D. Maidenhead
 Shettle, R.C. M.D. Physician to the Royal Berkshire Hospital, Reading
 Vines, Charles, Esq. Reading
 Walford, T. L. Esq. Surgeon to the Dispensary, Reading
 Walker, Thomas H. M.D. Reading
 Wells, Edward, M.D. Physician to the Royal Berkshire Hospital, Reading
 Westell, John, Esq. Maidenhead
 Wight, R. M.D. F.R.S. Reading
 Woodhouse, R. T. M.D. Physician to the Royal Berkshire Hospital, Reading
 Workman, John W. Esq. Reading
 Young, William B. Esq. Reading

BUCKINGHAMSHIRE.

Number of Members..25.

Branch..South Midland.

Bowstead, R. M. M.D. High Wycombe
 Ceely, Robert, Esq. Surgeon to the Bucks Infirmary, Aylesbury
 Daniell, William C. Esq. Stony Stratford
 De'ath, Robert, Esq. Buckingham
 Deyns, F. M.D. Fenny Stratford
 Dufty, Frederick, Esq. Stony Stratford
 Eagles, W. Esq. Aylesbury
 Gooch, James W. Esq. Eton
 Grindon, George H. Esq. Olney

Hailey, Hammett, Esq. Newport Pagnell
 Heygate, T. N. Esq. Hanslope, Stony Stratford
 Holmes, Charles, Esq. Slough
 Hooper, Charles, Esq. Surgeon to the Bucks Infirmary, Aylesbury
 Littlewood, Joseph J. Esq. Woburn
 Mackay, Allan D. M.B. Stony Stratford
 Prowse, William, Esq. Amersham
 Rogers, Henry C. Esq. Newport Pagnell
 Sandwith, H. M.D. Consulting Physician to the Hull General Infirmary, Beaconsfield
 Shield, R. D. Esq. Buckingham
 Spencer, Charles, Esq. Whitechurch
 Terry, Charles, Esq. Newport Pagnell
 Wadd, Frederick J. M.B. Beaconsfield
 Warren, Thomas, Esq. Prince's Risborough
 Whitton, Corbett, M.D. Stony Stratford
 Wilcox, R. W. Esq. Aylesbury

CAMBRIDGESHIRE.

Number of Members..39.

Branch..Cambridge and Huntingdon.

Anningson, Bushell, M.B. Cambridge
 Beck, J. T. Esq. Cambridge
 Bradbury, J. B. M.D. Physician to Addenbrooke's Hospital, Cambridge
 Bridger, John, Esq. Cottenham
 Buckenham, John, L.R.C.P.Ed. Cambridge
 Carter, James, Esq. Cambridge
 Carver, Edmund, M.B. Surgeon to Addenbrooke's Hospital, Cambridge
 Clapham, J. Esq. Thorney, Peterborough
 Daniell, C. P. Esq. Swavesey
 Drosier, W. H. M.D. Caius Col. Cambridge
 Ellis, Robert S. Esq. Willingham
 Fawcett, R. M. M.D. Cambridge
 Fisher, W. W. M.D. Downing Professor of Medicine, Cambridge
 Foster, Michael, M.D. Trinity Prælector of Physiology, Cambridge
 Green, Thomas, M.D. Cambridge
 Hammond, Josiah, Esq. Consulting Surgeon to Addenbrooke's Hospital, Cambridge
 Hemming, John, Esq. Upwell
 Hough, James, Esq. Cambridge
 Humphry, G. M. M.D. F.R.S. Professor of Human Anatomy and Physiology, and Surgeon to Addenbrooke's Hospital, Cambridge
 Ireland, Edward, Esq. Linton
 Jackson, Henry W. Esq. Walsoken, near Wisbeach
 Jenkins, Joseph, Esq. Bassingbourne
 Latham, P. W. M.D. Physician to Addenbrooke's Hospital, Deputy for the Downing Professor of Medicine, Cambridge
 McCaull, C. N. Esq. Whittlesey
 Muriel, John, Esq. Ely
 Muriel, Robert, Esq. Medical Officer to the Dispensary, Ely
 Newton, John L. Esq. Cambridge
 Nichol, Henry, L.R.C.P.Ed. Haddenham
 O'Connor, Thomas, Esq. March
 Ollard, William, Esq. Wisbeach
 Paget, George E. M.D. D.C.L. Physician to Addenbrooke's Hospital, and Linacre Lecturer on Medicine, Cambridge
 Pinchard, Benjamin, M.D. Cottenham
 Prince, Frederick, Esq. Sawston
 Prince, T. Esq. Balsbam
 Pyne, Richard, Esq. Royston
 Roper, William R. Esq. Cambridge
 Trestrall, H. Ernest, L.R.C.P.Ed. Harston
 Wallis, George, Esq. Cambridge
 Wilson, J. M. M.B. Chatteris

CHESHIRE.

Number of Members..102.

Branch..Lancashire and Cheshire.

Allen, James, Esq. Bollington
 Anderton, Henry, L.R.C.P.Ed. New Ferry Park, near Birkenhead (dead)
 Arkwright, John, Esq. Bowden
 Aspland, Alfred, Esq. Surgeon to the Ash-ton-under-Lyne Infirmary, Dukinfield
 Atkinson, James, Esq. Crewe
 Attwell, Gregory H. Esq. Surgeon to Lloyd's Hospital, Altrincham
 Bagnall, Samuel F. Esq. Runcorn
 Bangay, Richard, M.D. Cheshire
 Beales, Robert, M.D. Congleton
 Beecroft, S. Esq. Hyde, near Manchester

Bell, William, Esq. Surgeon to the Wallasey Dispensary, New Brighton
 Bellyse, Edward S. M.D. Nantwich
 Bennett, E. M.D. New Brighton
 Birchenall, John, Esq. Surgeon to the Dispensary, Macclesfield
 Bird, Benjamin, Esq. Tarporley
 Bird, J. D. M.B. Surgeon to the Stockport Infirmary, Heaton Norris, Stockport
 Blackshaw, Joseph, Esq. Stockport
 Bowen, Essex, M.D. Surgeon to the Borough Hospital, Birkenhead
 Bower, Joshua, Esq. Wilmstow
 Braidwood, P. M. M.D. Birkenhead
 Brierley, Thomas B. Esq. Tattenhall
 Brittain, Thomas, Esq. Chester
 Brooke, John, Esq. Stockport (dead)
 Buchan, Charles F. M.B. Runcorn
 Carruthers, W. Esq. Halton, Preston Brook
 Cook, George H. Esq. Hartford, Northwich
 Crutchley, Henry, Esq. Alsager
 Davies-Colley, T. M.D. Physician to the General Infirmary, Chester
 Dobie, William M. M.D. Chester
 Downs, G. M.D. Consulting Surgeon to the Infirmary, Stockport
 Eden, Thomas, Esq. Oxtan
 Firth, John, Esq. Macclesfield (dead)
 Foulkes, John G. Esq. Bunbury
 Godden, Joseph, Esq. Sudley House, Cloughton Firs, near Birkenhead
 Godson, Alfred, M.B. Cheshire
 Graham, George Y. Esq. Stockport
 Grindrod, F. Esq. Stockport
 Haining, William, M.D. House-Surgeon to the Infirmary, Chester
 Hamilton, A. Esq. Visiting Surgeon to the Infirmary, Chester
 Hamilton, W. T. Esq. Consulting Surgeon to the Birkenhead Hospital, Rock Ferry
 Hardie, Jas. M.D. Surgeon to the Clinical Hospital for Children at Manchester, Sale
 Harrison, Job, Esq. Chester
 Harrison, John, Esq. Consulting Surgeon to the Infirmary, Chester
 Harrison-Colley, J. Esq. Chester
 Henderson, Colin, Esq. Chester
 Hill, George, M.D. Hooton
 Howe, John, Esq. Marple, near Stockport
 Hudson, Frederick, Esq. Stockport
 Jacob, Edward L. Esq. Senior Surgeon to the Birkenhead Hospital, Cloughton
 Jennett, M. Esq. Consulting Surgeon to the Borough Hospital, Birkenhead
 Jordison, Christopher, Esq. Malpas
 Joynson, George T. Esq. Northwich
 Laidlaw, William G. M.B. Tranmere
 Lambert, James, M.D. Surgeon to the Borough Hospital, Birkenhead
 Larmuth, John H. Esq. Sale Moor
 Lawrence, Alexander, M.B. Assistant Medical Officer to the County Asylum, Chester
 Leah, T. C. L.R.C.P.Ed. Hyde, Manchester
 Lord, John, M.D. Crewe
 Lord, Richard, M.D. Crewe
 McEwen, William, M.D. Chester
 Main, Wm. M.D. New Ferry, Birkenhead
 Massey, T. Esq. Consulting Surgeon to the Infirmary, Stockport
 Mathews, William, Esq. Nantwich
 Moreton, James E. Esq. Tarvin
 Munro, S. H. M.D. Nantwich
 Newbold, Edward, Esq. Surgeon to the Dispensary, Macclesfield (dead)
 Nicholson, T. D. M.B. Rock Ferry
 Nicholls, Thos. F. L.R.C.P.Ed. Knutsford
 Parker, Robert, Esq. Malpas
 Parr, Alfred, M.D. Consulting Surgeon to the Wallasey Dispensary, New Brighton
 Paton, John W. M.D. Rock Ferry
 Pownall, J. Esq. Altrincham
 Provis, William A. Esq. Macclesfield
 Ransome, A. M.D. Consulting Surgeon to Lloyd's Hospital, Bowdon
 Renshaw, Charles J. M.D. Altrincham
 Reushaw, Herbert S. M.D. Sale
 Roberts, John, M.D. Chester
 Robinson, John, M.B. Runcorn
 Rushton, J. L. M.D. Macclesfield
 Russell, David, M.D. Neston
 Senior, Rawson, Esq. Surgeon to Lloyd's Hospital, Bowdon
 Sidebottom, E. Esq. Mottram-in-Longendale (dead)

Somerville, Thomas A. L.R.C.P.Ed. Wilmslow
 Smith, S. Esq. Weaverham, Northwich
 Spratly, S. M.D. Rock Ferry
 Stollerfoth, H. M.D. Chester
 Stollerfoth, Sigismund, M.D. Chester
 Taylor, James, Esq. Surgeon to the Infirmary, Chester
 Turner, George, M.D. Consulting Physician to the Infirmary, Stockport
 Vaughan, W. E. W. Esq. Crewe
 Walker, George, M.D. Birkenhead
 Warburton, James P. L.R.C.P.Ed. Betley, Crewe
 Warrington, F. W. M.D. Congleton
 Waters, E. M.D. Physician to the Infirmary, Chester
 Watson, George B. C. M.D. Chester
 Watson, W. C. Esq. Surgeon to the Infirmary, Chester
 Weaver, Frederick P. M.D. Frodsham
 Webster, Benjamin, M.D. Alderley Edge
 Whitlow, Samuel, L.R.C.P.Ed. Halton
 Wild, James, Esq. Hayfield, Stockport
 Willett, James, Esq. Stretton
 Williams, Charles, Esq. Northwich

CORNWALL.

Number of Members..48.

Branch..South Western.

Andrew, Henry, Esq. Senior Surgeon to the Royal Cornwall Infirmary, Truro
 Appleton, George, Esq. St. Kevern
 Ash, R. V. M. B. Truro
 Barham, C. M.D. Senior Physician to the Royal Cornwall Infirmary, Truro
 Berryman, John P. Esq. St. Austell
 Borlase, Henry W. M.D. Helston
 Brown, William, Esq. Callington
 Bullmore, Frederick C. Esq. Surgeon to the Dispensary, Falmouth
 Butlin, Charles, H. Esq. Camborne
 Chubb, Charles W. Esq. Torpoint
 Clark, J. L. Esq. Saltash
 Clogg, Stephen, Esq. East Looe
 Congdon, William G. Esq. Marazion
 Couch, Thomas Q. Esq. Surgeon to the East Cornwall Dispensary, Bodmin
 Dodge, William H. Esq. Penzance
 Gaved, Arthur, Esq. St. Mabyn, Bodmin
 Good, Thomas, Esq. Coroner for East Cornwall, Launceston
 Harden, Henry, M.D. St. Mawes
 Harris, Abraham, M.D. Camborne
 Harris, Henry, M.D. Redruth
 Hutchinson, Thomas, Esq. Camborne
 Kempthorne, John, Esq. Callington
 Kerswill, George, Esq. Looe
 Kerswill, Robert, W. P. Esq. St. Germans
 King, D. H. Esq. Stratton
 King, Francis, Esq. Truro
 Leverton, Henry S. L.R.C.P. Ed. Surgeon to the Royal Cornwall Infirmary, Truro
 Mackintosh, Angus, M.D. Callington
 Marley, H. F. Esq. Padstow
 Michell, George A. Esq. Redruth
 Montgomery, Jas. M.D. Consulting Physician to the Dispensary, Penzance
 Montgomery, J. Barclay, M.D. Physician to the Dispensary, Penzance
 Mudge, James, Esq. Hayle
 Mudge, Thomas, Esq. Bodmin
 Nettle, W. G. Esq. House Surgeon to the Royal Cornwall Infirmary, Truro
 Parks, Charles H. Esq. St. Colomb
 Pearce, William, Esq. St. Tudy
 Porter, Philip, Esq. Tideford, St. Germans
 Prideaux, Alfred, Esq. Liskeard
 Raby, John, Esq. St. Germans
 Sargent, H. E. M.D. Lewannick
 Sharp, Edward, jun. Esq. Surgeon to the Royal Cornwall Infirmary, Truro
 Slemán, John, Esq. Gunnislake
 Stephens, W. K. Esq. Helston
 Thompson, David, Esq. Launceston
 Vigurs, C. C. Esq. Newlyn East
 West, Edward L. L.R.C.P. Ed. Launceston
 Wilson, George, Esq. Launceston

CUMBERLAND.

Number of Members..63.

Branch..Cumberland and Westmorland.
 Ablett, Edward, M.D. Whitehaven
 Arras, William, Esq. Wetheral

Astles, H. E. L. R.C.P. Ed. Holborn Hill
 Barnes, Henry, M.D. Physician to the Dispensary and Fever Hospital, Carlisle
 Barnes, Thomas, M.D. F.R.S.E. Physician to the Fever Hospital, Carlisle
 Bell, Henry, L.R.C.P. Ed. Cockermouth
 Brown, Robert, Esq. Surgeon to the Cumberland Infirmary, Carlisle
 Brown, William, Esq. Hesket Newmarket
 Campbell, John A. M.D. Assistant Medical Officer of the Asylum, Carlisle
 Carlyle, David, M.D. Carlisle
 Clouston, Thomas S. M.D. Superintendent of the Cumberland and Westmorland Asylum, Carlisle
 Crerar, John, L.R.C.P. Ed. Maryport
 Dick, James, M.D. Harrington
 Dickson, Joseph, M.D. Surgeon to the Infirmary, Whitehaven
 Dodgson, Henry, M.D. Cockermouth
 Elliott, Robert, M.D. Physician to the Dispensary and Fever Hospital, Carlisle
 Galloway, James, M.D. Wigton
 Graham, W. Esq. Netherhouse, Kirklington
 Greaves, William T. Esq. Penrith
 Hall, Cornelius S. Esq. Carlisle
 Harwood, Alfred, Esq. Cleator
 Hay, William, M.D. Carlisle
 Head, Thomas, M.D. Warwick Bridge
 Henry, E. W. M.B. Whitehaven
 Horan, P. C. L.R.C.P. Ed. Whitehaven
 Hudson, Thomas W. Esq. Bootle
 L'Anson, Thomas F. M.D. Surgeon to the Infirmary, Whitehaven
 Jackson, T. M.D. Penrith
 Jones, William, M.D. Aspatria
 Knight, Alexander A. H. M.D. Keswick
 Lawson, J. E. S. Esq. Egremont
 Lietch, D. M.D. Derwent Bank, Keswick
 Lockie, Stewart, M.D. Physician to the Cumberland Infirmary, Carlisle
 Lumb, Robert, Esq. Surgeon to the Infirmary, Whitehaven
 M'Gregor, Donald, L.R.C.P. Ed. Penrith
 Maclaren, Roderick, M.D. Surgeon to the Dispensary, Carlisle
 Miller, Henry, M.B. Aspatria
 Mitchell, H. M.D. Wigton
 Mitchell, J. M.D. Southwaite, Carlisle
 Mitchell, W. Esq. Bothel, Aspatria
 Muriel, J. G., Esq. Whitehaven
 Page, W. B. Esq. Surgeon to the Cumberland Infirmary, Carlisle
 Pickup, Eli, Esq. Great Salkeld
 Reeves, William, M.D. Carlisle
 Rigg, Thomas, M.D. Burgh-by-Sands
 Robertson, J. D. M.D. Penrith
 Robertson, John, M.D. Cockermouth
 Robison, David, Esq. Aikshaw, Aspatria
 Savage, George H. M.D. Alston Moor
 Shannon, G. M.D. Wigton
 Shannon, J. Esq. Infirmary, Whitehaven
 Somerville, Walter, M.D. Gosforth
 Syme, James, Esq. Egremont
 Taplin, B. D. L.R.C.P. Ed. Kirkoswald
 Taylor, Michael W. M.D. Penrith
 Thom, Alexander, L.R.C.P. Ed. Brompton
 Tiffen, Robert, M.D., Wigton
 Tweddle, John, Esq. Keswick
 Walker, Robert, L.R.C.P. Ed. Surgeon to the Dispensary, Carlisle
 Weldon, W. J. M.B. Holborn Hill
 Whitehead, John G. Esq. Cockermouth
 Wickham, Joseph, M.D. Penrith
 Wilson, J. B. Esq. Senior Surgeon to the Infirmary, Whitehaven

DERBYSHIRE.

Number of Members. .55.
 Branch. .Midland.

Baker, John W. Esq. Surgeon to the Infirmary, Derby
 Bingham, J. J. Esq. Tilsbeck, Alfreton
 Borough, Frederick, Esq. Surgeon to the Dispensary, Derby
 Branson, F. M.D. Baslow, Chesterfield
 Cantrell, Wm. L.R.C.P. Ed. Wirksworth
 Casson, J. H. Esq. Ashbourne
 Copestake, W. G. Esq. Surgeon to the Dispensary, Derby
 Curgenven, William G. M.D. Surgeon to the General Infirmary, Derby
 Dolman, Arthur H. Esq. Surgeon to the General Infirmary
 Dunn, C. B. N. Esq. Crick
 Evans, Charles, Esq. Bakewell
 Evans, Samuel H. Esq. Derby
 Fant, Patrick, Esq. Derby
 Femtem, Thomas, Esq. Eyam
 Fielding, J. R. Esq. Alfreton
 Finney, Charles W. Esq. Ockbrook
 Francis, Alfred O. L.R.C.P. Ed. Derby

Gaylor, Edward, L.R.C.P. Ed. Belper
 Gentles, Thomas L. Surgeon to the Dispensary, Derby
 Gisborne, Henry F. Esq. Consulting Surgeon to the General Infirmary, Derby
 Goode, Henry, M.B. L.M. Surgeon to the Dispensary, Derby
 Goodwin, Robert D. Esq. Ashbourne
 Greaves, Charles A. M.B. Derby
 Hall, James B. Esq. Waterhouses, Ashbourne
 Harwood, Charles, M.D. Shardlow
 Heygate, J. M.D. F.R.S. Consulting Physician to the General Infirmary, Derby
 Hitchman, John, M.D. Mickleover
 Holland, R. C. B. M.D. Matlock
 Hollis, William, Esq. Alvaston, Derby
 Hoskins, Edward, Esq. Derby
 Howard, W. Wardlaw, Esq. Glossop
 Iliffe, William, Esq. Surgeon to the Dispensary, Derby
 Jones, John T. Esq. Eckington
 Knipe, William M. Esq. Melville
 Knox, John, M.D. Bakewell
 Lee, John, Esq. Ashbourne
 Legge, Wm. Esq. Ironville, near Alfreton
 Marshall, W. J. Esq. Darley Dale
 Norman, George B. Esq. Ilkestone
 Ogle, William, M.D. Physician to the Infirmary, Derby
 Parke, John L. Esq. Tideswell
 Robertson, Wm. H. M.D. Consulting Physician to the Bath Charity, Buxton
 Russell, Arthur J. F. L.K.Q.C.P. Whitwell
 Sharpe, J. A. Esq. House Surgeon to the Infirmary, Derby
 Shipton, W. P. Esq. Consulting Surgeon to the Bath Charity, Buxton
 Tasker, Richard Thomas, Esq. Melbourne
 Taylor, George, M.D. Surgeon to the Infirmary, Derby
 Twigg, T. N. Esq. Parwich, Ashbourne
 Walker, Hugh E. M.D. Surgeon to the Hospital, Chesterfield
 Webb, William, M.D. Wirksworth
 Wilson, Wm. J. L.R.C.P. Ed. Clay Cross
 Wood, Robert, Esq. Ilkestone
 Woolley, T. S. Esq. Heanor
 Wrench, Edward M. Esq. Baslow
 Wright, Frederick W. Esq. Derby

DEVONSHIRE.

Number of Members. .113.
 Branch. .South Western.

Ackland, W. H. M.D. Medical Officer to the Dispensary, Bideford
 Adkins, Joshua E. Esq. Yealmpton
 Ash, T. L. L.R.C.P. Ed. Holsworthy
 Baker, Albert, M.D., Physician to the Dispensary, Dawlish
 Bankart, James, M.B. Surgeon to the Devon and Exeter Hospital, Exeter
 Blake, C. Paget, M.D., Consulting Physician to the Infirmary, Torquay
 Brooking, C. H., M.D., Brixham
 Brush, John R. M.D. Newton Abbot
 Bryden, Richard, Esq. Uffculme
 Budd, George, M.D. F.R.S. Barnstaple
 Budd, Richard, M.D. Physician to the North Devon Infirmary, Barnstaple
 Budd, Samuel, M.D. Physician to the Devon and Exeter Hospital, Exeter
 Bulteel, C. Esq. Surgeon to the Royal Albert Hospital, Stonehouse
 Cheves, A. B. M.B. Millbrook
 Clay, Robert H. M.D. Physician to the South Devon and East Cornwall Hospital, Plymouth
 Coates, Matthew, Esq. Stoke, Devonport
 Crighton, R. W. M.D. Physician to the Dispensary, Tavistock
 Cumming, A. J. Esq. Surgeon to the Devon and Exeter Hospital, Exeter
 Dansey, George, M.D. Stoke, Devonport
 Deacon, H. P. Esq. Ottery St. Mary
 De la Garde, P. C. Esq. Senior Surgeon to the Devon and Exeter Hospital, and to the Eye Infirmary, Exeter (dead)
 De la Rue, P. F. L. N. Esq. Devonport
 De Mierre, A. M.D. Ben Venue, Torquay
 Doidge, John G. Esq. Lifton
 Eccles, George H. Esq. Plymouth
 Edwards, Henry J. Esq. Teignmouth
 Edye, Stonard, Esq. Surgeon to the Eye Infirmary, Exeter
 Elliot, John, Esq. Kingsbridge
 Elliot, John, jun. Esq. Kingsbridge
 Elliot, William Henry, M.D. Physician to the Devon and Exeter Hospital, Exeter
 Evanson, R. T. M.D. Torquay (dead)
 Fairbank, F. Royston, M.D. Lynton
 Feild, Rev. J. Meyrick, Ashwater

Finch, T. Esq. St. Mary Church, Torquay
 Ford, James, M.D. Chulmleigh
 Gardner, Frederick, Esq. Ilfracombe
 Gaye, Henry S. Esq. Newton Abbot
 Gervis, W. S. M.D. Ashburton
 Goodridge, John T. Esq. Paignton
 Gould, John, Esq. Hatherleigh
 Greenway, Henry, Esq. Plymouth
 Hall, C. Radclyffe, M.D. F.R.C.P. Consulting Physician to the Hospital for Consumption, Torquay
 Hallett, Charles, Esq. Axminster
 Harper, Joseph, Esq. Barnstaple
 Harper, Thomas, Esq. Plymouth
 Harris, J. W. Esq. Surgeon to the Dispensary, Exeter
 Hicks, James H. Esq. Plymouth
 Hingston, Charles A. M.D. Physician to the Dispensary, Plymouth
 Hodge, Benjamin T. Esq. Surgeon to the Dispensary, Sidmouth
 Hounsell, H. S. M.D. Physician to the Consumption Hospital, Torquay
 Huxley, James U. M.D. Surgeon to the Torbay Infirmary, Torquay
 Kempe, Arthur, Esq. Consulting Surgeon to the Devon and Exeter Hospital, Exeter (dead)
 Kiernan, Owen, Esq. Buckfastleigh
 Leah, Thomas, Esq. Stonehouse
 Lillies, G. W. M.D. Chudleigh
 Littleton, Thomas, M.B. Physician to the Dispensary, Plymouth
 Lyle, Thos. M.D. Wenford House, Exeter
 Mackenzie, Frederick, Esq. Surgeon to the Infirmary, Tiverton
 Mackenzie, John I. M.B. Medical Officer to the Dispensary, Sidmouth
 Macreight, William W. M.D. Physician to the Torbay Infirmary, Torquay
 May, John H. S. Esq. Surgeon to the Dispensary, Plymouth
 May, Joseph, Esq. Consulting Surgeon to the Royal Albert Hospital, Devonport
 May, Joseph, jun. Esq. Surgeon to the Royal Albert Hospital, Stoke, Devonport
 Michell, Sloane, Esq. Dolton
 Miles, George, Esq. Plympton St. Mary
 Miller, P. M.D. Consulting Physician to the Devon and Exeter Hospital, Exeter (dead)
 Moore, Milner M. Esq. Resident Medical Officer to the Royal Albert Hospital, Devonport
 Nankivell, Charles B. M.D. Physician to the Consumption Hospital, Torquay
 Nason, Edward, Esq. Bampton
 Owen, Arthur W. Esq. Black Torrington
 Owen, Thomas E. Esq. Totnes
 Pearce, Thomas, M.D. Plymouth
 Perry, Henry, Esq. East Stonehouse
 Picken, Samuel, Esq. Plymouth
 Pollard, James, Esq. Surgeon to the Torbay Infirmary, Torquay
 Pollard, William, jun. Esq. Surgeon to the Torbay Infirmary, Torquay
 Pridham, Chas. W. L.R.C.P. Ed. Paignton
 Pridham, Thomas L. Esq. Bideford
 Prowse, A. P. Esq. Mannamhead, Plymouth
 Rendle, E. M. Russell, Esq. Surgeon to the Royal Eye Infirmary, Plymouth
 Risdon, William, Esq. Dolton
 Roberts, A. C. Esq. Exeter
 Rogers, W. H. Esq. Yealmpton
 Rolston, George T. Esq. Devonport
 Rolston, John, M.D. Stoke, Devonport
 Roper, C. H. Esq. Surgeon to the Devon and Exeter Hospital, Exeter
 Ross, J. T. C. Esq. Surgeon-major, Budleigh Salterton
 Row, Frederick, M.D., Surgeon to the Royal Albert Hospital, Devonport
 Saunders, George J. S. M.D. Medical Superintendent of the County Asylum, Exminster
 Shapter, Thomas, M.D. Physician to the Devon and Exeter Hospital, Exeter
 Somer, James, Esq. Broadclyst
 Soper, R. W. Esq. Dartmouth
 Spragge, W. K. Esq. Paignton
 Square, William, Esq. Surgeon to the Royal Eye Infirmary, Plymouth
 Square, William Joseph, Esq. Surgeon to the South Devon and East Cornwall Hospital, Plymouth
 Stabb, William W. Esq. Torquay
 Steele, W. S. Esq. St. Mary Church, Torquay
 Stevens, John N. Esq. Surgeon to the Borough Prison, Plymouth
 Swain, Paul Wm. Esq. Stoke, Devonport

Swain, William Paul, Esq. Surgeon to the Royal Albert Hospital, Ker Street, Devonport
 Thompson, John, M.D. Bideford
 Thompson, Spencer, M.D. Ashton, Torquay
 Thorold, Ellis F. M.D. Plymouth
 Toogood, I. Baruch, Esq. Surgeon to the Torbay Infirmary, Torquay
 Trimmer, Francis, Esq. Okehampton
 Turnbull, George W. M.D. Physician to the Dispensary, Exmouth
 Wallis, Albert J. Esq. Totnes
 Whipple, Connell, Esq. Surgeon to the South Devon and East Cornwall Hospital, Plymouth
 Whipple, John, Esq. Consulting Surgeon to the South Devon and East Cornwall Hospital, Plymouth
 White, Archibald, M.D. Torquay
 Woodman, John, Esq. Surgeon to the Dispensary, Exeter
 Woolcombe, R. W. Esq. Stoke, Devonport
 Workman, C. J. M.D. Ophthalmic Surgeon to the Infirmary, Teignmouth.

DORSETSHIRE.

Number of Members. .16.
 Branch. .None.

Bacot, William G. Esq. Blandford
 Clapcott, John J. Esq. Evershot
 Cowdell, C. M.D. Physician to the Dorset County Hospital, Dorchester (dead)
 Ellis, Heber D. Esq. Poole
 Evans, G. M. Esq. Bridport
 Hingston, Wm. Esq. Lyme Regis
 Lacy, Edward, Esq. Poole
 Lush, William G. V. M.D. Weymouth
 McLean, Allan, M.B. Portland
 Miles, E. J. M.D. Gillingham
 Norris, Henry E. Esq. Charmouth
 Philpots, Edward, M.D. Poole
 Skinner, David S. Esq. Lyme Regis
 Tarzwell, J. Esq. Sturminster Newton
 Thorne, George L. M.D. Swanage
 Underhay, Samuel F. Esq. Gussage All Saints

DURHAM.

Number of Members. .136.
 Branch. .Northern.

Abrath, Gustav A. M.D. Sunderland
 Adamson, J. M.D. Hetton-le-Hole, Fence Houses
 Allen, W. C. Esq. Willington
 Alworthy, Charles, Esq. Toft Hill, Bishop Auckland
 Appleton, Henry, M.D. Darlington
 Arison, Charles, L.R.C.P. Ed. Stanhope
 Arrowsmith, Wm. H. Esq. Darlington
 Atkinson, James, M.D. West Hartlepool
 Banning, Robert J. M.D. Medical Officer to the Dispensary, Gateshead
 Barker, Robert, Esq. Sunderland
 Barkus, B. M.D. Gateshead
 Barron, James, Esq. Assistant-Surgeon to the General Infirmary, Sunderland
 Blackett, George P. Esq. Whickham
 Blackett, William C. Esq. Durham
 Blandford, Joseph W. Esq. Coxhoe
 Blumer, Luke, M.D. Sunderland
 Bolton, George, Esq. Sunderland
 Bolton, William T. Esq. Ebchester
 Botham, J. C. M.D. Surgeon to the Hospital, Hartlepool
 Boyd, William, Esq. Durham
 Brady, C. S. Esq. Bishopwearmouth
 Brady, Henry, Esq. Gateshead
 Brecknell, William H. M.D. Felling
 Broadbent, S. W. Esq. South Hetton
 Brunskill, W. Esq. Staindrop, Darlington
 Callender, Edwin, Esq. South Shields
 Canney, George, M.D. Bishop Auckland
 Clark, Hugh, M.D. Ferry Hill
 Cockcroft, George E. Esq. Hurworth
 Cook, Robert F. M.B. Medical Officer to the Dispensary, Gateshead
 Copeland, William, Esq. Staindrop, Darlington
 Crease, J. R. L.R.C.P. Ed. South Shields
 Crisp, J. L. Esq. South Shields
 Curry, William, Esq. East Rainton
 Dale, John, Esq. Stockton-on-Tees
 Davis, John, Esq. Sunderland
 Davis, Robert, Esq. Surgeon to the Gateshead Dispensary, Wrekenton
 Denham, Jacob S. M.D. Surgeon to the Dispensary, South Shields
 Dixon, William H. M.D. Sunderland
 Douglas, M. Esq. Surgeon to the Hospital for Children, Sunderland

Douglass, George, M.D. Medical Officer to the Dispensary, Gateshead
 Downie, George, Esq. Chester-le-Street
 Easby, Wm. Esq. Darlington
 Eastwood, J. W. M.D. Dinsdale Park, Darlington
 Evans, John, M.B. Sunderland
 Farquharson, John, Esq. Surgeon to the Hospital and Dispensary, Stockton-on-Tees
 Fielden, Samuel, Esq. Shildon, Darlington
 Foote, Charles N. M.D. Bishopwearmouth
 Forster, W. W. Esq. Chester-le-Street
 Foss, R. W. M.B. Stockton-on-Tees
 Fothergill, John R. M.D. Physician to the Hospital, Darlington
 Frain, Joseph, M.D. Surgeon to the Dispensary, South Shields
 Fraser, Robert M.L. Esq. Darlington
 Furniss, J. T. Esq. Castle Eden
 Gammage, Robert G. Esq. Sunderland
 Goodisson, William, Esq. Esh
 Gourley, Samuel, M.D. Surgeon to the Hospital, West Hartlepool
 Gowans, Wm. Esq. South Shields
 Hardy, H. G. L.R.C.P.Ed. Byer's Green, Ferry Hill
 Heffernan, Edward, Esq. Speunymoor
 Henderson, Thomas M. M.D. Crook
 Hood, George, Esq. Tow Law, Darlington
 Huntley, Robert E. M.D. Jarrow
 Hutchinson, V. M.D. Bishop Auckland
 Jackson, John, Esq. Great Usworth
 Jackson, Thomas Hayes, M.D. Darlington
 Jepson, Edward Cave, Esq. Surgeon to the County Hospital, Durham
 Jobson, John, Esq. Bishop Auckland
 Jones, F. D. M.D. Washington Station
 Kelly, James, Esq. Jarrow
 Kilburn, W. B. Esq. West Auckland
 Knox, Wm. Esq. Felling
 Laidler, Joseph, Esq. Stockton-on-Tees
 Lambert, William O. M.D. Sunderland
 Legat, Andrew, M.D. South Shields
 Linton, Ralph, Esq. Chester-le-Street
 Longbotham, J. Esq. Seaton Carew
 Macdonald, J. E. L. L.R.C.P.Ed. Haswell, Fence Houses
 Macdonald, John W. Esq. Willington
 Mackay, J. Esq. Crook
 Mackechnie, Daniel, Esq. Bishop Auckland
 Mackechnie, David, Esq. West Hartlepool
 Mackie, J. Esq. Heighington, Darlington
 Makens, John, Esq. Middleton-in-Teesdale
 Maling, Edward H. Esq. Senior Surgeon to the Sunderland Infirmary, Bishopwearmouth
 Maling, Edwin A. Esq. Surgeon to the Sunderland Infirmary, Bishopwearmouth
 Manson, R. T. Esq. Howden
 Mitchell, John, M.D. Barnard Castle
 Modlin, Robert, Esq. Sunderland
 Moore, George, M.D. Physician to the Hospital, Hartlepool
 Morgan, George B. Esq. Surgeon to the Sunderland Infirmary, Bishopwearmouth
 Munro, James, M.D. Barnard Castle
 Natrass, Charles, M.D. Sunderland
 O'Hanlan, J. C. Esq. Spennymoor
 Oldham, Riton, Esq. West Hartlepool
 Oliver, W. H. Esq. L.R.C.P.Ed. Stockton-on-Tees
 Piper, Stephen E. Esq. Consulting-Surgeon to the Hospital, Darlington
 Pyle, Thomas T. M.D. Physician to the Infirmary Sunderland
 Rawlings, James, Esq. Hartlepool
 Read, James T. Esq. Ryhope
 Reid, Alex. Esq. Tow Law, Darlington
 Reilly, Maxwell F. Esq. Castle Eden (dead)
 Renton, George, M.D. Shotley Bridge
 Renton, William M. M.D. Shotley Bridge
 Richardson, William, Esq. Surgeon to the Dispensary, Stockton-on-Tees (dead)
 Robinson, William, M.D. Medical Officer to the Dispensary, Gateshead
 Robson, James, Esq. South Shields
 Robson, Robert N. Esq. Durham
 Rolf, Alfred G. Esq. Gateshead
 Scott, James, Esq. Gateshead
 Shiell, William R. Esq. Chester-le-Street
 Smeddle, Robert, Esq. Shildon
 Smith, Robert, M.D. Superintendent of the Durham County Asylum, Ferry Hill
 Smith, Robert A. Esq. Sunderland
 Smith, W. H. Esq. Houghton-le-Spring
 Stevenson, Henry R. L.R.C.P.Ed. Whickham (dead)

Stoker, William, Esq. Surgeon to the Durham County Hospital, Durham
 Thompson, Robert F. M.D. Jarrow
 Thomson, J. C. M.D. Cassop, Ferry Hill
 Thwaites, T. B. Esq. Bishop Auckland
 Trotter, Charles, Esq. Surgeon to the Hospital and Dispensary, Stockton-on-Tees
 Twaddell, Geo. Esq. Houghton-le-Spring
 Tyler, Edwin, Esq. Durham (dead)
 Wallis, John A. M. Esq. Assistant Medical Officer to the County Asylum, Sedgefield
 Waterston, James, Esq. Sunderland
 Watson, H. W. Esq. Burnopfield, Durham
 Welford, G. Esq. Consulting Surgeon to the Sunderland Infirmary, Bishopwearmouth
 Williamson, James, M.D. South Shields
 Wilson, Allan, M.D. Castle Eden
 Wilson, James, L.R.C.P.Ed. Sunderland
 Wilson, John, M.D. Lanchester
 Wilson, John, Esq. Jarrow
 Wilson, Robert H. M.D. Medical Officer to the Dispensary, Gateshead
 Wood, T. O. Esq. Dunston, Gateshead
 Yeld, Henry J. M.D. Surgeon to the Infirmary, Sunderland
 Young, Thomas, Esq. South Shields

ESSEX.

Number of Members. 31.
 Branch. Metropolitan Counties.
 Argles, F. Esq. Waxstead
 Brown, George, M.D. Colchester
 Collins, Frederick, M.D. Wanstead
 Cook, John W. M.D. Manningtree
 Cooper, Frank W. Esq. Leytonstone
 Grattan, Matthew H. L.K.Q.C.P. Chipping Ongar
 Hamilton, J. B. L.R.C.P.Ed. Stratford
 Hare, Henry, M.D. Great Baddow
 Harley, Edward, Esq. Surgeon to the Hospital, Saffron Walden
 Hart, Walter, Esq. Great Baddow
 Hinds, James, M.D. Halstead
 Jones, Alfred N. Esq. Surgeon to the Hospital, Saffron Walden
 Ling, William S. Brightlingsea
 Manthorp, Maurice L. Esq. Thorpe
 Matthews, Arthur, Esq. Dovercourt
 Nicholson, John F. Esq. Surgeon to the West Ham Dispensary, Stratford Green
 Parsons, Francis H. M.D. Barking
 Reynolds, R. Esq. Steeple Bumpstead
 Roche, Francis E. M.D. Surgeon to the Essex County Gaol, Chelmsford
 Salter, John H. Esq. Tolleshunt D'Arcy
 Sanders, Charles, L.R.C.P.Ed. Chigwell
 Sinclair, Duncan, Esq. Halstead
 Stear, Henry, Esq. Surgeon to the Hospital, Saffron Walden
 Vance, John, Esq. Plaistow
 Varenne, Ezekiel G. Esq. Kelvedon
 Warwick, William R. M.D. Southend
 Weller, George, Esq. Wanstead
 Welsh, F. F. Esq. Surgeon to the Hospital, Saffron Walden
 Wheeler, Daniel, Esq. Chelmsford
 Williams, Edward, M.D. Consulting Physician to the Essex and Colchester Hospital, Colchester
 Wright, Alfred, Esq. Romford

GLOUCESTERSHIRE.

Number of Members. 153.
 Branches { Bath and Bristol.
 Gloucestershire.
 Abell, Joseph, Esq. Hempstead Villa, near Gloucester
 Allard, Wm. Esq. Tewkesbury
 Arnott, George, M.D. Redmarley, Newent
 Askwith, Robert, M.D. Cheltenham
 Atchley, G. F. M.B. Surgeon to the Bristol General Hospital, and Lecturer on Physiology in the Medical School, Cotham, Bristol
 Averill, Alfred, Esq. Tetbury
 Bartley, Robert T. H. M.D. Surgeon to the Bristol Eye Hospital, Clifton
 Batten, R. W. M.D. Physician to the Infirmary, Gloucester
 Batten, Thomas, Esq. Coleford
 Beddoe, John, M.D. Physician to the Bristol Royal Infirmary, Clifton
 Bernard, David E. Esq. Bristol
 Bernard, R. M. Esq. Senior Surgeon to the Bristol Royal Infirmary, Clifton (dead)
 Black, Cornelius, M.D. Clifton
 Blagden, R. Esq. Minchinhampton

Board, Edmund C. Esq. Lecturer on Anatomy in the Bristol Medical School, and Assistant-Surgeon to the Royal Infirmary, Clifton
 Boughton, J. H. Esq. Tewkesbury
 Bradley, Edward, Esq. Cheltenham
 Bridgman, Isaac T. Esq. Berkeley
 Brittan, Frederick, M.D. Physician to the Bristol Royal Infirmary, Clifton
 Bubb, John, Esq. Surgeon to the General Hospital, Cheltenham
 Budd, William, M.D. F.R.S. Consulting Physician to the Bristol Royal Infirmary, Clifton
 Burder, George F. M.D. Physician to the Bristol General Hospital, and Lecturer on Materia Medica and Therapeutics in the Medical School, Clifton
 Burleigh, Alfred, Esq. Surgeon Accoucheur to the Bristol Dispensary, Cotham
 Burroughs, Benjamin, P. B. Esq. Physician's Assistant at the General Hospital, Bristol
 Burroughs, J. B. Esq. Clifton
 Bush, D. Ward, M.D. Physician to the Bristol Hospital for Children, Clifton
 Campbell, Charles M. M.D. Staunton
 Carr, Alexander, Esq. Totterdown, Bristol
 Challacombe, J. P. M.D. Bristol
 Clark, Thomas E. Esq. Surgeon to the Bristol Royal Infirmary, Clifton
 Clarke, William M. Esq. Consulting Surgeon to the Bristol General Hospital, Clifton
 Coe, R. W. Esq. Surgeon to the General Hospital, and Lecturer on Surgery in the Medical School, Bristol
 Coleman, John, M.D. Bristol
 Colledge, T. R. M.D. Consulting Physician to the Ophthalmic Infirmary, Cheltenham
 Cook, Francis, M.D. Physician to the General Hospital, Cheltenham
 Cookson, Ambrose D. Esq. Gloucester
 Cooper, Frederick, Esq. Clifton
 Cooper, Wm. Esq. Surgeon-Accoucheur to the Bristol Dispensary, Bristol
 Corbould, George Giles, Esq. Surgeon to the Dispensary, Bristol
 Cripps, Edward, Esq. Cirencester
 Crocker, T. M.D. Bristol
 Cross, W. Esq. Caledonia Place, Clifton
 Crossman, Edward, Esq. Hambrook
 Cubitt, George R. Esq. Surgeon to the Hospital, Stroud
 Currie, John, M.D. Lydney
 Davey, James G. M.D. Northwoods, Bristol
 Davies, David, Esq. Surgeon to the Dispensary, and Medical Inspector of Health, Bristol
 Davies, Thomas H. W. Esq. Bristol
 Day, Wm. E. L.R.C.P.Ed. Barton Hill, Bristol
 Devereux, Daniel, Esq. Tewkesbury
 Dew, Henry R. Esq. Assistant-Surgeon to the Eye Hospital, Bristol
 Dobson, N. C. Esq. Surgeon to the Children's Hospital, Clifton
 Dowson, C. H. Esq. Bristol
 Dutton, Douglas, John, Esq. Dursley
 Elcum, C. F. Esq. Cheltenham
 Ellis, Robert W. Esq. Bristol
 Ellis, Thomas S. Esq. Surgeon to the Infirmary, Gloucester
 Evans, Thomas, M.D. Consulting Physician to the Infirmary, Gloucester
 Fendick, Robert, Esq. Bristol
 Fisher, Stephen W. M.D. Physician to the Hospital for Children, Redland, Bristol
 Fleischmann, Alfred, Esq. Cheltenham
 Fox, Edward L. M.D. Physician to the Bristol Royal Infirmary, and Lecturer on Medicine in the Medical School, Clifton
 Gardiner, George, Esq. Bristol
 Gimblett, John, M.D. Lydney
 Gloag, G. A. Esq. Resident Medical Officer to the Dispensary, Bristol
 Goodeve, Edward, M.B. Stoke Bishop, nr. Bristol
 Grace, Alfred, Esq. Chipping Sodbury
 Grace, Edward M. Esq. Thornbury
 Grace, H. Esq. Kingswood Hill, Bristol
 Graves, Ryves W. Esq. Surgeon to the Infirmary, Gloucester
 Green, Thomas, M.D. Consulting Surgeon to the Royal Infirmary, Bristol
 Greig, Charles, Esq. Clifton
 Griffiths, L. M. Esq. Hotwells, Clifton
 Hallett, Thomas G. P. Esq. Redcliff Hill, Bristol
 Hart, Gratian C. B. Esq. Clifton
 Hatton, John, L.R.C.P.Ed. Coleford
 Haviland, H. J. M.D. Cheltenham

Hawkins, Clement J. Esq. Consulting Surgeon to the General Hospital Cheltenham
 Hicks, Thomas, Esq. Surgeon to the County Prison, Gloucester
 Highett, Charles, Esq. Bristol
 Hore, Henry Augustus, Esq. Bristol (dead)
 Humphreys, John, Esq. House-Surgeon to the Dispensary, Cheltenham
 James, Joshua, Esq. Surgeon to the Hospital for Children, Bristol
 Jessop, Henry E. Esq. Cheltenham
 Kilgour, John S. M.D. Physician to the Dispensary, Cheltenham
 Knill, James, L.R.C.P.Ed. Lechlade
 Lansdown, F. P. Esq. Surgeon to the General Hospital, and Lecturer on Anatomy in the Medical School, Clifton
 Lawrence, John, Esq. Clifton
 Leonard, Crosby, Esq. Surgeon to the Royal Infirmary, Bristol
 Liddell, J. B. M.D.
 Linton, Sir W. M.D. Inspector-General of Hospitals, Royal Army, Cheltenham
 Long, Edward, Esq. Thornbury
 Lucy, William, Esq. Cotham, Bristol
 Ludlow, Ebenezer, M.B. Assistant Physician to the Royal Infirmary, Bristol
 McBride, James, L.R.C.P.Ed. Bristol
 Macgowan, A. T. Esq. Kingswood Park, Bristol
 Macrorie, David, M.D. Mount Vernon, Stroud
 Marshall, Henry, M.D. Surgeon to the Bristol General Hospital, Clifton
 Martyn, Samuel, M.D. Physician to the Bristol General Hospital, and Lecturer on Medicine in the Medical School, Clifton
 Mayor, T. O. Esq. Surgeon to the Clifton Dispensary, Redland, Bristol
 Metford, Joseph, Esq. Surgeon to the Clifton Dispensary, Bristol
 Moore, G. Esq. Moreton-in-the-Marsh
 Morgan, William F. Esq. Consulting Surgeon to the Royal Infirmary, Bristol
 Morris, Charles William, Esq. Chipping-Campden
 Morris, David W. Esq. Frampton-on-Severn
 Nash, Joseph, M.D. Brookley Hall, near Bristol
 Norton, John A. M.B. Resident Medical Officer to the Dispensary, Bristol
 Paine, W. H. M.D. Physician to the Hospital, Stroud
 Parsons, John D. F.M.D. Resident Medical Officer to the Dispensary, Clifton
 Partridge, Thomas, L.K.Q.C.P. Stroud
 Phelps, W. H. Esq. Bristol
 Prieard, Augustin, Esq. Consulting Surgeon to the Bristol Royal Infirmary, Clifton
 Proudfoot, Thomas, M.D. Lydney
 Reade, H. C. Esq. Deputy Inspector-General Royal Army, Clifton
 Ring, Charles G. Esq. Clifton
 Rooke, Thomas M. M.D. Cheltenham
 Rudge, Charles K. Esq. Cotham, Bristol
 Rumsey, Henry W. M.D. Cheltenham
 Sankey, W. H. Octavius, M.D. Lecturer on Mental Diseases in University College, London, Sandywell Park, Cheltenham
 Sheppard, William Yeoman, Esq. Clifton
 Simmons, B. Esq. Wotton-under-Edge
 Sleeman, Philip R. Esq. Clifton
 Smerdon, Charles W. Esq. Clifton
 Smith, R. Shingleton, M.D. Assistant House-Surgeon to the Royal Infirmary, Bristol
 Smith, Thomas, M.D. Cheltenham
 Smith, William, Esq. Clifton
 Steele, Charles, Esq. Surgeon to the Bristol Royal Infirmary, and Lecturer on Physiology in the Bristol Medical School, Bristol
 Stephens, H. O. M.D. Bristol
 Sugden, William, Esq. Horfield, Bristol
 Swayne, J. G. M.D. Physician-Accoucheur to the Bristol General Hospital, and Lecturer on Midwifery in the Medical School, Clifton
 Swayne, S. H. Esq. Berkeley Square, Bristol
 Swinson, T. S. Esq. Mickleton, Campden
 Symonds, John A. M.D. F.R.S.E. Consulting Physician to the Bristol General Hospital, Clifton Hill House, Bristol (dead)
 Taylor, James, Esq. Bristol
 Taylor, Theodore T. Esq. Cirencester
 Thomas, Reynolds C. M.D. Cheltenham

Thompson, George, Esq. Asylum, Staple-
ton, Bristol
Thorp, Disney L. M.D. Suffolk Lawn,
Cheltenham
Tibbitts, R. W. M.B. Surgeon to the Bristol
Royal Infirmary, and Lecturer on Sur-
gery in the Medical School, Clifton
Tilton, Rowland, Esq. Stonehouse
Tyte, R. H. Esq. Minchinhampton
Ware, John, Esq. Clifton, Bristol
Walters, Charles A. Esq. Cheltenham
Washbourn, Buchanan, M.D. Physician to
the Infirmary, Gloucester
Watson, John D. M.B. Chalford
Webster, Thomas, Esq. Surgeon to the
Hospital for Children, Redland, Bris-
tol
Wethered, Charles, Esq. Surgeon to the
Hospital, Stroud
White, Frederick B. M.R.C.P. Wotton-
under-edge
Wickham, William, Esq. Tetbury
Willett, Matthew, M.D. Easton Road,
Bristol
Wilson, Edward T. M.B. Physician to the
Dispensary, Cheltenham
Winterbotham, L. Esq. Surgeon to the
General Hospital, Cheltenham
Withington, J. B. Esq. Bristol

HAMPSHIRE.

Number of Members..70.
Branch..Reading.

Aitken, William, M.D. Professor of Patho-
logy in the Army Medical School, Wool-
ston, near Southampton
Aldersey, William H. Esq. Havant
Alford, Samuel, Esq. Southsea
Beckingsale, J. E. Esq. Newport, Isle of
Wight
Bentham, Samuel, Esq. Southsea
Betts, G. H. M.D. Shanklin, Isle of
Wight
Burslem, Willoughby, M.D. Consulting
Physician to the Sanatorium, Bourn-
mouth
Butler, Frederick J. M.D. Surgeon to the
Royal Hants County Hospital, Win-
chester
Case, William, L.R.C.P.Ed. Fareham
Compton, T. A. M.D. Bournemouth
Cooper, Robert T. M.B. Southampton
Cooper, William, M.D. Southsea
Covey, John, Esq. Alresford
Cross, R. Shackleford, Esq. Petersfield
Curtis, William, Esq. Alton
Dayman, H. Esq. Milbrook, Southamp-
ton
Doswell, G. H. Esq. Bishop's Waltham
Dyer, Samuel S. M.D. Ringwood
Elliott, Ernest, M.D. Surgeon to the Royal
Portsmouth, Portsea, and Gosport Hos-
pital, Southsea
Elmes, W. H. Esq. Victoria Hospital,
Netley
Evans, J. O. M.D. Fratton, Portsmouth
Falls, W. S. M.D. Physician to the Sana-
torium, Bournemouth
Farr, Septimus B. Esq. Andover
Fox, Luther O. M.D. Broughton
Gibson, James E. Esq. West Cowes
Giles, W. F. Esq. Hythe, Southampton
Godwin, James, Esq. Twyford
Harrison, George W. Esq. Alton
Haslam, James, Esq. Heckfield
Heale, J. Newton, M.D. Winchester
Hemsted, T. R. Esq. Whitechurch
Hoffmeister, William C. M.D. Surgeon to
the Queen and the Royal Family, Cowes,
Isle of Wight
Kealy, John R. M.D. Medical Officer to the
Dispensary, Gosport
Keele, Charles P. Esq. Surgeon to the
Borough Gaol, Hythe, Southampton
Lake, G. A. K. M.D. Surgeon to the Royal
South Hants Infirmary, Southampton
Langdon, T. C. Esq. Surgeon to the Royal
Hants County Hospital Winchester
Longmore, Thomas, Esq. O.B. Deputy In-
spector General, Professor of Military
Surgery in the Army Medical School,
Netley
M'Intyre, John, M.D. Odiham
Manley, John, M.D. Superintendent of the
County Asylum, Fareham
Martin, J. H. C. M.D. Portsmouth
Mayo, Charles, Esq. Consulting Surgeon
to the Royal Hants County Hospital,
Winchester
Miller, John W. M. M.D. Southsea
Moore, Thomas, Esq. Petersfield
Morley, Frederic, Esq. Portsmouth

Newman, Adam P. M.D. Hill, Southamp-
ton
Norman, H. Burford, Esq. Southsea
Orsborn, John, M.D. Bitterne
Page, Frederick, M.D. Milton, Southsea
Parkes, E. A. M.D. F.R.S. Professor of
Hygiene in the Army Medical School,
Bitterne, Southampton
Pern, Alfred, Esq. Botley, Southampton
Pritchard, John F. Esq. Portsmouth
Shorto, J. R. Esq. Surgeon to the Royal
South Hants Infirmary, Southampton
Simpson, T. Pemberton, M.D. Medical
Officer to the Royal Portsmouth, Port-
sea, and Gosport Hospital, Southsea
Smith, Henry R. Esq. Southsea
Smith, Robt. Esq. Sandown, Isle of Wight
Smith, William A. Esq. Surgeon to the
Sanatorium Bournemouth
Snow, William V. M.D. Physician to the
Sanatorium, Bournemouth
Stephens, Daniel W. M.D. Emsworth
Sweeting, Robert B. Esq. Basingstoke
Thomson, J. Roberts, M.D. Physician to
the Sanatorium, Bournemouth
Trend, T. W. L.K.Q.C.P.I. Southampton
Turner, W. F. J. M.R.C.P.Ed. Ryde, Isle of
Wight
Ward, Thomas, Esq. Southampton
Webb, Charles, Esq. Basingstoke
Wharton, H. S. Esq. Gosport
Whicher, James, Esq. Southsea
White, J. G. M.D. Bournemouth
Wilks, A. G. Platt, M.B. Ryde
Wills, Douglas, Esq. Kingston, Portsea
Wilson, G. M.D. Portsea

HEREFORDSHIRE.

Number of Members..15.

Branch..Gloucestershire.

Barnett, Samuel, Esq. Leominster
Bull, H. G. M.D. Senior Physician to the
Infirmary, Hereford
Cartwright, J. A. T. Esq. Leintwardine
Chapman, Thomas A. M.D. Medical Super-
intendent of the Asylum, Hereford
Foote, Gustavus, Esq. Kington
George, Frederick, M.D. Ross
Horton, Henry, Esq. Eardisley
Howey, Edwards W. Esq. Bromyard
Hyde, William E. Esq. Surgeon to the
Dispensary, Leominster
Jones, Edmund, M.D. Ross
Lingen, Charles, M.D. Surgeon Extraor-
dinary to the Infirmary, Hereford
Rudge, Henry, M.D. Surgeon to the Dis-
pensary, Leominster
Symmons, George S. Esq. Ledbury
Turner, Thomas, Esq. Surgeon to the In-
firmary, Hereford
Wood, Miles Astman, Esq. Surgeon to the
Dispensary, Ledbury

HERTFORDSHIRE.

Number of Members..26.

Branch..Metropolitan Counties.

Ambler, Edward H. Esq. Surgeon to the
West Herts Infirmary, Hemel Hemp-
stead
Balding, Daniel B. Esq. Royston
Brett, Alfred T. M.D. Watford
Brickwell, J. Esq. Sawbridgeworth
Case, Henry, Esq. House-Surgeon to the
West Herts Infirmary, Hemel Hemp-
stead
Cocks, Benjamin, Esq. Buntingford
Codd, George, Esq. Rickmansworth
Denne, William, Esq. Medical Superin-
tendent of the Three Counties Lunatic
Asylum, Stotfold, Baldock
Drage, Charles, M.D. Hatfield
Elin, George, M.D. Medical Officer to the
Infirmary, Hertford
Godson, Charles, Esq. Barnet
Hobson, W. H. Esq. Surgeon to the West
Herts Infirmary, Berkhamstead
Hodges, Herbert B. Esq. Watton, Hert-
ford
Hodson, C. F. Esq. Bishop's Stortford
Hutchinson, John R. Esq. Medical Officer
to the Dispensary, St. Albans
Iles, F. H. Wilson, M.D. Watford
Linnear, E. H. Esq. Shenley
Lipscomb, J. T. N. M.D. Medical Officer
to the Dispensary, St. Albans
Parker, T. Esq. Cheuies, Rickmansworth
Phillips, G. M. Esq. Whitwell
Pope, Edward, Esq. Tring
Prior, Richard H. Esq. Medical Officer to
the Dispensary, St. Albans
Smith, Frederick M. M.D. Great Hadham

Spackman, F. R. M.D. Medical Officer to
the St. Alban's Dispensary Harpenden
Tindale, Edward, Esq. Ashwell
Webster, Frederic R. Esq. St. Albans

HUNTINGDONSHIRE.

Number of Members..15.

Branch..Cambridge and Huntingdon.

Bates, C. P. Esq. Ramsey
Evans, John J. Esq. St. Neots
Few, William, Esq. Ramsey
Foster, Michael, Esq. Medical Officer to
the County Hospital, Huntingdon
Goodall, Joseph, Esq. St. Ives
Grove, William R. M.D. St. Ives
Hemming, J. H. Esq. Kimbolton
Lucas, Herbert, Esq. Medical Officer to
the County Hospital, Huntingdon
Mence, W. H. D. Esq. St. Ives
Oldman, J. Esq. Medical Officer to the
County Hospital, Huntingdon
Sergeant, D. M. M.D. Warboys
Ward, William, M.D. Consulting Medical
Officer to the County Hospital, Hunting-
don
Watson, J. Esq. Hemingford Grey
Wright, Samuel, Esq. St. Neots
Wright, Thomas G. Esq. Stilton

KENT.

Number of Members..161.

Branch..South Eastern.

Adams, Matthew A. Esq. Surgeon to the
Kent County Ophthalmic Hospital,
Maidstone
Allfrey, Charles H. M.D. St. Mary Cray
Armstrong, John, M.D. Consulting Sur-
geon to the Infirmary, Gravesend
Armstrong, John C. Esq. Surgeon to the
Infirmary, Gravesend
Astley, E. F. M.D. Physician to the Hos-
pital, Dover
Atkinson, C. S. A. Esq. Ashford
Austen, Josiah, Esq. Surgeon to the Dis-
pensary, Ramsgate
Barrington, N. W. M.D. Bexley Heath
Barry, J. Milner, M.D. Tunbridge Wells
Barton, Francis E. Esq. Surgeon to the
Hospital, Dover
Bateman, Francis, M.B. House-Surgeon
to the Hospital, Canterbury
Bateman, William, Esq. Surgeon to the
Dispensary, Folkestone
Beadles, Arthur, Esq. Forest Hill
Beeby, W. T. M.D. Bromley
Bell, James Vincent, M.D. Surgeon to St.
Bartholomew's Hospital, Rochester
Bell, William, Esq. Rochester
Billinghurst, Henry, M.D. Bromley
Bird, W. Valentine, M.D. Longton Grove,
Sydenham
Bishop, Henry, Esq. Tunbridge
Blaxland, John, Esq. Tunbridge Wells
Bothwell, G. G. Esq. Resident Medical
Officer to the Dispensary, Greenwich
Bowles, R. L. M.D. Surgeon to the Dis-
pensary, Folkestone
Bright, John M. M.D. Forest Hill
Brown, Frederick James, M.D. Consulting
Surgeon to St. Bartholomew's Hospital
at Chatham, Rochester
Brown, John Dan, M.D. Rochester
Brown, R. R. Esq. Strood
Burns, J. J. D. M.D. R.N. Chatham
Burton, J. M. Esq. Lee Park, Lee
Burton, Joseph S. Esq. Blackheath
Butler, John M. M.D. Medical Officer to
the Royal Kent Dispensary, Woolwich
Carr, William, M.D. Medical Officer to the
Royal Kent Dispensary, Lee Grove,
Lee
Charlton, Alfred, Esq. Southborough, Tun-
bridge Wells
Churton, Thomas, Esq. Erith
Colebrooke, H. M.D. Southborough, Tun-
bridge Wells
Cooke, George R. Esq. Greenhithe
Crook, John E. M.D. Northfleet
Croucher, Henry, Esq. Dartford
Davey, R. Staines, M.D. Walmer
Davies, Albert, M.D. Physician to the West
Kent Hospital, Maidstone
Denne, Henry, Esq. Surgeon to the Kent
and Canterbury Hospital, Canterbury
Duncan, Robert, M.D. Tunbridge Wells
Eastes, Silvester, Esq. Consulting Surgeon
to the Dispensary, Folkestone
Edmonds, F. H. Esq. Rochester
Fagge, Frederick T. Esq. Hythe
Fegan, Richard, M.D. Old Charlton

Fisher, Charles H. M.D. Sittingbourne
FitzPatrick, John, M.D. Lenham
Francis, R. S. Esq. Boughton, Faversham
Franks, John, Esq. Sevenoaks
Fry, Frederick, Esq. Consulting Surgeon
to the West Kent Hospital, Maidstone
Furber, G. H. Esq. Maidstone
Gange, Frederick A. M.D. Faversham
Garraway, Edward, Esq. Faversham
Godfrey, Thomas, Esq. Herne Bay
Gooding, Ralph, M.D. Blackheath
Gould, Henry, Esq. Northfleet
Graham, T. H. Esq. Lamberhurst
Gramshaw, James H. M.D. Surgeon to the
Infirmary, Gravesend
Grantham, John, Esq. Crayford
Hall, F. de H. Esq. House-Surgeon to the
Infirmary, Tunbridge Wells
Harding, John F. Esq. Southborough
Harmer, Wm. M. M.R.C.P.Ed. Hawkhurst
Hatten, John, M.D. Belvedere (dead)
Henderson, Thomas A. M.D. Physician to
the Seaman's Infirmary, Ramsgate
Hicks, Robert, Esq. Surgeon to the Sea-
man's Infirmary, Ramsgate
Hoar, Charles E. Esq. Maidstone
Hoar, William, Esq. Surgeon to the West
Kent Hospital, Maidstone
Hoare, William Parker, Esq. Dartford
Hooker, E. M. C. L.R.C.P. Hadlow
Hugo, Edward H. L.R.C.P.Ed. Brompton,
Chatham
Hunter, R. H. Esq. Dartford
Hott, Edward, Esq. Bromley
James, Alfred, M.D. Forest Hill
Jessett, Frederic B. Esq. Erith
Joy, Henry W. Esq. Surgeon to the County
Prison, Maidstone
Joyce, Thomas, M.D. Rolyenden
Kersey, R. C. M.D. Littlebourn, Sandwich
Lang, Thomas B. M.D. Groombridge,
Tunbridge Wells
Lewis, Henry, M.D. Surgeon to the Dis-
pensary, Folkestone
Loché, Alfred, M.D. Physician to the
Kent and Canterbury Hospital, Canter-
bury
Long, Arthur, Esq. Buckland, Dover
Long, Edward, Esq. Barham, Canterbury
Lovegrove, James F. Esq. Ightham
Lowry, Thomas H. M.D. West Malling
Lyddon, J. H. Esq. Rochester
Manser, Frederick, Esq. Tunbridge Wells
Marriott, Osborne D. M.B. Sevenoaks
Marsack, Blackall, Esq. Surgeon to the
Infirmary, Tunbridge Wells
Marshall, John, Esq. Dover
Martin, Adam Rae, Esq. Surgeon to St.
Bartholomew's Hospital at Chatham,
Rochester
Martin, Frederick, M.B. Beckenham
Martin, Joseph C. Esq. Dartford
Mathews, Robert, Esq. Bickley
Mathewson, R. R. Esq. Belvedere
Medwin, Aaron G. M.D. Dental Surgeon
to the Royal Kent Dispensary Black-
heath
Miller, John Nicholas, M.D. Surgeon to
the Royal Kent Dispensary, Blackheath
Monckton, Stephen, M.D. Physician to the
West Kent Hospital, Maidstone
Monckton, W. L.R.C.P.Ed. Brencley
Moore, Ebenezer, Esq. Dartford
Nankivell, Arthur W. Esq. Resident Sur-
geon to St. Bartholomew's Hospital,
Chatham
Nisbett, R. Innes, Esq. Surgeon to the In-
firmary, Gravesend
Osborn, Ashby G. Esq. Dover
Parratt, James E. T. Esq. Inspector-
General of Hospitals, Royal Army, Old
Charlton
Parsons, Charles, M.D. Dover
Pinching, Charles John, Esq. Gravesend
Pink, Henry N. Esq. Greenwich
Pitcock, F. W. Esq. Ramsgate
Pitcock, G. M. M.D. Margate
Piomley, J. F. Esq. Maidstone
Pout, H. Esq. Yalding, near Staplehurst
Price, Wm. P. M.D. Margate
Pritchard, George F. M.D. Greenstreet,
Sittingbourne
Purvis, John P. Esq. Medical Officer to
the Royal Kent Dispensary, Greenwich
Purvis, Prior, M.D. Medical Officer to the
Royal Kent Dispensary, Blackheath
Rathill, Robert M. Esq. Westerham
Reid, James, Esq. Surgeon to the Kent
and Canterbury Hospital, Canterbury
Rendle, Richard, Esq. Surgeon to the Royal
Infirmary for Children and Women, Dart-
mouth Park, Forest Hill

Rigden, George, Esq. Surgeon to the Dispensary, Canterbury
 Roper, Arthur, Esq. Blackheath
 Rowe, Thomas S. M.D. Surgeon to the Sea-Bathing Infirmary, Margate
 Sams, John Sutton, Esq. Medical Officer to the Royal Kent Dispensary, Eltham Road, Lee
 Sankey, George, Esq. Surgeon to the West Kent Hospital, Maidstone
 Sankey, Wm. M.D. Sutton Valence
 Satchell, W. C. Esq. Tunbridge Wells
 Saunders, Edwin Dawes, Esq. Tenterden
 Saunders, Thomas D. Esq. Smarden
 Slaughter, Thomas G. M.D. Farningham
 Smith, H. Cecil, Esq. Maidstone
 Smith, T. Heckstall, Esq. St. Mary Cray
 Sopwith, Henry I. Esq. Tunbridge Wells
 Spurrell, F. L.R.C.P.Ed. Belvedere
 Spysers, Thomas C. M.D. Faversham
 Starling, R. J. Esq. Tunbridge Wells
 Stilwell, Robert R. M.D. Beckenham
 Sutton, Wm. M.D. Dover
 Swales, Edward, Esq. Sheerness
 Terry, John J. Esq. Wittersham
 Tessier, W. H. Cecil, M.D. Biddenden
 Thompson, Chas. M. Esq. Sevenoaks
 Thompson, Chas. R. Esq. Westerham
 Thompson, Herbert, Esq. Sevenoaks
 Thomson, John B. Esq. Ramsgate
 Thornton, Wm. H. Esq. Surgeon to the Sea-bathing Infirmary, Margate
 Thurston, Edward W. Esq. Ashford
 Trustram, Chas. Esq. Surgeon to the Infirmary, Tunbridge Wells
 Venables, Robert, M.D. Physician to the Royal Kent Dispensary, Blackheath
 Waller, Chas. B. Esq. Sydenham
 Walter, John, Esq. Dover
 Wardell, John R. M.D. Physician to the Infirmary, Tunbridge Wells
 Wheeler, Thomas, Esq. Bexley
 White, Archibald, M.D. Sevenoaks
 White, Charles, J. M.D. Snodland
 Wilkash, H. C. M.D. Hythe
 Wilkin, John F. Esq. Folkestone
 Wilks, George, M.B. Ashford
 Williams, Edward A. Esq. Bromley
 Williams, Hutchins, Esq. Ayleford
 Wise, Wm. C. M.D. Plumstead
 Woodman, Samuel, Esq. Surgeon to the Royal Dispensary, Ramsgate
 Wright, F. T. Esq. Hoo, near Rochester
 Young, Edward, Esq. Hawkhurst

LANCASHIRE.

Number of Members, 857.

Branch, Lancashire and Cheshire.

Adam, Edw. L.K.Q.C.P. Islington, Liverpool
 Aldred, Henry, L.K.Q.C.P. Manchester
 Alcock, Christopher, Esq. Waterloo, Liverpool
 Allen, Richard, Esq. Fishergate, Preston
 Allen, Rd. Esq. Didsbury, Manchester
 Arminson, W. B. M.D. Medical Officer to the Royal Infirmary, Preston
 Armistead, W. M.B. Harpurhey, Manchester
 Aspinall, Thomas, Esq. Over Darwen
 Aspinall, W. L.R.C.P.Ed. Haslingden
 Bailey, Francis J. Esq. Liverpool
 Baker, John C. M.D. Assistant-Surgeon to the Lying-in Hospital, Liverpool
 Banks, W. Mitchell, M.D. Lecturer on Anatomy in the Royal Infirmary School of Medicine, Liverpool
 Bardsley, Sir James L. M.D. Consulting Physician to the Royal Infirmary, Manchester
 Barnes, James H. L.R.C.P.Ed. Liverpool
 Barrett, B. M.D. Texteth Park, Liverpool
 Bell, William, M.D. Preston
 Bennett, James M. M.D. Medical Officer to the South Dispensary, Liverpool
 Berry, John, Esq., Leyland, Preston
 Bickersteth, Edw. R. Esq. Surgeon to the Royal Infirmary, Liverpool
 Bickerton, T. Esq. Surgeon to the Eye and Ear Infirmary, Liverpool
 Bindloss, James B. Esq. Pendleton
 Blackburn, William, Esq. Upper Mill, Manchester
 Blower, Benjamin, Esq., Consulting Surgeon to the Lying-in Hospital, Liverpool
 Borchardt, Louis, M.D. Physician to the General Hospital for Sick Children, Manchester.
 Bott, Thomas B. M.D. Surgeon to the Dispensary, Bury
 Boutflower, J. Esq. Surgeon to the Salford and Pendleton Royal Hospital, Salford

Braddon, Charles H. M.D. Surgeon to the Salford Gaol, Manchester
 Bradley, S. M. Esq. Lecturer on Anatomy and Comparative Anatomy in the Royal School of Medicine, Manchester
 Brideoake, James, Esq. Leigh, Manchester
 Briggs, Henry, M.D. Burnley
 Broadbent, James C. L.K.Q.C.P. Everton, Liverpool
 Broadbent, John, Esq. Manchester
 Broadhurst, John, Esq. Superintendent of the County Lunatic Hospital, Lancaster
 Bromley, Frederic, Esq. Oldham
 Brown, Robert C. M.B. Medical Officer to the Royal Infirmary, Preston
 Browne, Henry, M.D. Physician to the Royal Infirmary, Manchester
 Brumwell, George M. M.D. Mossley, Manchester
 Buckley, James, Esq. Surgeon to St. Mary's Hospital, Manchester
 Bucknill, Ebenezer, M.D. Rawtenstall, Manchester
 Burrows, John, L.R.C.P.Ed. Liverpool
 Burrows, William, Esq. Liverpool
 Burton, J. E. Esq. Medical Officer to the North Dispensary, Liverpool
 Callon, William T. M.D. Physician to the Hospital for Consumption, Liverpool
 Cameron, A. H. F. L.R.C.P.Ed. Shiel Road, Liverpool
 Cameron, John, M.D. Physician to the Southern Hospital, and Lecturer on Medicine in the Liverpool Royal Infirmary School of Medicine, Liverpool
 Carter, Albert E. Esq. Liverpool
 Carter, W. M.B. Medical Officer to the North Dispensary, and Lecturer on Botany in the Royal Infirmary School of Medicine, Liverpool
 Cartmel, Henry, Esq. Hulme, Manchester
 Caton, Richard, M.D. Assistant-Physician to the Infirmary for Children, and Lecturer on Comparative Anatomy in the Royal Infirmary School of Medicine, Liverpool
 Cayzer, Thomas, Esq. Mayfield, Aigburth
 Chadwick, Samuel T. M.D. Southport
 Chalmers, David, M.D. Consulting Surgeon to the Northern Hospital, Everton, Liverpool
 Chapman, William, L.R.C.P.Ed. Garstang
 Clark, John B. M.B. Liverpool
 Clarke, Alexander C. M.D. Salford
 Clarke, Robert A. W. Esq. Farnworth
 Clayton, R. E. Esq. Accrington
 Cleaver, W. J. M.B. House-Surgeon to the Royal Infirmary, Liverpool
 Clegg, William J. M.D. Bacup
 Clements, George, Esq. Withington, Manchester
 Cocker, John, F.R.C.P.Ed. Blackpool
 Collinson, Henry R. Esq. Manchester
 Cooke, Frederick, Esq. Ashton-under-Lyne (dead)
 Coultate, W. Miller, Esq. Burnley
 Coveney, J. H. Esq. Prestwich, Manchester
 Crawford, Joseph D. Esq. Liverpool
 Crompton, Samuel, M.D. Physician to the Salford Royal Hospital and Dispensary, Manchester
 Davidson, Alexander, M.D. Lecturer on Pathological Anatomy in the Royal Infirmary School of Medicine, Liverpool
 Davies, Thomas C. M.D. Bury
 Denton, George B. Esq. Surgeon to the Lying-in Hospital, Liverpool
 Desmond, Lorenzo E. M.D. Consulting Surgeon to the Dispensaries, Edge Hill, Liverpool
 De Vitre, Edward D. M.D. Lancaster
 De Zouche, Isaiah, M.D. Assistant Physician to the Infirmary for Children, Liverpool
 Drummond, Edward, M.D. Royton, Oldham
 Dumville, Arthur W. Esq. Surgeon to the Royal Infirmary, Manchester (dead)
 Eames, Thomas B. L.R.C.P.Ed. Kearsley, Stoneclough, Manchester
 Eccles, Edmund, Esq. Longridge, Preston
 Elias, Daniel, M.D. Medical Officer to the Infirmary, Southport
 Evers, Chas. M.D. Grassendale, Liverpool
 Falloon, F. L. L.R.C.P.Ed. Everton, Liverpool
 Farr, Charles J. Esq. Swinton
 Fay, Tullius W. W. Esq. Liverpool
 Fenton, John, M.D. Surgeon to the Lying-in Hospital, Liverpool

Finegan, James H. M.D. Surgeon to the Lying-in Hospital, Liverpool
 Fisher, Henry F. Esq. Liverpool
 Fisher, Luke, M.D. Lytham, Preston
 FitzHenry, Edward H. M.D. Surgeon to Dispensary, Waterloo, Liverpool
 FitzPatrick, C. D. L.R.C.P.Ed. Surgeon to the Dispensary, Liverpool
 FitzPatrick, W. Honner, M.B. Knotty Ash, Liverpool
 Fletcher, J. Shepherd, M.D. Manchester
 Forrest, John, Esq. Blackburn
 Fox, James T. M.D. Manchester
 Fox, R. D. Esq. Resident Medical Officer, Workhouse, Crumpsall, Manchester
 Franklin, Isaac A. Esq. Manchester
 Garstang, James, Esq. Clitheroe
 Garstang, T. B. Esq. Surgeon to the Infirmary, Bolton
 Garstang, Walter, M.D. Manchester
 Garthside, James, Esq. Liverpool
 Gaskell, Richard A. Esq. St. Helen's
 Gilbertson, Joseph B. M.D. Medical Officer to the Royal Infirmary, Preston
 Gill, George, L.R.C.P.Ed. Liverpool
 Gillespie, John M. M.D. Accrington
 Glazebrook, Nicholas S. Esq. West Derby, Liverpool
 Glynn, T. R. M.B. Physician to the Royal Infirmary, Liverpool
 Goodman, Charles R. M.D. Cheetham, Manchester
 Goodman, John, M.D. Southport
 Gornall, John H. Esq. Surgeon to the Dispensary, Warrington
 Gornall, R. G. Esq. Newton Heath, Manchester
 Goulstone, J. G. M.D. Liverpool (dead)
 Graham, Adolphus F. M.D. Liverpool
 Grattan, John S. L.K.Q.C.P. Walton-on-the-Hill, Liverpool
 Green, Thomas W. M.D. Rawtenstall
 Gregory, George, Esq. Moses Gate, Bolton
 Grimsdale, Thomas F. L.R.C.P.Ed. Consulting Surgeon to the Lying-in Hospital, Liverpool
 Gumpert, Edward, M.D. Physician to the Clinical Hospital for Children, Manchester
 Haddon, John, M.D. Eccles, Manchester
 Hakes, James, Esq. Surgeon to the Royal Infirmary, Liverpool
 Haldan, Bernard, L.R.C.P.Ed. Preston
 Halkyard, Henry, Esq. Oldham
 Hall, Egerton F. M.D. Prescott
 Hall, Richard S. Esq. Ince, Wigan
 Hall, William, Esq. Consulting Surgeon to the Salford and Pendleton Royal Hospital, Salford
 Hall, W. L.R.C.P.Ed. Senior Surgeon to the Infirmary, Lancaster
 Hamilton, Robert, Esq. Surgeon to the Southern Hospital, Liverpool
 Hardy, George Wilmot, Esq. Consulting Surgeon to the Dispensary, Warrington
 Harker, John, M.D. Surgeon to the Infirmary, Lancaster
 Harrison, G. M. Esq. Lecturer on Forensic Medicine in the Royal School of Medicine, Manchester
 Harrison, James Bower, M.D. High Broughton, Manchester
 Harrison, Reginald, Esq. Lecturer on Surgery in the Royal Infirmary School of Medicine, and Assistant-Surgeon to the Royal Infirmary, Liverpool
 Hartley, D. Esq. Accrington
 Hawett, Thomas, Esq. Wigan
 Heath, F. A. Esq. Surgeon to the Royal Infirmary, Manchester
 Heath, William R. Esq. Surgeon to the Southern Hospital for Diseases of Women and Children, Manchester
 Heathcote, Ralph, Esq. Manchester
 Heathcote, Rowland, Esq. Grosvenor St. Manchester
 Heckscher, Martin, M.D. Manchester
 Hendry, Daniel, Esq. Liverpool
 Henson, Sydney, Esq. Manchester
 Hepworth, Francis, Esq. Eccles
 Heywood, Henry J. Esq. Pendleton, Manchester
 Heywood, T. Esq. Pendleton
 Higginson, A. Esq. Consulting Surgeon to the Southern Hospital, Liverpool
 Hill, Charles, M.D. Kirkdale, Liverpool
 Hill, Matthew, L.R.C.P.Ed. Physician to the Hospital, Bootle
 Hilton, Caleb S. M.D. Skelmersdale
 Hilton, John, Esq. Croston, Chorley
 Hodgson, James B. M.D. Preston
 Holmes, F. Esq. West Gorton, Manchester

Holroyde, E. Esq. The Clough, Clitheroe
 Howarth, George, Esq. Surgeon to the Infirmary, Bolton-le-Moors
 Howitt, Thomas, Esq. Consulting Surgeon to the Infirmary, Lancaster
 Howitt, William, Esq. Consulting Surgeon to the Dispensary, Preston
 Howsin, E. A. M.D. Newton-le-Willows
 Hughes, William H. Esq. Ashton-under-Lyne
 Hunt, Richard Thomas, Esq. Consulting Surgeon to the Eye Hospital, and Lecturer on Diseases of the Eye in the Royal School of Medicine, Manchester
 Hutchinson, Joseph, Esq. Manchester
 Hutchinson, Richard, Esq. Consulting Surgeon to the Dispensaries, Liverpool
 Imlach, Henry, M.D. Consulting Physician to the Lying-in Hospital, Liverpool
 Irvine, W. J. Esq. Walton-on-the-Hill, Liverpool
 Jackson, Edward, L.K.Q.C.P.I. Wheelton, Chorley
 Jackson, William, Esq. Bolton-le-Sands
 Johnson, Christopher, Esq. Lancaster
 Johnson, James, Esq. Surgeon to the Kirkdale Gaol, Bootle, Liverpool
 Johnson, Augustus, M.B. Hawkshead
 Johnson, John, L.R.C.P.Ed. Edgehill, Liverpool
 Jones, David, Esq. Everton Road, Liverpool
 Jones, Ellis, Esq. Consulting Surgeon to the Northern Hospital, Liverpool
 Jukes, Charles, Esq. Cheetham Hill, Manchester
 Kenworthy, John, Esq. Hollinwood, Manchester
 Kershaw, John, Esq. Royton, Oldham
 Kershaw, Joseph, Esq. Byrom Street, Manchester
 Lambart, Rev. W. H. M.D. Liverpool
 Lane, William, Esq. Hawkshead
 Lang, John, M.D. Medical Officer to the Convalescent Hospital, Southport
 Langshaw, James P. Esq. Lancaster
 Lax, William, Esq. Surgeon to the Dispensary, Ormskirk
 Leach, Abraham, Esq. Waterhead, Oldham
 Ledward, Ralph W. M.D. Manchester
 Leech, Daniel J. M.B. Physician to the Hulme Dispensary, Manchester
 Lees, S. Duncuft, M.D. Ashton-under-Lyne
 Leigh, Peter, Esq. Liverpool
 Lewtas, T. L.R.C.P.Ed. Islington, Liverpool
 Lister, Bryan, M.D. Littleborough
 Lister, Edward, L.R.C.P.Ed. Newton-le-Willows
 Little, David, M.D. Surgeon to the Eye Hospital, Manchester
 Long, James, Esq. Consulting Surgeon to the Royal Infirmary, Liverpool
 Longton, Edward J. M.D. Southport
 Lowndes, F. Walter, Esq. Assistant-Surgeon to the Lying-in Hospital, Liverpool
 Lowndes, Henry, Esq. Surgeon to the Northern Hospital, Liverpool
 Lund, Edward, Esq. Lecturer on Anatomy in the Royal School of Medicine, and Surgeon to the Royal Infirmary, Manchester
 Lyster, Chaworth E. M.D. Liverpool
 Macbeth, James, M.D. Liverpool
 McChenne, William, Esq. Surgeon to the Lock Hospital, Everton, Liverpool
 McGowan, Samuel A. M.D. Oldham
 Macnaught, John, M.D. Liverpool
 McNicol, Stewart, Esq. Surgeon to the Infirmary, Bootle
 Macrae, Donald, Esq. Walton, Liverpool
 Madeley, G. S. Esq. Ardwick Green, Manchester
 Mallett, G. Esq. Consulting Surgeon to the Infirmary, Bolton-le-Moors (dead)
 Manifold, W. Hargreaves, Esq. Surgeon to the Northern Hospital, Liverpool
 Manley, Edmund, M.B. Manchester
 Mann, Robert M. Esq. Manchester
 March, H. Colley, M.D. Surgeon to the Dispensary, Rochdale
 Marsh, Nicholas, Esq. Liverpool
 Marshall, Andrew, M.D. Medical Officer to the Royal Infirmary, Preston
 Martin, Robert, M.D. Manchester
 Martin, W. Young, Esq. Little Hulton, Bolton
 Martland, Wm. Esq. Surgeon to the Infirmary, Blackburn
 Mather, T. Esq. Ashton-in-Makerfield

Matthews, James, L.K.Q.C.P. Yealand-Conyers
 May, Arthur P. Esq. Great Crosby
 Meacham, Edward, Esq. Manchester
 Mellor, Thomas, Esq. Oxford Street, Manchester
 Minshall, John L. Esq. Consulting Surgeon to the Southern Hospital, Liverpool
 Moore, John D. M.D. Surgeon to the Infirmary, Lancaster
 Morgan, John E. M.D. Consulting Physician to the Salford and Pendleton Royal Hospital, and Lecturer on Medicine in the Royal School of Medicine, Manchester
 Mould, Geo. W. Esq. Medical Superintendent of the Lunatic Asylum, Cheadle
 Murphy, Charles O. L.R.C.P.Ed. Manchester
 Murray, Charles, Esq. Oldham
 Nash, G. Branston V. Esq. Surgeon to the Northern Hospital, Liverpool
 Nevins, J. Birkbeck, M.D. Surgeon to the Eye and Ear Infirmary, and Lecturer on Materia Medica in the Royal Infirmary School of Medicine, Liverpool
 Newton, George, Esq. Ashton-under-Lyne
 Nicholson, Emilius R. M.D. Oldham
 Noble, Daniel, M.D. Ardwick Green, Manchester
 Noon, Frederick, Esq. Earlstown, Newton-le-Willows
 Nowell, R. B. Esq. Ashton-under-Lyne
 O'Connor, Thomas J. H. Esq. Everton
 Oxley, Martin G. B. L.K.Q.C.P. Physician to the Infirmary for Children, Liverpool
 Packer, James M. M.D. Huyton
 Park, Robert, Esq. Manchester
 Parke, Edward, Esq. West Derby, Liverpool
 Parker, Edw. Esq. Kirkdale Road, Liverpool
 Parker, James, Esq. Lytham
 Parsons, Daniel W. Esq. Liverpool
 Parsons, George, M.B. Hawkshead
 Patchett, Henry, L.R.C.P.Ed. Blackburn
 Patchett, R. Esq. Ribchester, Blackburn
 Peacock, A. L. Esq. Accrington
 Peatson, Joseph Chadwick, M.D. Surgeon to the Lock Hospital, Manchester
 Pennington, Abel, Esq. Surgeon to the Dispensary, Warrington
 Pennington, James E. Esq. Ashton-in-Makerfield
 Pennington, Thomas, Esq. Liverpool
 Petrie, James, M.D. Consulting Surgeon to the Southern Hospital, Liverpool
 Pierce, F. M. M.D. Higher Broughton, Manchester
 Pigg, Thomas, M.D. Physician to the Southern Hospital for Women and Children, Withington, Manchester
 Platt, Thomas, Esq. Oldham
 Pritchard, Henry, Esq. Fairfield, Liverpool
 Pughe, John E. H. Esq. Liverpool
 Radford, Thomas, M.D. Consulting Physician to St. Mary's Hospital, Higher Broughton, Manchester
 Rains, John, M.D. Chorlton-cum-Hardy, Manchester
 Rains, Samuel, Esq. Manchester
 Rawdon, Henry G. M.D. Surgeon to the Infirmary for Children, Liverpool
 Redmayne, John T. Esq. Bolton
 Reed, George, M.D. Resident Medical Officer to the Royal Infirmary, Manchester
 Rigby, James M. Esq. Chorley
 Rigby, John, Esq. Preston
 Rigg, John, Esq. Lytham, Preston
 Ritchie, C. Currie, M.D. Manchester
 Rix, Charles James, Esq. Manchester
 Roberts, D. Lloyd, M.D. Physician to St. Mary's Hospital, Manchester
 Roberts, John, M.D. Manchester
 Roberts, William, M.D. Physician to the Royal Infirmary, and Lecturer on Medicine in the Royal School of Medicine, Manchester
 Robertson, Robert, M.D. Liverpool
 Robinson, Richard H. Esq. Salford
 Rogers, Thomas L. M.D. Medical Superintendent of the County Asylum, Rainhill
 Russell, William S. Esq. Accrington
 Sadler, Peter J. Esq. Warrington
 Samelson, A. M.D. Surgeon to the Royal Eye Hospital, Manchester
 Samuels, Arthur, M.D. Liverpool
 Saul, William W. Esq. Lancaster
 Scowcroft, John E. Esq. Bolton

Segar, John, M.D. Surgeon to the Infirmary, Southport
 Sellers, W. B. Esq. Rochdale
 Sephton, Richard, L.R.C.P.Ed. Culcheth, Warrington
 Sephton, Robert, Esq. Atherton
 Shain, James M. L.R.C.P.Ed. Liverpool
 Shaw, Thomas, Esq. Kirkham
 Shedd, Ebenezer, Esq. Surgeon to the Ardwick and Ancoates Dispensary, Manchester
 Shepherd, Charles D. Esq. Surgeon to the Dispensary, Wigan
 Shuttleworth, George E. M.D. Resident Medical Superintendent of the Royal Albert Asylum for Idiots, Lancaster
 Simpson, Henry, M.D. Physician to the Royal Infirmary, and Lecturer on Pathology in the Royal School of Medicine, Manchester
 Skinner, Thomas, M.D. Surgeon to the Lying-in Hospital, Liverpool
 Smallman, R. S. M.B. Wigan
 Smart, R. B. Esq. Surgeon to the Hospital for Children, Manchester
 Smith, C. Swaby, L.R.C.P.Ed. Physician to the Dispensary, Seaford
 Smith, Henry, Esq. Blackrod, Chorley
 Smith, Joseph K. Esq. Liverpool
 Smith, Thomas S. M.B. Physician to the Dispensary, Warrington
 Smith, William, Esq. Surgeon to the Royal Infirmary, and Lecturer on Anatomy and Physiology in the School of Medicine, Manchester
 Smith, William, Esq. Fallowfield, Manchester
 Smith, William, Esq. Preston
 Suape, George H. Esq. Dental Surgeon to the Royal Infirmary, Liverpool
 Somers, A. Esq. Lecturer on Materia Medica in the Manchester Royal School of Medicine, Whitecross Bank, Salford
 Somerville, Thomas A. Esq. Wilmslow, Manchester
 Southam, George, Esq. Surgeon to the Royal Infirmary, and Lecturer on Surgery in the Royal School of Medicine, Pendleton, Manchester
 Spencer, Lawrence, M.D. Preston
 Spinks, Christopher N. Esq. Warrington
 Steele, Arthur B. L.K.Q.C.P. Surgeon to the Lying-in Hospital, and Lecturer on Midwifery in the Royal Infirmary School of Medicine, Liverpool
 Stephens, Alfred, L.R.C.P.Ed. Physician to the Hospital for Children, Liverpool
 Stewart, William, M.D. Bacup
 Stocks, Alfred W. Esq. Surgeon to the Salford and Pendleton Royal Hospital, Salford
 Stone, Joseph, M.D. Manchester
 Stubbs, Henry, Esq. Senior Surgeon to the Royal Infirmary, Liverpool
 Swinden, Edward, Esq. Wavertree
 Taylor, E. M.D. Middleton, Manchester
 Taylor, James E. Esq. Whitworth
 Taylor, R. Hibbert, M.D. Consulting Surgeon to the Eye and Ear Infirmary, Liverpool
 Thomson, William C. Esq. Liverpool
 Thorburn, John, M.D., Physician to the Manchester Southern Hospital for Women and Children, and Lecturer on Midwifery in the Royal School of Medicine, Manchester
 Thorp, Charles W. L.K.Q.C.P. Todmorden
 Townson, Benj. Esq. Islington, Liverpool
 Trench, William S. M.D. Medical Officer of Health, Liverpool
 Turnbull, James, M.D. Physician to the Royal Infirmary, Liverpool
 Turner, Thomas, Esq. Consulting Surgeon to the Royal Infirmary, Manchester
 Turner, William, Esq. Everton Road, Liverpool
 Twyford, Edward P. M.D. St. Helen's
 Unwin, John B. Esq. Wigan
 Vale, James T. L.R.C.P.Ed. Balderston, Blackburn
 Vose, James R. W. M.D. Liverpool
 Wahlutich, Adolph, M.D. Manchester
 Walker, George C. M.D. Medical Officer to the Liverpool North Dispensary, Bootle
 Walker, G. E. Esq. Rodney Street, Liverpool
 Walker, John D. Esq. Kirkham, Preston
 Walker, T. S. Esq. Surgeon to the Eye and Ear Infirmary, Rodney Street, Liverpool

Wallace, John, M.D. Assistant-Surgeon to the Lying-in Hospital, Liverpool
 Walling, John, M.D. Medical Officer to the Royal Infirmary, Preston
 Walmsley, Henry, Esq. Preston
 Ward, John, M.D. Grange, Carnforth
 Waters, A. T. H. M.D. Physician to the Royal Infirmary, and Lecturer on Physiology in the Royal Infirmary School of Medicine, Liverpool
 Waterhouse, Frederick, Esq. Bolton
 Watkins, J. W. M.D. Newton-le-Willows
 Watson, William, Esq. Surgeon to the Infirmary, Lancaster
 Wearing, Allan, Esq. Blackburn
 Weddell, J. C. M.D. House-Surgeon to the Royal Infirmary, Preston
 Wharton, Joseph, L.K.Q.C.P. Oldham
 Whitaker, Edmund, M.B. Bacup
 White, Charles, Esq. Surgeon to the Dispensary, Warrington
 White, Frederick, Esq. Assistant-Surgeon to the Lying-in Hospital, Rodney Street, Liverpool
 White, J. A. Esq. Pendleton, Manchester
 White, W. M.D. Southport
 Whitehead, James, M.D. Physician to the Hospital for Children, Manchester
 Whitehead, Walter, Esq. Surgeon to St. Mary's Hospital, Manchester
 Whittle, Ewing, M.B. Lecturer on Medical Jurisprudence in the Royal Infirmary School of Medicine, Liverpool
 Wild, Thomas, Esq. Chorlton-cum-Hardy, Manchester
 Wilkinson, M. A. Eason, M.D. Physician to the Royal Infirmary, Manchester
 Williams, David M. L.K.Q.C.P.I. Liverpool
 Williams, John, M.D. Swinton, Manchester
 Williams, Robert H. L.R.C.P.Ed. Great Eccleston
 Williams, W. J. M.D. Oldham Road, Manchester
 Williamson, Henry Merrell, Esq. Consulting Surgeon to the Chorlton-upon-Medlock Dispensary, Manchester
 Wilson, Chas. B. Esq. Consulting-Surgeon to the Lying-in Hospital, Liverpool
 Wilson, John Henry, L.K.Q.C.P.I. Surgeon to the Lying-in Hospital, Kensington, Liverpool
 Wilson, Thomas, M.D. Ramsbottom
 Wood, R. Esq. Ashton-under-Lyne (dead)
 Woods, George Arthur, Esq. Medical Officer to the Convalescent Hospital, Southport
 Young, J. de Courcy, Esq. Liverpool
 Yule, John C. S. Esq. Bury

LEICESTERSHIRE.

Number of Members..30.

Branch..Midland.

Bakewell, Robert H. M.D. Leicester
 Barclay, John, M.D. Physician to the Infirmary, Leicester
 Benfield, Thomas W. Esq. Surgeon to the Infirmary, Leicester
 Blunt, Thomas, M.D. Surgeon to the Dispensary, St. Martin's, Leicester
 Bolton, John A. M.D. Leicester
 Bradshaw, J. B. M.D. Quorndon
 Buszard, Marston, M.D. Lutterworth
 Clarke, Julius St. T. M.B. Leicester
 Costin, J. Q. Esq. Market Harborough
 Denton, Edward R. Esq. Surgeon to the Dispensary, Leicester
 Downey, Patrick, Esq. Sileby
 Eddowes, J. H. M.D. Surgeon to the Infirmary, Loughborough
 Francis, John, Esq. Market Harborough
 Franks, William Francis, Esq. Billesdon
 Hunt, John, Esq. Thurnby
 Irwin, William C. M.D. Leicester
 Jackson, P. A. Esq. Leicester
 Lankester, Henry, Esq. Surgeon to the Dispensary, Leicester
 McIlree, E. Q. Esq. Claybrooke, Lutterworth
 Marriott, Charles H. M.D. Surgeon to the Infirmary, Leicester
 Marriott, John, Esq. Kibworth
 Paget, Thomas, Esq. Leicester
 Sidley, C. M. Esq. Leicester
 Sloane, John, M.D. Leicester
 Smith, John, Esq. Castle Donington
 Thomas, D. P. Esq. Market Bosworth
 Thomas, Richard H. Esq. Ibstock
 Wilby, Burdett, Esq. Leicester
 Wood, Charles Walker, Esq. Woodhouse Eaves, near Loughborough
 Wood, James A. Esq. Sheepshed

LINCOLNSHIRE.

Number of Members..68.

Branches { Midland
 { East York and North Lincoln

Adam, A. Mercer, M.D. Boston
 Barton, M. S. Esq. Market Rasen
 Bell, John, L.R.C.P.Ed. The Elms, Louth
 Bennett, T. M. M.B. Barton-on-Humber
 Best, Palemon, M.B. Louth
 Bower, William, Esq. Metheringham
 Broadbent, Edward Farr, Esq. Surgeon to the County Hospital, Lincoln
 Brook, Charles, Esq. Surgeon to the County Hospital, Lincoln
 Burnham, Ralph, Esq. Keelby
 Cammack, Thomas, F.R.C.P. Physician to the Infirmary, Spalding
 Campbell, Andrew, Esq. Navenby
 Cheate, Edward, Esq. Revesby
 Collingwood, Joseph E. Esq. Corby, Grant-ham
 Deacon, William B. Esq. Market Deeping
 Ditchett, William E. Esq. Louth
 Eaton, Freeman, Esq. Ancaster, Grantham
 Eddie, W. H. Esq. Barton-upon-Humber
 Edlin, Edward W. H. Esq. Bourne
 Ellis, H. W. T. L.R.C.P.Ed. Crowle
 Fawcett, William, Esq. Binbrook, near Market Rasen
 Ferneley, Charles, L.R.C.P.Ed. Grantham
 Flowers, W. F. M.B. Tealby, Market Rasen
 Garnham, Devereux J. Esq. Lincoln
 George, H. Esq. North Thoresby, Louth
 Graham, William, Esq. Goxhill
 Harper, Robert, Esq. Holbeach
 Harrison, C. M.D. Physician to the County Hospital, Lincoln
 Henderson, William, M.D. Gainsborough
 Henson, S. R. Esq. Grimsby
 Heward, John M. Esq. Surgeon to the Infirmary, Stamford
 Higgs, Frederick S. Esq. Heighington
 Holland, George, Esq. Grimsby
 Jeans, J. W. Esq. Grantham
 Keetley, Thomas B. Esq. Grimsby
 Kenyon, John K. Esq. Billingham, Fellingham
 Leppington, H. M. Esq. Great Grimsby
 Lowe, George M. M.D. Medical Officer to the Dispensary, Lincoln
 Macdonald, John, Esq. Lincoln
 Mackinder, Draper, M.D. Consulting Surgeon to the Dispensary, Gainsborough
 Mitchinson, G. L.K.Q.C.P.I. Physician to the County Hospital, Lincoln
 Moody, Charles B. Esq. Grimsby
 Morgan, Fortescue J. Esq. Surgeon to the Infirmary, Stamford
 Morley, John, Esq. Barton-on-Humber
 Morris, Edwin, M.D. Surgeon to the Infirmary, Spalding
 Moxon, J. B. Esq. Brigg
 Newby, Thomas, M.D. Grimsby
 Newman, William, M.D. Surgeon to the Stamford and Rutland Infirmary, St. Martin's, Stamford
 Palmer, Edward, M.D. Medical Superintendent of the County Asylum, Lincoln
 Perry, Marten, M.D. Surgeon to the Infirmary, Spalding
 Philpot, F. Esq. Barrow-on-Humber
 Pilcher, William J. Esq. Boston
 Rainbird, Horace, L.R.C.P.Ed. Saxilby
 Sadler, Joseph, Esq. Winterton
 Shaw, Henry S. Esq. Upgate, Louth
 Shipman, Robert, Esq. Grantham (dead)
 Sissons, W. H. Esq. Barton-on-Humber
 Smallman, Joseph C. B. M.D. Willingham, Gainsborough
 Snaith, Francis, M.D. Boston
 Simpson, T. L.R.C.P.Ed. Surgeon to the County Hospital, Lincoln
 Thompson, Ebenezer M. Esq. Sleaford
 Tickler, R. P. L.R.C.P.Ed. Owston, Bawtry
 Tittle, James, M.D. Brigg
 Turnour, Henry E. M.D. Market Rasen
 Vise, Edward B. Esq. Holbeach
 Vise, Wm. Foster, Esq. Surgeon to the Infirmary, Spalding
 Walker, John West, M.B. Surgeon to the County Prison, Spilsby
 Willan, James R. M.B. Hoxne
 Wrangham, John D. M.D. Wragby

MIDDLESEX.

Number of Members..627.

Branch..Metropolitan Counties.

Acton, William, Esq. Queen Anne Street
 Adams, James E. Esq. Assistant-Surgeon to the London Hospital, Finsbury Circus

- Adams, Wm. Esq. Surgeon to the Royal Orthopædic and Great Northern Hospitals, Henrietta Street, Cavendish Sq.
- Adams, Wm. Esq. Harrington Square
- Aikin, C. A. Esq. Clifton Place, Hyde Pk.
- Aldis, Charles J. B. M.D. Medical Officer of Health for St. George's, Hanover Square, Chester Square
- Alford, Stephen S. Esq. Haverstock Hill
- Allen, Peter, M.D. Aural Surgeon to St. Mary's Hospital, Harley Street
- Althaus, Julius, M.D. Physician to the London Infirmary for Epilepsy and Paralysis, Bryanston Street
- Anderson, J. Ford, M.D. Buckland Crescent, Belsize Park
- Andrews, Arthur, Esq. New Southgate
- Andrews, Henry C. M.D. Oakley Square, St. Pancras
- Anstie, Francis E. M.D. Assistant-Physician to and Lecturer on Medicine at the Westminster Hospital, Wimpole St.
- Appleton, H. M.D. Mare Street, Hackney
- Argles, Robert, Esq., Radnor Place
- Ashton, Thos. J. Esq. Cavendish Square
- Aspray, Charles O., M.D., Mortimer Street
- Atkinson, F. P. M.D. Bessborough Gdns
- Austin, T. J. Esq. Guilford Street
- Aveling, James H. M.D. Upper Wimpole Street
- Bader, Charles, Esq. Ophthalmic Surgeon to Guy's Hospital, Finsbury Circus
- Bailey, George H. Esq. Charles Street, Middlesex Hospital
- Bain, W. P. M.D. Surgeon to the Poplar Hospital, Brunswick Street, Blackwall
- Baker, G. Benson, Esq. Grove Road
- Baker, J. P. Esq. Milwall Works, Poplar
- Baker, W. Marrant, Esq. Lecturer on Physiology at, and Assistant-Surgeon to, St. Bartholomew's Hospital
- Ballard, Edward, M.D. Compton Terrace, Islington
- Ballard, Thomas, M.D. Southwick Place, Hyde Park
- Baller, Joseph H. M.D. Gilston Road, West Brompton
- Barker, Alfred J. M.D. Hornsey Road
- Barnes, John W. Esq. Gower Street
- Barnes, Robert, M.D., Obstetric Physician to and Lecturer on Midwifery at St. Thomas's Hospital, Grosvenor Street
- Barrett, Ashley W. M.B. Dental Surgeon to the London Hospital, Finsbury Square
- Barry, D. Paterson, M.D. Twickenham
- Bartlett, Joseph J. H. Esq. Ladbroke Sq.
- Bartlett, Wm. Esq. Surgeon to the Kensington Dispensary, Ladbroke Lodge, Ladbroke Square
- Barwell, Rd. Esq. Surgeon to and Lecturer on Anatomy at Charing Cross Hospital, George Street, Hanover Square
- Bastian, H. Charlton, M.D. F.R.S. Professor of Pathological Anatomy in University College, and Physician to University College Hospital, Avenue Road, Regent's Park
- Bäumler, C. G. H. M.D. Assist.-Physician to the German Hospital, and to the City of London Chest Hospital, Finsbury Place North
- Baxter, Evan B. M.D. King's College
- Beach, Fletcher, Esq. House-Surgeon to the Hospital for Sick Children, Great Ormond Street
- Beale, Lionel John, Esq. Long Acre (dead)
- Beale, Lionel S. M.B. F.R.S. Professor of Pathological Anatomy in King's College, and Physician to King's College Hospital, Grosvenor Street
- Beard, Charles J. M.B. Medical Department Privy Council Office
- Beck, T. Snow, M.D. F.R.S. Portland Place
- Begley, William Chapman, A.M. M.D. Asylum, Hanwell
- Behrend, H. M.R.C.P.Ed. Norfolk Crescent, Hyde Park
- Beigel, Hermann, M.D. Physician to the Metropolitan Free Hospital, and Physician for Skin-Diseases to Charing Cross Hospital, Finsbury Square
- Belgrave, Thomas B. M.D. Hendon
- Bennet, J. Henry, M.D. Grosvenor Street
- Bennett, James Risdon, M.D. Consulting-Physician to St. Thomas's Hospital, and Physician to the City of London Chest Hospital, Finsbury Square
- Billing, Arch. M.D. F.R.S. Grosvenor Gate
- Birch, Scholes Butler, M.D. Harley Street
- Bird, Fred. M.D. Obstetric Physician to and Lecturer on Midwifery at the Westminster Hospital, Grosvenor Street
- Bird, James, Esq. Seymour Street, Connaught Square
- Bird, William, Esq. Surgeon to the West London Hospital, Hammersmith
- Birkett, J. Esq. Surgeon to and Lecturer on Surgery at Guy's Hospital, Green Street, Grosvenor Square
- Bisshopp, James, Esq. Medical Club
- Black, J. Watt, M.D. Physician-Accoucheur and Lecturer on Midwifery at Charing Cross Hospital, Charing Street
- Black, Robert J. M.D. Marquess Road, Canonbury
- Blackstone, Joseph, Esq. Park House, Gloucester Gate, Regent's Park
- Blackstone, Joseph, jun. Esq. Gloucester Road, Regent's Park
- Blandford, Geo. F. M.D. Lecturer on Psychological Medicine at St. George's Hospital, Grosvenor Street
- Blandy, A. H. M.D. Gloucester Place, Hyde Park
- Blenkins, George E. Esq. Deputy-Inspector General, Warwick Square
- Bonney, W. A. Esq. King's Road, Chelsea
- Boulton, Percy, M.D. Physician to outpatients at the Samaritan Hospital, Seymour Street
- Bourne, William, M.D. King William Street
- Bowkett, T. E. jun. Esq. Surgeon to the Poplar Hospital, East India Road
- Bowman, Wm. M.D. F.R.S. Clifford Street
- Brace, William H. M.D. Eccleston Square
- Braine, Francis W. Esq. Maddox Street
- Bridgewater, Thomas, M.B. Harrow
- Brietzeke, H. Esq. Park Place, Bayswater
- Bristowe, John S. M.D. Physician to and Lecturer on Pathology at St. Thomas's Hospital, Old Burlington Street
- Britton, Wm. Samuel, M.D. Acacia Road
- Broadbent, Wm. H. M.D. Physician to and Lecturer on Medicine at St. Mary's Hospital, Seymour Street
- Brodhurst, Bernard E. Esq. Orthopædic Surgeon to St. George's Hospital, Grosvenor Street
- Brodie, George B. M.D. Curzon Street
- Brown, Augustus, M.D. Barnsbury
- Brown, C. Blakeley, M.B. Physician to Queen Charlotte's Hospital, Hill Street
- Brown, Charles Gage, M.D. Sloane Street
- Brown, George D. Esq. Ealing
- Brown, Henry J. Esq. Wilmington Square
- Browne, Isaac Lennox, Esq. Welbeck St.
- Browne, J. Hullett, M.D. Physician to St. Pancras Dispensary, Gordon Square
- Brunton, John, M.D. Caledonian Road
- Brunton, Thomas L. M.D. Lecturer on Materia Medica and Casualty-Physician to St. Bartholomew's Hospital, Somerset Street, Portman Square
- Bryant, Thomas, Esq. Surgeon to Guy's Hospital, Finsbury Square
- Bryant, W. J. L.R.C.P.Ed. Sussex Square
- Buncombe, Charles H. Esq. York Place, Bow Road
- Burchell, Peter L. M.B. Surgeon-Accoucheur to the City of London Lying-in Hospital, Kingsland Road
- Burrows, Geo. M.D. F.R.S. Physician Extraordinary to the Queen, and Consulting Physician to St. Bartholomew's Hospital, Cavendish Square
- Burrows, W. A. Esq. Islington
- Burt, George, Esq. Salisbury Square
- Burton, T. Beard, Esq. Rich Terrace, Brompton
- Rury, G. Esq. Whetstone
- Buzzard, Thomas, M.D. Physician to the National Hospital for the Paralysed and Epileptic, Green Street, Grosvenor Sq.
- Byles, James Cotton, Esq., Victoria Park Road
- Byramjee, R. M.D. Parliament Street
- Cabill, T. M.D. Albert Terrace, Hyde Park
- Callender, G. W. Esq. F.R.S. Surgeon to and Lecturer on Anatomy at St. Bartholomew's Hospital, Queen Anne Street
- Camps, Wm. M.D., Southampton Street, Bloomsbury Square
- Carter, Charles T. Esq. Hadley
- Cartwright, S. Esq. Professor of Dental Surgery in King's College, Old Burlington Street
- Cass, W. Cunningham, Esq. St. George's Road, Pimlico
- Chambers, Thomas, J.R.C.P.Ed. Consulting Surgeon-Accoucheur to the Western Dispensary, Sutherland Street
- Chambers, T. K. M.D. Consulting-Physician to and Lecturer on Medicine at St. Mary's Hospital, Brook Street
- Chapman, H. T. H. Esq. Seymour Street
- Charlton, Egbert, M.D. Albion Place, Hyde Park Square
- Chater, Sidney, Esq. Surgeon to the Metropolitan Free Hospital, St. Helen's Place
- Cheadle, Walter B. M.D. Assistant Physician to and Lecturer on Materia Medica at St. Mary's Hospital, Hyde Park Place
- Cheyne, R. R. Esq. Nottingham Place
- Cholmeley, Wm. M.D. Physician to the Great Northern Hospital, Russell Square
- Christian, J. S. L.R.C.P. Thurloe Place, South Kensington (dead)
- Christie, Thomas R. M.D. Medical Superintendent of the Royal India Asylum, Ealing
- Church, W. S. M.B. Assistant-Physician to and Lecturer on Comparative Anatomy at St. Bartholomew's Hospital, Upper George Street, Bryanston Square
- Clapton, William, Esq. Bloomsbury Square
- Clark, Alfred, Esq. Twickenham
- Clark, Andrew, M.D. Physician to the London Hospital, Cavendish Square
- Clarke, J. Lockhart, M.D. F.R.S. Warwick Street, Belgravia
- Clarke, John, M.D. Obstetric Physician to and Lecturer on Midwifery at St. George's Hospital, Hertford Street
- Clarke, Vans C. M.D. Surgeon to the Convict Prison, Pentonville
- Clarke, W. Fairlie, M.B. Assistant-Surgeon to the Charing Cross Hospital, Curzon Street
- Clayton, Oscar, Esq. Harley Street
- Cleveland, W. F. M.D. Stuart Villa, Maida Vale
- Clothier, Henry, M.D. Highgate
- Clover, Joseph T. Esq. Cavendish Place
- Cobbold, T. Spencer, M.D. F.R.S. Lecturer on Botany at the Middlesex Hospital, Wimpole Street
- Cockle, John, M.D. Physician to the Royal Free Hospital, Suffolk Place, Pall Mall
- Cogswell, Charles, M.D. York Terrace, Regent's Park
- Coles, G. C. Esq. Surgeon to the Infirmary for Epilepsy and Paralysis, and Assistant-Surgeon to the South London Ophthalmic Hospital, Great Coram Street
- Cooke, Thomas, Esq. Assistant-Surgeon to the Westminster Hospital, Gower Street
- Cooke, T. C. Weedon, Esq. Upper Berkeley Street
- Cooper, Alfred, Esq. Assistant-Surgeon to the West London Hospital, Jermyn St.
- Cooper, Geoffrey V. Esq. Hampstead Road (dead)
- Cooper, George, Esq. Brentford
- Cooper, Geo. Lewis, Esq. Woburn Place
- Cooper, W. White, Esq. Surgeon-Oculist in Ordinary to the Queen, Berkeley Square
- Corfield, W. H. M.B. Professor of Hygiene in University College, Harley Street
- Corner, Francis M. Esq. Surgeon to the Hospital, Poplar
- Corner, Matthew, M.D. Medical Officer of Health, Mile End Road
- Cotton, Rd. Payne, F.R.C.P. Physician to the Brompton Hospital for Consumption, Charing Street
- Coulson, Walter J. Esq. Surgeon to the Lock Hospital, St. James's Place
- Coulson, Wm. Esq. Consulting-Surgeon to St. Mary's Hospital, Frederick Place, Old Jewry
- Couper, John, M.D. Surgeon to the London Hospital, Grosvenor Street
- Cowell, George, Esq. Assistant-Surgeon to the Westminster Hospital, and to the Royal Westminster Ophthalmic Hospital, Belgrave Road
- Critchett, George, Esq. Surgeon to the Royal London Ophthalmic Hospital, Harley Street
- Croft, John, Esq. Surgeon to St. Thomas's Hospital, Brook Street
- Croft, Robert C. L.R.C.P.Ed. Camden Road
- Crosby, Thomas B. M.D. Gordon Square
- Crucknell, H. H. M.D. Physician to the Great Northern Hospital, Welbeck Street
- Cumberbatch, L. T. M.D. Cadogan Place
- Curgenven, J. Brendon, Esq. Craven Hill Gardens
- Curling, Thos. B. Esq. F.R.S. Consulting-Surgeon to the London Hospital, Grosvenor Street
- Dalby, Wm. Bartlett, M.B. Aural Surgeon to St. George's Hospital, Sackville Street
- Daldy, Frederick S. Esq. Finsbury Square
- Daldy, Thomas M. M.D. Finsbury Square
- Dale, George C. M.D. Ledbury Road
- Davies, Herbert, M.D. Physician to and Lecturer on Medicine at the London Hospital, Finsbury Square
- Davis, John Hall, M.D. Obstetric Physician and Lecturer on Midwifery at the Middlesex Hospital, Harley Street
- Davy, Richard, Esq. Assistant-Surgeon to and Lecturer on Pathology and Operative Surgery at the Westminster Hospital, Welbeck Street
- Day, Wm. H. M.D. Physician to the Samaritan Hospital, Manchester Square
- Day, William H. Esq. Chapel Street, Pentonville
- De la Cour, G. F. M.D. Camden Road
- De Méric, Victor, Esq. Surgeon to the Royal Free Hospital, Brook Street
- De Morgan, Campbell, Esq. F.R.S. Surgeon to and Lecturer on Surgery at the Middlesex Hospital, Seymour Street
- Dick, H. M.D. Wimpole Street
- Dickie, John, M.D. Ormond Row, South Street, Chelsea
- Dickinson, W. H. M.D. Assistant-Physician to and Lecturer on Materia Medica at St. George's Hospital, Chesterfield Street
- Dickman, H. Esq. Bernard Street
- Dickson, John T. M.B. Physician to the Infirmary for Epilepsy and Paralysis, Queen Anne Street
- Dickson, Walter, M.D., R.N. Medical Officer to H.M. Customs, Trinity Square
- Dixon, J. Esq. Surgeon to the Ophthalmic Hospital, Moorfields, Lower Seymour Street, Portman Square
- Dobell, Horace, M.D. Physician to the Royal Hospital for Diseases of the Chest, Harley Street
- Donne, Jeremiah M. L.K.Q.C.P. Titchfield Terrace, Regent's Park (dead)
- Douglas, Archibald, M.D. Clifton Place, Hyde Park
- Dow, Henry B. M.D. Pembridge Villas, Bayswater
- Down, J. Langdown H. M.D. Physician to and Lecturer on Medicine at the London Hospital, Welbeck Street
- Druitt, Robert, M.R.C.P. Hertford Street, Mayfair
- Drysdale, Chas. R. M.D. Physician to the Metropolitan Free Hospital, Southampton Row
- Duckworth, Dyce, M.D. Assistant-Physician to and Lecturer on Diseases of the Skin at St. Bartholomew's Hospital, Grafton Street, Bond Street
- Dudley, John G. M.D. Physician to the North London Consumption Hospital, Belgrave Road
- Dundas, R. M.D. Gloucester Place, Hyde Park (dead)
- Dunn, Robert, Esq. Norfolk Street, Strand
- Dunn, Robert Wm. Esq. Surgeon to the Farringdon Dispensary, Surrey Street, Strand
- Du Pasquier, Claudius F. Esq. Surgeon-Apothecary to the Queen and the Prince of Wales's Household, Pall Mall
- Duplex, George, L.R.C.P.Ed. Torrington Square
- Durham, Arthur E. Esq. Assistant-Surgeon to and Lecturer on Anatomy at Guy's Hospital, Brook Street
- Dyte, David Hyman, Esq. Bury Street, Aldgate
- Easton, John, M.D. Connaught Square
- Ede, John R. M.D. Hemingford Road, Barnsbury
- Edis, Arthur W. M.D. Physician Accoucheur to the British Lying-in Hospital, Sackville Street
- Edmunds, James, M.D. Fitzroy Square
- Elam, Charles, M.D. Harley Street
- Ellis, Jas. L.K.Q.C.P. Resident Medical Officer, St. Pancras Workhouse Infirmary
- Ellis, Robert, Esq. Surgeon to the Chelsea and Belgrave Infirmary, Sloane Street
- English, Thomas, M.D. Fulham Road
- Erichsen, J. E. Esq. Surgeon and Holme Professor of Clinical Surgery in University College Hospital, Cavendish Place
- Evaus, Herbert N. M.D. Hampstead
- Evans, J. Esq. Queen's Road, Bayswater (dead)
- Evans, William, M.D. College Terrace, Belsize Park
- Eyles, Rd. S. Esq. Bloomsbury Square
- Farr, Wm. M.D. D.C.L. F.R.S. General Register Office, Somerset House

- Farquharson, Robert, M.D. Junior United Service Club
 Felce, Stamford, L.R.C.P.Ed. Chippenham Road, Harrow Road
 Fenwick, Samuel, M.D. Assistant-Physician to and Lecturer on Physiology at the London Hospital, Harley Street
 Fergusson, Sir Wm. Bart. F.R.S. Surgeon and Professor of Clinical Surgery to King's College Hospital, George Street, Hanover Square
 Ferris, John S. M.B. Uxbridge
 Field, Octavius A. Esq. Sussex Gardens
 Fincham, Geo. T. M.D. Physician to the Westminster Hospital, Belgrave Road
 Fish, John C. M.B. Physician to the Royal Hospital for Diseases of the Chest, Wimpole Street
 Forster, J. Cooper, Esq. Surgeon to and Lecturer on Surgery at Guy's Hospital, Upper Grosvenor Street
 Forsyth, J. Esq. C.B. Newton Road, Westbourne Grove
 Foulerton, J. M.D. Thatched House Club, St. James's Street
 Fox, Charles James, Esq. Dentist to the Great Northern Hospital, Mortimer St.
 Fox, W. Tilbury, M.D. Physician for Diseases of the Skin to University College Hospital, Sackville Street
 Fox, Wilson, M.D. Physician and Holme Professor of Clinical Medicine to University College Hospital, Grosvenor St.
 Frank, P. M.D. Upper Grosvenor Street
 Freeman, Wm. H. Esq. Spring Gardens
 French, John G. Esq. Great Marlborough Street
 Fulcher, George A. Esq. Hanwell
 Fuller, Henry W. M.D. Physician to St. George's Hospital, Manchester Square
 Fuller, W. F. Esq. St. Marylebone Infirmary
 Fyfe, Andrew, M.D. Brompton Road
 Gant, Fred. J. Esq. Surgeon to the Royal Free Hospital, Connaught Square
 Gardner, W. H. Esq. Gloucester Terrace
 Garrod, Alfred B. M.D. F.R.S. Professor of Materia Medica in King's College, and Physician to King's College Hospital, Harley Street
 Gascoyen, George C. Esq. Assistant-Surgeon and Lecturer on Anatomy in St. Mary's Hospital, Queen Anne Street
 Gaskoin, George, Esq. Westbourne Park
 Gay, John, Esq. Surgeon to the Great Northern Hospital, Finsbury Place South
 Gayton, Wm. Esq. Medical Superintendent of the Small-pox Hospital, Homerton
 Gervis, F. H. Esq. Adelaide Road, Haverstock Hill
 Gibb, Sir Duncan, Bart. M.D. F.G.S. Assistant-Physician to and Lecturer on Forensic Medicine at the Westminster Hospital, Bryanston Street
 Gibbon, Septimus, M.B. Oxford Terrace
 Gibson, John R. Esq. Surgeon to Newgate Prison, Russell Square
 Gilbert, Samuel G. Esq. Victoria Park Road, Hackney
 Gleeson, Michael A. F. M.D. Holloway Rd.
 Godrich, Francis, Esq. Grove House, Brompton
 Godwin, Ashton, M.D. Pelham Crescent, Brompton
 Goldie, George, Esq. Poplar and Stepney Sick Asylum, Bromley
 Goodchild, John, Esq. Ealing
 Goodfellow, Stephen J. M.D. Physician to the Middlesex Hospital, Savile Row
 Gover, R. M. Esq. Medical Officer to the Milbank Prison, Claverton Street
 Gowers, W. R. M.D. Mornington Crescent
 Gowlan, Peter, Esq. Surgeon to St. Mark's Hospital, Finsbury Square
 Gray, John H. M.B. Montagu Place, Poplar
 Gream, G. T. M.D. Physician-Accoucheur to H.R.H. the Princess of Wales, Upper Brook Street
 Greenaway, E. Esq. Melcombe Place, Dorset Square
 Greenhalgh, Robert, M.D. Obstetric Physician to and Lecturer on Midwifery at St. Bartholomew's Hospital, Grosvenor Street
 Greenhow, E. H. M.D. F.R.S. Physician to and Lecturer on Medicine at the Middlesex Hospital, Upper Berkeley Street
 Gregson, George, Esq. Surgeon to the Dental Hospital, Harley Street
 Grieve, Robert, M.D. Medical Superintendent of the Small-pox Hospital, Hampstead
 Groth, Ernest R. G. M.D. Marquess Road, Canonbury
 Gull, William W. M.D. D.C.L. Brook Street
 Habershon, Samuel O. M.D. Physician to and Lecturer on Materia Medica at Guy's Hospital, Brook Street
 Hackney, John, Esq. Twickenham
 Haden, F. Seymour, Esq. Sloane Street
 Hall, E. T. Esq. Blacklands House, Chelsea
 Hall, John, M.D. Shaftesbury Villas, Hornsey Rise
 Hancock, Henry, Esq. Surgeon to Charing Cross Hospital, Harley Street
 Hanks, H. L.R.C.P.Ed. Mile End Road
 Hardinge, Henry, M.D. Physician to the Great Northern Hospital, Grafton Street
 Hare, Charles J. M.D. Brook Street
 Hare, L. Esq. Princes Street, Cavendish Square
 Harley, George, M.D. F.R.S. Harley Street
 Harley, John, M.D. Assistant-Physician to and Lecturer on Physiology at St. Thomas's Hospital, Upper Berkeley St.
 Harper, H. L. M.D. Lancaster Road, Nottingham Hill
 Harries, Gwynne, M.D. Richmond Terrace
 Harris, C. J. Esq. Broad Street, Golden Sq.
 Hart, Ernest A. Esq. Harley Street
 Harvey, W. Esq. Aural Surgeon to the Great Northern Hospital, Soho Square
 Haviland, Alfred, Esq. King Henry's Road, Primrose Hill
 Haward, E. M.D. Physician to the St. Marylebone Dispensary, Nottingham Place, Marylebone
 Hawksley, Thomas, M.D. Brook Street
 Hayward, H. H. Esq. Dental Surgeon to St. Mary's Hospital, Harley Street
 Head, Edward, M.B. Obstetric Physician to and Lecturer on Midwifery at the London Hospital, Harley Street
 Heath, Christopher, Esq. Surgeon to University College Hospital, Cavendish Pl.
 Hemming, W. B. Esq. Norland Square
 Henry, Alex. M.D. Great Coram Street
 Hetling, H. L.R.C.P.Ed. Worship Street
 Hewett, Prescott G. Esq. Surgeon to St. George's Hospital, Chesterfield Street
 Hewitt, W. M. Grafton, M.D. Professor of Midwifery in University College, and Obstetric Physician to University College Hospital, Berkeley Square
 Hewlett, T. Esq. Harrow-on-the-Hill
 Hickman, William, M.B. Surgeon to the Samaritan Hospital and the Westminster Dispensary, Dorset Square
 Hill, Berkeley, Esq. Surgeon to University College Hospital, Weymouth Street
 Hill, John D. Esq. Surgeon to the Royal Free Hospital, Guilford Street
 Hill, J. Higham, Esq. Resident Medical Officer, St. Pancras Infirmary
 Hill, R. Gardiner, L.R.C.P.Ed. Earl's Court House, Brompton
 Hill, Samuel, M.D. Mecklenburg Square
 Hill, Thomas H. Esq. Stanhope Terrace
 Hillman, W. A. Esq. Argyl Street
 Hilton, J. Esq. F.R.S. Consulting-Surgeon to Guy's Hospital, New Broad Street
 Hinton, James, Esq. Aural Surgeon to Guy's Hospital, Savile Row
 Hird, Francis, L.R.C.P.Ed. Surgeon to Charing Cross Hospital, Old Burlington Street
 Hochee, James, Esq. Finchley
 Hogg, Charles, L.R.C.P.Ed. Charterhouse Square
 Holden, Luther, Esq. Surgeon to St. Bartholomew's Hospital, Gower Street
 Holding, Charles, Esq. Victoria Street
 Holland, Philip H. Esq. Medical Inspector Burials Department, Richmond Terrace
 Hollis, W. A. M.B. Casualty Physician to St. Bartholomew's Hospital, Harley St.
 Holman, William H. M.B. Adelaide Road South
 Holmes, T. Esq. Professor of Surgery and Pathology in the Royal College of Surgeons, Surgeon to and Lecturer on Surgery at St. George's Hospital, Clarges Street
 Holt, Barnard, Esq. Surgeon to the Westminster Hospital, Savile Row
 Holthouse, Carsten, Esq. Surgeon to and Lecturer on Surgery at the Westminster Hospital, George Street, Hanover Square
 Hood, Peter, M.D. Lower Seymour Street
 Hovell, D. De Berdt, Esq. Five Houses, Clapton
 Howes, F. C. P. M.D. Dispensary, Kensington
 Hubbard, H. W. Esq. Ladbroke Gardens
 Hulke, J. W. Esq. F.R.S. Surgeon to the Middlesex Hospital and the Royal London Ophthalmic Hospital, Old Burlington Street
 Hume, F. H. Esq. St. Peter's St., Islington
 Hunt, Alfred, Esq. Hammersmith
 Hunt, Thos. Esq. Surgeon to the Western Dispensary for Diseases of the Skin, Dorset Square
 Hunt, William J. M.D. Hoxton
 Hutchinson, Jonathan, Esq. Surgeon to and Lecturer on Surgery at the London Hospital, Finsbury Circus
 Ibbetson, George A. Esq. Dental Surgeon to University College Hospital, Hanover Square
 Ilett, James J. Esq. Resident Surgeon to the Workhouse, Whitechapel
 Inglis, Cornelius, M.D. Cavendish Chambers, Duke Street, Portland Place
 Jackson, J. Hughlings, M.D. Physician to the London Hospital, and to the Hospital for the Paralysed and Epileptic, Manchester Square
 Jackson, T. Carr, Esq. Surgeon to the Great Northern Hospital, Weymouth Street
 Jacobs, Henry, Esq. Russell Road, Kensington
 Jagielski, V. A. M.D. Weymouth Street
 James, M. Prosser, M.D. Lecturer on Materia Medica at the London Hospital, Upper Phillimore Gardens, Kensington
 Jenkins, Robert W. Esq. Philpot Lane
 Jenner, Sir Wm. Bart. M.D. D.C.L. F.R.S. Physician in Ordinary to the Queen, and Physician to University College Hospital, Brook Street
 Johnson, Edward, M.D. Cavendish Place
 Johnson, G. M.D. Physician to King's College Hospital, and Professor of Medicine in King's College, Savile Row
 Jones, C. Handfield, M.B. F.R.S. Physician to St. Mary's Hospital, Green Street, Grosvenor Square
 Jones, John, Esq. King Street, Regent St.
 Jones, Walter, M.D. Finsbury Square
 Jones, William H. M.D. Brook Street
 Joubert, C. H. M.B. St. Mary's Hospital
 Kelly, Charles, M.D. Assistant-Physician to King's College Hospital, Wimpole St.
 King, Robert, Esq. Uxbridge
 King, Robert, M.B. Medical Registrar to the Middlesex Hospital
 King, W. T. Esq. Victoria Park Road
 Kingdon, J. A. Esq. New Bank Buildings
 Kirkwood, John T. Esq. Euston Road
 Kisch, Joseph, Esq. Circus Place, Finsbury
 Kitching, George, M.D. Enfield
 Lackersteen, Mark H. M.D. Queen Anne Street
 Lane, James R. Esq. Surgeon to and Lecturer on Surgery at St. Mary's Hospital, Berkeley Street
 Langmore, John C. M.D. Sussex Gardens
 Langston, T. Esq. Broadway, Westminster
 Langton, John, Esq. Assistant-Surgeon and Demonstrator of Anatomy, St. Bartholomew's Hospital, Harley Street
 Lankester, E. M.D. F.R.S. Coroner for Central Middlesex, Gt. Marlborough St.
 Lattey, Parke P. Esq. Cambridge Place, Hyde Park
 Lawrence, Henry C. Esq. Queen's Road, Bayswater
 Lawson, George, Esq. Surgeon to the Middlesex Hospital, Harley Street
 Leared, A. M.D. Physician to the Great Northern Hospital, Old Burlington St.
 Lee, Henry, Esq. Surgeon to St. George's Hospital, Savile Row
 Lee, Newton B. C. Esq. Hanley Road, Hornsey Rise
 Letheby, Henry, M.B. Lecturer on Chemistry and Forensic Medicine at the London Hospital, Sussex Place
 Levy, Julius, Esq. Lancaster Street, Lancaster Gate
 Lewis, Waller, M.B. F.G.S. Principal Medical Officer, General Post Office
 Liddle, John, Esq. Medical Officer of Health for Whitechapel, Campbell Terrace, Bow Road
 Lindsay, J. Murray, M.D. Asylum, Hanwell
 Littelljohn, Salterne G. M.B. Hanwell
 Little, L. Stromeyer, Esq. Surgeon to the National Orthopaedic Hospital, Brook St.
 Liveing, Edward, M.D. Queen Anne Street
 Liveing, Robert, M.D. Assistant-Physician to and Lecturer on Anatomy at the Middlesex Hospital, Manchester Square
 Lloyd, Edmund, Esq. General Post Office
 Locock, Sir Charles, Bart. M.D. D.C.L. Hertford Street, Mayfair
 Long, Mark, M.D. Richmond Road, Dalston
 Lord, Charles F. J. Esq. Hampstead
 Lucas, Robert H. Esq. Middlesex Hospital
 Lyle, Wm. V. M.D. Marlborough Terrace, Harrow Road
 MacCormac, William, Esq. Assistant-Surgeon to St. Thomas's Hospital, Harley Street
 Mackenzie, Morell, M.D. Assistant-Physician to the London Hospital, Weymouth Street
 Mackinlay, J. G. Esq. Isleworth
 Mackintosh, D. M.D. Lancaster Road, Belsize Park
 Mackintosh, Hugh R. M.D. Surgeon to the Chelsea Dispensary, Brompton Road
 MacLaren, Alexander C. Esq. Harley St.
 McNair, F. Esq. Great James Street, Bedford Row
 M'Oscar, John, M.D. Argyll Street
 Macpherson, John, M.D. Curzon Street
 Madge, Henry M. M.D. Fitzroy Square
 Marsh, F. Howard, Esq. Surgeon to the Hospital for Sick Children, Guilford St.
 Marsh, John, Esq. St. John's Lodge, Woodbridge Road
 Marsh, Lory, M.D. Medical Club
 Marshall, John, Esq. F.R.S. Professor of Surgery in University College, and Surgeon to University College Hospital, Savile Row
 Marshall, Peter, Esq. Bedford Square
 Marshall, William G. Esq. Asylum, Colney Hatch
 Martin, Sir J. Ranald, F.R.S. Physician to the Council for India, Up. Brook Street
 Martin, Robert, M.D. Queen Anne Street
 Martin, William, Esq. St. Peter's Square, Hammersmith
 Mason, Francis, Esq. Assistant-Surgeon to and Lecturer on Anatomy at St. Thomas's Hospital, Conduit Street
 Matthews, John, M.D. Mylne Street
 Maudsley, Henry, M.D. Professor of Medical Jurisprudence in University College, Hanover Square
 Maunder, C. F. Esq. Surgeon to the London Hospital, New Broad Street
 May, Edward H. M.D. Medical Officer to the Dispensary, Tottenham
 Meadows, Alfred, M.D. Obstetric Physician to and Lecturer on Midwifery at St. Mary's Hospital, George Street, Hanover Square
 Meredyth, A. W. D. Colomiati, M.D. Margaret Street, Cavendish Square
 Merriman, J. J. Esq. Kensington Square
 Meryon, Edward, M.D. Clarges Street
 Michael, William H. Esq. Cholmeley Park, Highgate
 Michell, W. D. Esq. Delancy Street
 Millar, John, L.R.C.P.Ed. Bethnal House, Cambridge Heath
 Miller, Benjamin, Esq. St. James's Place
 Mills, Samuel, Esq. Southampton Street, Strand
 Mitchell, J. Esq. Charington Street
 Morgan, James L. Esq. Copenhagen Street
 Morgan, J. Esq. Sussex Place, Hyde Park
 Morris, Henry, M.B. Assistant-Surgeon to the Middlesex Hospital, Bedford Sq.
 Morrison, J. R. Esq. Cannon Street Road
 Morton, Thomas, M.D. Kilburn
 Mould, John T. Esq. Onslow Crescent Brompton
 Moxey, D. A. M.D. Turnham Green
 Moxon, Walter, M.D. Assistant-Physician to and Lecturer on Pathology at Guy's Hospital, Finsbury Circus
 Munk, William, M.D. Librarian to the Royal College of Physicians, Finsbury Square
 Murchison, Charles, M.D. LL.D. Physician to and Lecturer on Medicine at St. Thomas's Hospital, Wimpole Street
 Murray, John, M.D. Assistant-Physician to the Middlesex Hospital, and to the Hospital for Sick Children, Bryanston Street
 Musgrave, J. T. L.R.C.P.Ed. Finchley Road
 Mushet, William B. M.B. New Southgate
 Nettleship, Edward, Esq. Finsbury Pavement
 Niblett, F. D. Esq. The Grove, Hackney
 Norton, Algernon, M.D. Westbourne Grove
 Norton, Arthur Trehern, Esq. Assistant-Surgeon to and Lecturer on Anatomy at St. Mary's Hospital, Wimpole Street

Norton, Edward, Esq. Clifton Terrace, Maida Hill
 Norton, George E. Esq. Upper Baker Street
 Nunn, Thomas W. Esq. Surgeon to the Middlesex Hospital, Stratford Place
 Nunneley, Frederic B. M.D. Assistant-Physician and Lecturer on Histology at St. Mary's Hospital, Harley Street
 Oates, Parkinson, M.D. Cambridge Street, Piccadilly
 Ogle, John W. M.D. Physician to St. George's Hospital, Cavendish Square
 Orwin, James, Esq. Granville Terrace, Ladbrooke Road
 Paget, Sir James, Bart. D.C.L. F.R.S. Consulting Surgeon to St. Bartholomew's Hospital, Harewood Place
 Parker, William K. Esq. F.R.S. Claverton Street
 Partridge, Richard, Esq. F.R.S. Professor of Anatomy in King's College, New St. Spring Gardens
 Payne, J. Frank, M.B. Assistant-Physician to St. Thomas's Hospital, Green Street, Grosvenor Square
 Peacock, Thomas B. M.D. Physician to and Lecturer on Medicine at St. Thomas's Hospital, Finsbury Circus
 Pearson, David R. M.D. Upper Phillimore Place, Kensington
 Pettifer, E. H. Esq. Southgate Road
 Phillips, John J. M.D. Assistant Obstetric Physician to Guy's Hospital, and Assistant-Physician to the Hospital for Children, Finsbury Square
 Phillips, Richard, Esq. Leinster Square
 Pidwell, Samuel, Esq. Middlesex Hospital (dead)
 Playfair, William S. M.D. Assistant-Physician-Accoucheur to King's College Hospital, Curzon Street
 Polard, Frederick, M.D. Euston Road
 Pollock, George D. Esq. Surgeon to St. George's Hospital, Grosvenor Street
 Poore, George V. M.D. Wimpole Street
 Potter, John B. M.D. Assistant Obstetric Physician to the Westminster Hospital, Maddox Street
 Powell, Josiah T. M.D. City Road
 Powell, R. Douglas, M.D. Assistant-Physician to the Charing Cross Hospital, Nottingham Place
 Power, H. M.B. Ophthalmic Surgeon to St. Bartholomew's Hospital, Seymour Street
 Preston, T. J. Esq. Belsize Road
 Priestley, William O. M.D. Professor of Midwifery in King's College, and Obstetric Physician to King's College Hospital, Hertford Street
 Pullar, Alfred, M.D. Physician to the East London Hospital for Children, Grafton Street
 Puzey, Chauncey, Esq. Houghton Place, Amptill Square
 Pye-Smith, Philip H. M.D. Assistant-Physician to and Lecturer on Histology and Comparative Anatomy at Guy's Hospital, Finsbury Square
 Quain, Richard, Esq. F.R.S. Consulting Surgeon to University College Hospital, Cavendish Square
 Quain, Richard, M.D. F.R.S. Physician to the Brompton Hospital for Consumption, Harley Street
 Radcliffe, Charles B. M.D. Physician to the Westminster Hospital and the Hospital for the Paralyzed and Epileptic, Cavendish Square
 Ralfe, Charles H. M.B. Queen Anne Street
 Ramsay, W. F. H. M.D. Somerset Street
 Ramskill, Jabez S. M.D. Physician to and Lecturer on Medicine in the London Hospital, and Physician to the Hospital for the Paralyzed and Epileptic, St. Helen's Place
 Randall, John, M.D. Lecturer on Medical Jurisprudence at St. Mary's Hospital, Nottingham Place
 Rasch, A. M.D. Physician for Diseases of Women to the German Hospital, South Street, Finsbury
 Rawlins, Henry A. L.R.C.P.Ed. Francis Terrace, Highgate Road
 Rayner, J. Esq. Barnsbury
 Read, Thomas J. Esq. Petersham Terrace, Kensington
 Rees, George Owen, M.D. F.R.S. Physician to and Lecturer on Medicine at Guy's Hospital, Albemarle Street
 Reeves, H. A. Esq. Assistant-Surgeon to the London Hospital, Gordon Square

Reynolds, J. Russell, M.D. F.R.S. Professor of Medicine in University College, and Physician to University College Hospital, Grosvenor Street
 Richardson, Benjamin W. M.D. F.R.S. Hinde Street
 Richardson, William, M.D. Gloucester Gardens, Hyde Park
 Rickards, Walter, M.D. Assistant-Physician to the City of London Chest Hospital, Cavendish Place
 Ridge, Joseph, M.D. Dorset Square
 Rivington, Walter, Esq. Surgeon to and Lecturer on Anatomy at the London Hospital, Finsbury Square
 Roberts, Anthony T. M.D. Lamb's Conduit Street
 Roberts, David W. M.D. Manchester St.
 Roberts, Frederick T. M.D. Assistant-Physician to University College Hospital, and to the Brompton Hospital for Consumption, Elgin Crescent, Kensington Park
 Robertson, C. Lockhart, M.D. Hanover Sq.
 Rogers, George A. Esq. Medical Officer of Health for Limehouse, High Street, Shadwell
 Rogers, G. H. Esq. Old Burlington Street
 Rogers, Joseph, M.D. Dean Street, Soho
 Rose, Henry Cooper, M.D. Hampstead
 Ross, Daniel, Esq. Commercial Place, Commercial Road East
 Routh, C. H. F. M.D. Physician to the Samaritan Hospital, Montagu Square
 Royston, Charles, M.D. St. Stephen's Crescent, Westbourne Park
 Rudderforth, Edward H. Esq. Air Street
 Rutherford, William, M.D. Professor of Physiology in King's College, Upper Berkeley Street
 Sabben, James T. M.D. Northumberland House, Stoke Newington
 Sall, William, L.R.C.P. Deputy Inspector-General, Charlwood Street
 Salter, H. Hyde, M.D. F.R.S. Physician to and Lecturer on Medicine at the Charing Cross Hospital, Harley Street (dead)
 Sanderson, Hugh James, M.D. Upper Berkeley Street
 Sanderson, J. Burdon, M.D. F.R.S. Professor of Histology in University College, Queen Anne Street
 Sansom, Arthur E. M.D. Physician to the Royal Hospital for Diseases of the Chest, Duncan Terrace, City Road
 Saunders, Edwin, Esq. Surgeon-Dentist to the Queen and the Prince and Princess of Wales, George Street, Hanover Square
 Savage, Henry, M.D. Consulting Physician to the Samaritan Hospital, Baker Street
 Savory, William S. M.B. F.R.S. Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital, Brook Street
 Sealiff, J. Parr, M.D. Sloane Street
 Seaton, Joseph, M.D. Sunbury
 Sedgwick, Leonard W. M.D. Gloucester Terrace, Hyde Park
 Sedgwick, William, Esq. Park Place, Regent's Park
 Semple, Robert H. M.D. Physician to the Eastern Dispensary, Torrington Square
 Sercombe, Edwin, Esq. Brook Street
 Sewell, Charles B. M.D. Guilford Street
 Sharp, Jas. Esq. Grosvenor Street West
 Sharpey, William, M.D. LL.D. Sec. R. S. Professor of Anatomy and Physiology in University College, Hampstead
 Shaw, Alexander, Esq. Consulting Surgeon to the Middlesex Hospital, Kilburn
 Shillitoe, Buxton, Esq. Surgeon to the Gt. Northern Hospital, Finsbury Circus
 Shrimpton, Charles, M.D. Whitehall
 Sibley, S. W. Esq. New Burlington Street
 Sibson, Francis, M.D. D.C.L. F.R.S. Consulting Physician to St. Mary's Hospital, Brook Street
 Sieveking, Edward H. M.D. Physician to H.R.H. the Prince of Wales, and to St. Mary's Hospital, Manchester Square
 Simms, Frederick, M.B. Physician to the West London Hospital, Wimpole Street
 Simpson, Archibald, M.D. Canonbury Park North
 Simpson, George A. M.B. Highgate
 Sisson, Richard S. M.D. Warrington Terrace, Maida Hill
 Skafie, Henry, Esq. Westbourne Road, Holloway
 Skej, Frederick C. Esq. C.B. F.R.S. Consulting Surgeon to St. Bartholomew's Hospital, Mount Street

Slight, George, M.D. Brewer Street, Regent Street
 Slyman, William D. Esq. Caversham Road, Kentish Town
 Smith, Charles, Esq. Upper Craven Place, Kentish Town
 Smith, Henry, Esq. Surgeon to King's College Hospital, Wimpole Street
 Smith, H. Spencer, Esq. Surgeon to St. Mary's Hospital, Queen Anne Street
 Smith, Herbert Alder, Esq. Surgeon to Christ's Hospital, Newgate Street
 Smith, Heywood, M.B. Physician to the British Lying-in Hospital, Park Street
 Smith, Protheroe, M.D. Physician to the Hospital for Women, Park Street
 Smith, Thomas, Esq. Assistant Surgeon to St. Bartholomew's Hospital and Surgeon to the Hospital for Children, Stratford Place
 Smith, Walter, Esq. William Street, Regent's Park
 Smith, W. Tyler, M.D. Consulting Physician-Accoucheur to St. Mary's Hospital, Upper Grosvenor Street
 Snell, Edward, Esq. City Road
 Solly, Samuel, Esq. F.R.S. Savile Row (dead)
 Southey, Reginald, M.D. Physician to and Lecturer on Forensic Medicine at St. Bartholomew's Hospital, Harley Street
 Squarey, C. E. M.B. Physician-Accoucheur to the St. Marylebone Dispensary, Upper Wimpole Street
 Squire, A. J. Balmanno, M.B. Weymouth Street
 Squire, William, Esq. Orchard Street
 Stanton, John, M.D. Montagu Square
 Startin, James, Esq. Senior Surgeon to the Hospital for Diseases of the Skin, Savile Row
 Steele, Henry Murray, Esq. Stanhope St. Hampstead Road
 Steven, Alexander, M.D. Inverness Terrace, Kensington Gardens
 Stewart, Alexander, Esq. Cheapside
 Stewart, A. P. M.D. Consulting Physician to the Middlesex Hospital, Grosvenor St.
 Stewart, William, M.D. Southwick Place, Hyde Park
 Stewart, William E. Esq. Weymouth St.
 Stilwell, Henry, M.D. Hillingdon
 Stocker, Alonzo H. M.D. Grove Hall, Bow
 Stone, Thomas, Esq. South Square, Gray's Inn
 Stott, Thomas S. Esq. Highgate Road
 Strange, W. H. M.D. Avenue, Belsize Park
 Sutherland, H. M.B. 6, Richmond Terrace, Whitehall
 Suro, Sigismund, M.D. Physician to the German Hospital, Finsbury Square
 Sutton, Henry G. M.B. Assistant-Physician to the London Hospital and to the City of London Hospital for Diseases of the Chest, Finsbury Square
 Tait, Edward W. Esq. Northampton Park, Canonbury
 Tanner, Thomas H. M.D. Henrietta Street, Cavendish Square (dead)
 Taplin, Thomas, Esq. St. James Square
 Tatham, John, M.D. Assistant-Physician to the Brompton Hospital for Consumption, Wilton Place, Knightsbridge
 Tay, Warren, Esq. Assistant-Surgeon to the London Hospital and the Blackfriars Hospital for Skin-Diseases, Finsbury Pavement
 Taylor, John, M.D. Queen's Road, Bayswater
 Taynton, H. Esq. Bedford Place, Commercial Road East
 Teevan, William F. Esq. Surgeon to the West London Hospital, Portman Square
 Tegart, Edward, Esq. Jermyn Street
 Tenison, E. T. Ryan, M.D. R.N. Keith Terrace, Shepherd's Bush
 Thomas, Montague, M.D. Nottingham Pl. Regent's Park
 Thompson, E. Symes, M.D. Physician to the Brompton Hospital for Consumption, Upper George Street, Portman Square
 Thompson, Henry, M.D. Physician to the Middlesex Hospital, Welbeck Street
 Thompson, Sir Henry, M.B. Surgeon to University College Hospital, Wimpole St.
 Thompson, J. A. Esq. Delamere Street
 Thompson, John, L.R.C.P.Ed. Oakley Sq. St. Pancras
 Thorne, R. Thorne, M.B. Seymour Street
 Thorowgood, John C. M.D. Physician to the West London Hospital, Assistant-Physician to the City of London Chest Hospital, Welbeck Street

Thyne, Thomas, M.D. Minorities
 Tilt, E. J. M.D. Grosvenor Street
 Tindale, Wentworth R. M.B. Hampton
 Toulmin, Frederick J. Esq. Thurloe Sq. Brompton
 Trail, William, M.D. Brownswood Park, Stoke Newington
 Tuke, Harrington, M.D. Albemarle Street
 Tulk, John A. M.R.C.P. Spring Grove
 Turner, Duncan, Esq. Essex Rd. Islington
 Turner, George, Esq. Sussex Gardens
 Turner, James S. Esq. Margaret Street
 Vasey, Charles, Esq. Dental Surgeon to St. George's Hospital, Cavendish Place
 Vernon, Bowater J. Esq. Ophthalmic Surgeon to St. Bartholomew's Hospital, Wimpole Street
 Vinall, John, Esq. Cassland Crescent, Hackney
 Vincent, Osman, Esq. Surgeon to the Great Northern Hospital, and to the National Orthopaedic Hospital, Devonshire Street, Portland Place
 Vinen, E. Hart, M.D. Chepstow Villas, Bayswater
 Vintras, Achille, M.D. Physician to the French Hospital, Regent Street
 Von Seydewitz, the Baron Paul, M.D. Shadwell Road, Upper Holloway
 Waggett, John, M.D. Stanley Terrace
 Waite, Charles D. M.B. Physician to the Westminster General Dispensary, Old Burlington Street
 Walker, Alfred, M.B. Physician to the St. Pancras and Northern Dispensary, Throgmorton Street
 Walker, John B. Esq. Clifton Gardens
 Wall, A. B. L.R.C.P.Ed. Bayswater
 Walshe, Walter H. M.D. Consulting Physician to the Brompton Hospital for Consumption, Queen Anne Street
 Walton, Haynes, Esq. Surgeon and Ophthalmic Surgeon to St. Mary's Hospital, Brook Street
 Wane, Daniel, M.D. Grafton Street
 Ward, Charles P. Esq. Buckingham Palace Road
 Ward, Stephen H. M.D. Physician to the Seamen's Hospital, Finsbury Circus
 Ward, W. J. C. M.D. Bedford Gardens, Kensington
 Ware, Martin, Esq. Gordon Square
 Waring, Edward J. M.D. Portsdown Gardens, Maida Hill
 Warn, Reuben, Esq. Highgate Road
 Watkins, Edwin T. M.D. Consulting Accoucheur to the Bloomsbury Lying-in Charity, Guilford Street
 Watson, John, M.D. Southampton Street, Bloomsbury
 Watson, Sir Thomas, Bart. M.D. D.C.L. Henrietta Street
 Watson, W. Spencer, M.B. Surgeon to the Great Northern Hospital, and Assistant-Surgeon to the Central London Ophthalmic Hospital, Henrietta Street, Cavendish Square
 Watson, William Tyndall, M.D. Surgeon to the Dispensary, Tottenham
 Way, John, M.D. Medical Officer to the Royal Pimlico Dispensary, Eaton Sq.
 Webb, Frederick E. Esq. Maida Vale
 Weber, Frederic, M.D. Green Street, Grosvenor Square
 Weber, Hermann, M.D. Physician to the German Hospital, Grosvenor Street
 Wells, J. Soelberg, M.D. Professor of Ophthalmology in King's College, and Ophthalmic Surgeon to King's College Hospital, Savile Row
 Wells, T. Spencer, F.R.C.S.P. Surgeon to the Samaritan Hospital, Upper Grosvenor Street
 Westall, Edward, M.D. Holland Villas Road, Kensington
 Whistler, M. Esq. Brook Street
 White, John C. Esq. Storey's Gate
 Whitmore, John, M.D. Medical Officer of Health for Marylebone, Wimpole Street
 Wilks, Samuel, M.D. F.R.S. Physician to and Lecturer on Medicine at Guy's Hospital, Grosvenor Street
 Willett, Edmund S. M.D. Wyke House, Isleworth
 Williams, A. Wynn, M.D. Physician to the Samaritan Hospital, Montagu Square
 Williams, Charles J. B. M.D. F.R.S. Consulting Physician to the Brompton Hospital for Consumption, Upper Brook St.
 Williams, C. Theodore, M.D. Physician to the Brompton Hospital for Consumption, Park St. Grosvenor Sq.

Williams, H. Llewelyn, M.D. Leonard Pl. Kensington
 Williams, Henry W. M.D. Fulham Road
 Williams, Joseph, M.D. Chichester Street, Upper Westbourne Terrace
 Williamson, James, M.D. Mildmay Park, Stoke Newington
 Willis, Julian, Esq. Resident Medical Officer, Great Northern Hospital
 Wilson, Erasmus, Esq. F.R.S. Professor of Dermatology in the Royal College of Surgeons, Henrietta St. Cavendish Sq.
 Wiltshire, Alfred, M.D. Physician to the British Lying-in Hospital, and Physician for Diseases of Women to the West London Hospital, Wimpole St.
 Winslow, Forbes, M.D. D.C.L. Cavendish Square
 Wood, John, Esq. F.R.S. Surgeon to King's College Hospital, and Professor of Surgery in King's College, Wimpole St.
 Wood, W. M.D. Visiting Physician to St. Luke's Hospital, Harley Street
 Wookey, James, Esq. Potter's Bar, Barnet
 Worley, W. C. Esq. New North Road, Hoxton
 Wright, John F. Esq. Seymour Street
 Young, Edward P. Esq. Surgeon to the Westbourne Dispensary, Delamere Crescent

MONMOUTHSHIRE.

Number of Members. .19.
 Branch. . Gloucestershire.

Brown, George A. Esq. Tredegar
 Clapp, William J. Esq. Nantyglo
 Davies, John, M.D. Ebbw Vale
 Essex, James, Esq. Pontypool
 Hale, Edmund T. Esq. Abertillery
 King, Thomas, Esq. Chepstow
 Redwood, Thomas H. M.D. Rhymney
 Renwick, William, Esq. Blackwood, Newport
 Robathan, Edward, Esq. Risca
 Robathan, George B. Esq. Risca
 Scott, R. Inceledon, Esq. Newport
 Soper, J. H. Esq. Blaenau
 Steel, Samuel Hopkins, M.B. Surgeon to the Dispensary, Abergavenny
 Watkins, George, Esq. Chepstow
 Watson, Wasdale, Esq. Newport
 White, Frederick G. Esq. Chepstow
 Williams, John, M.D. Pontypool
 Willis, George, M.D. Physician to the Hospital, Monmouth
 Wilson, George, Esq. Monmouth

NORFOLK.

Number of Members. .38.
 Branch. . East Anglian.

Allen, Joseph, Esq. Tombland, Norwich
 Amyot, Thomas E. Esq. Diss
 Bately, J. Esq. South Town, Great Yarmouth
 Bateman, F. M.D. Physician to the Norfolk and Norwich Hospital, Norwich
 Beverley, Michl. M.D. Norwich
 Bousfield, Edward, Esq. Thetford
 Cadge, William, Esq. Surgeon to the Norfolk and Norwich Hospital, Norwich
 Cater, William, Esq. Fincham
 Clouting, John R. Esq. Shipham
 Cooper, James, Esq. Cromer
 Copeman, Edward, M.D. Physician to the Norfolk and Norwich Hospital, Norwich
 Cossar, T. M.D. King's Lynn
 Crosse, T.W. Esq. Assistant-Surgeon to the Norfolk and Norwich Hospital, Norwich
 Drury, C. D. H. M.D. Pulham St. Mary's
 Eade, Peter, M.D. Physician to the Norfolk and Norwich Hospital, Norwich
 Farrington, A. C. Esq. Diss
 Fox, John, Esq. Norwich
 Hastings, Horace C. Esq. East Dereham
 Kendall, Thomas M. Esq. King's Lynn (dead)
 Lettes, Thomas, Esq. Great Yarmouth
 Little, Frederick, Esq. Aylsham
 Lowe, John, M.D. Surgeon to H.R.H. the Prince of Wales' Household, and to West Norfolk and Lynn Hospital, King's Lynn
 Meadows, Daniel, Esq. Surgeon to the Hospital, Great Yarmouth
 Norman, R. R. B. Esq. Great Yarmouth
 Palmer, Charles, Esq. Surgeon to the Hospital, Great Yarmouth
 Payne, Sturley, Esq. Norwich
 Pitt, John B. M.D. Norwich
 Prangley, T. Esq. Aldborough
 Ransom, Peter P. Esq. North Elmham
 Robinson, Haynes S. Esq. Norwich

Smith, J. C. Esq. Great Yarmouth
 Smyth, S. T. M.D. Great Yarmouth
 Steele, Henry Browne, Esq. Stoke Ferry
 Summerhayes, William, Esq. Norwich
 Taylor, G. Esq. Mattishall
 Vores, William, M.D. Great Yarmouth
 Wales, T. G. Esq. Downham Market
 Waller, J. T. Esq. Fleggburgh

NORTHAMPTONSHIRE.

Number of Members. .48.
 Branch. . South Midland.

Ashdown, George, Esq. Surgeon to the Infirmary, Northampton
 Bailey, T. C. Esq. Weldon
 Banks, Philip H. Esq. Risely
 Bennett, Charles, Esq. Braunston
 Bishop, E. Esq. Culworth
 Bryau, John M. M.D. Northampton
 Buszard, Frank, M.D. Northampton
 Carruthers, James G. Esq. House-Surgeon to the Infirmary, Northampton
 Clark, William, M.D. Wellingborough
 Cotton, George, Esq. Northampton
 Cox, Arthur, Esq. Long Buckby
 Crew, John, Esq. Higham Ferrers
 Dudley, Edward, Esq. Yardley Hastings
 Evans, Charles J. Esq. Northampton
 Farmer, John, Esq. Brackley
 Francis, D. J. T. M.D. Senior Physician to the Infirmary, Northampton
 Gowing, B. C. Esq. Daventry
 Harday, George, Esq. West Haddon
 Hunt, W. J. Esq. Silverstone
 Knott, James P. Esq. Blisworth
 Knott, William P. Esq. Rugbrooke
 McMahon, J. T. L.K.Q.C.P. Deeping Gate
 Marshall, Francis H. L.R.C.P. Ed. Moulton, Northampton
 Martin, Joseph C. Esq. Oundle
 Mash, James, Esq. Surgeon to the Infirmary, Northampton
 Masters, William H. Esq. Thrapstone
 More, James, M.D. Rothwell
 Moxon, William, Esq. Northampton
 Olive, Eustace, Esq. Northampton
 Paley, William, M.D. Physician to the Infirmary, Peterborough
 Porter, William George, Esq. Consulting Surgeon to the Infirmary, Peterborough
 Pritchard, T. M.D. Abington Abbey, Northampton
 Skinner, William A. Esq. Kingscliffe
 Southam, Francis, Esq. Wansford
 Spurgin, B. Esq. Thrapston
 Spurgin, Herbert, Esq. Northampton
 Starling, T. John, Esq. Higham Ferrers
 Swann, F. B. Esq. Weedon
 Terry, Henry, jun. Esq. Surgeon to the Borough Gaol, Northampton
 Tomlinson, D. W. Esq. Oundle
 Walker, T. M.D. Surgeon and Honorary Physician to the Infirmary, Peterborough
 Walker, Thomas James, M.D. Surgeon to the Infirmary, Peterborough
 Walker, William H. Esq. Bugbrooke
 Watkins, Robert W. Esq. Towcester
 Webster, John H. M.D. Physician to the Infirmary, Northampton
 Williams, Hugh, Esq. Thrapston
 Williams, William, Esq. Guilsborough
 Wright, Joseph B. M.D. Wellingborough

NORTHUMBERLAND.

Number of Members. .91.
 Branch. . Northern

Aitchison, Andrew, M.B. Wallsend
 Alexander, Peter, Esq. Earsdon
 Anderson, Wm Esq. Newcastle-on-Tyne
 Angus, James A. Esq. Newcastle-on-Tyne
 Armstrong, Henry B. Esq. Resident Medical Officer to the Dispensary, Newcastle-on-Tyne
 Armstrong, Luke, Esq. Surgeon to the Infirmary, and Lecturer on Anatomy in the College of Medicine, Newcastle-on-Tyne
 Arnison, William C. M.D. Surgeon to the Infirmary, and Lecturer on Materia Medica in the College of Medicine, Newcastle-on-Tyne
 Atkinson, John L. Esq. Wylam
 Barkas, W. J. L.R.C.P. Ed. Newcastle-on-Tyne
 Bell, Anthony, Esq. Assistant-Surgeon to the Infirmary, Newcastle-on-Tyne
 Black, John G. M.B. Newcastle-on-Tyne
 Bolton, Andrew, M.D. Newcastle-on-Tyne
 Boyd, James, Esq. Newcastle-on-Tyne
 Bramwell, Byrom, M.B. North Shields

Bramwell, John Byrom, M.D. Surgeon to the Dispensary, North Shields
 Broadbent, Lewis G. M.D. Medical Officer to the Dispensary, Bambrough
 Brown, Colville, M.D. Berwick-on-Tweed
 Brumell, Matthew, Esq. Morpeth
 Burnup, Martin, M.D. Newcastle-on-Tyne
 Candlish, Henry, M.D. Physician to the Infirmary Alnwick
 Carr, Charles, Esq. Newcastle-on-Tyne
 Charlton, Edward, M.D. D.C.L. Physician to the Infirmary, and Lecturer on Medicine in the College of Medicine, Newcastle-on-Tyne
 Clarke, Richard, Esq. Newcastle-on-Tyne
 Currie, Thomas, Esq. Amble
 Davison, Anthony, Esq. Seaton Delaval
 Davison, Robert S. Esq. Newburn, Blayden
 Dodd, T. A. H. Esq. Newcastle-on-Tyne
 Donnelly, T. J. Esq. Seaton Delaval
 Ellis, Richard, Esq. Newcastle-on-Tyne
 Embleton, Dennis, M.D. Physician to the Infirmary, and Lecturer on Medicine in the College of Medicine, Newcastle-on-Tyne
 Fawcus, Henry R. M.D. Ford
 Fenwick, J. C. M.B. Bolton, Alnwick
 Fife, Joseph B. Esq. Surgeon to the Eye Infirmary, Newcastle-on-Tyne
 Gibb, Charles J. M.D. Consulting Surgeon to the Infirmary, and Lecturer on Pathological Anatomy in the College of Medicine, Newcastle-on-Tyne
 Gibson, C. M.D. Physician to the Dispensary, and Lecturer on Midwifery in the College of Physicians, Newcastle-on-Tyne
 Gilchrist, G. C. M.B. Newcastle-on-Tyne
 Gregson, T. L. Esq. Newcastle-on-Tyne
 Harcastle, N. Esq. Newcastle-on-Tyne
 Hawthorn, John, Esq. Assistant-Surgeon to the Infirmary, Newcastle-on-Tyne
 Heath, George Y. M.D. Surgeon to the Infirmary, and Lecturer on Surgery in the College of Medicine, Newcastle-on-Tyne
 Hislop, George B. Esq. Killingworth
 Hope, John, Esq. Newcastle-on-Tyne
 Houseman, John, M.D. Newcastle-on-Tyne
 Humble, Thomas, M.D. Consulting Physician to the Infirmary, and Lecturer on Materia Medica in the College of Medicine, Newcastle-on-Tyne
 Hume, George H. M.D. Assistant-Surgeon to the Infirmary, Newcastle-on-Tyne
 I'Anson, W. A. Esq. Newcastle-on-Tyne
 Jackson, Daniel, M.D. Hexham
 Jamieson, William A. M.B. Ravensdowne, Berwick-on-Tweed
 Jeaffreson, Christopher S. Esq. Assistant-Surgeon to the Infirmary, Newcastle-on-Tyne
 Kendal, Cuthbert R. Esq. Hexham
 Liddell, John, Esq. Newcastle-on-Tyne
 Lownds, James R. Esq. Walker
 Lynn, Robert D. M.D. Newcastle-on-Tyne
 Lynch, John, Esq. Blyth
 Macaulay, John, M.D. Newcastle-on-Tyne
 McBean, Samuel, Esq. Newcastle-on-Tyne
 McCoull, George, Esq. Ovington
 MacLagan, Philip W. M.D. Berwick-on-Tweed
 Maclaren, Benjamin, L.R.C.P. Ed. Bedlington
 MacLachlan, Alexander, M.B. Newcastle-on-Tyne
 McLean, Hugh, M.D. Corbridge
 McVail, David C. Esq. House-Surgeon to the Infirmary, Alnwick
 Manford, F. W. Esq. Newcastle-on-Tyne
 Matthews, John, M.D. Tynemouth
 Miller, James, Esq. Newcastle-on-Tyne
 Montgomery, William, Esq. Haydon Bridge
 Murray, John C. M.D. Newcastle-on-Tyne
 Murray, S. H. L. Esq. Newcastle-on-Tyne
 Murray, William, M.D. Lecturer on Physiology in the College of Medicine, Newcastle-on-Tyne
 Nesham, Thomas C. M.D. Lecturer on Anatomy in the College of Medicine, Newcastle-on-Tyne
 Newton, Robert C. Esq. Newcastle-on-Tyne
 Page, Frederick, M.D. House-Surgeon to the Infirmary, Newcastle-on-Tyne
 Paxton, John, Esq. Norham
 Peart, R. S. M.D. North Shields
 Philipson, George H. M.D. Physician to the Infirmary, and Lecturer on Pathological Anatomy in the College of Medicine, Newcastle-on-Tyne
 Reid, John C. M.D. Newbiggin-by-Sea
 Ridley, Herbert, Esq. Surgeon to the Lying-in Hospital and the Hospital for Children, Newcastle-on-Tyne

Rose, R. D. Esq. Morpeth
 Russell, John, Esq. Surgeon to the Infirmary, and Lecturer on Anatomy in the College of Medicine, Newcastle-on-Tyne
 Spencer, Walter W. Esq. Newcastle-on-Tyne
 Stephens, Thomas, Esq. North Shields
 Stuart, James S. M.D. Newcastle-on-Tyne
 Tatham, Thomas, Esq. Ponteland
 Thornhill, John, Esq. Bulman Village
 Turnbull, Thomas J. Esq. Medical Officer to the Dispensary, North Shields
 Walker, Robert, M.D. Wooler
 Ward, Henry D. M.D. Blyth
 Wickham, R. H. B. Esq. Medical Superintendent of the Borough Asylum, Newcastle-on-Tyne
 Wilson, Richard, Esq. Medical Superintendent of the County Asylum, Morpeth
 Wilson, Robert, M.D. Alnwick
 Wilson, Thomas, Esq. Wallsend

NOTTINGHAMSHIRE.

Number of Members. .38.
 Branch. . Midland.

Allison, W. Esq. East Retford
 Appleby, Frederick H. Esq. House-Surgeon to the Hospital, Newark-on-Trent
 Bateman, Charles, Esq. East Bridgeford
 Broadbent, John, Esq. North Cottingham
 Brookhouse, Joseph O. M.D. Surgeon to the Eye Infirmary, Nottingham
 Buckoll, E. C. Esq. Nottingham
 Bury, George, L.R.C.P. Ed. Nottingham
 Butler, James, Esq. Beeston
 Calvert, C. Esq. Southwell
 Cooke, Edward J. M.B. Surgeon to the Dispensary, Worksop
 Elder, George, M.D. House-Surgeon to the General Hospital, Nottingham
 Grewecock, George, Esq. Nottingham
 Higginbottom, J. Esq. F.R.S. Nottingham
 Higginbottom, Marshall Hall, Esq. Nottingham
 Job, Samuel, Esq. Surgeon to the Hospital and Dispensary, Newark-on-Trent
 Johnson, Osborn, Esq. Bassingham
 Mickle, A. G. M.B. Nottingham
 Morris, William W. Esq. East Bridgeford
 Osborne, J. H. Esq. Southwell
 Prichard, William, Esq. East Retford
 Ransom, William H. M.D. F.R.S. Physician to the General Hospital, Nottingham
 Robertson, W. Tindal, M.D. Physician to the General Hospital, Nottingham
 Souter, J. C. M.D. Nottingham
 Spurr, J. Esq. Carlton-in-Lindrick
 Stanger, G. E. Esq. Surgeon to the Dispensary, Nottingham
 Stevenson, T. Appleby, M.D. Surgeon to the Eye Infirmary, Nottingham
 Stevenson, Frederick, Esq. Nottingham
 Stiff, W. P. M.B. Resident Physician to the Lunatic Asylum, Nottingham
 Taylor, Charles B. M.D. Surgeon to the Eye Infirmary, Nottingham
 Taylor, Henry, Esq. Surgeon to the Dispensary, Nottingham
 Thompson, John N. Esq. Nottingham
 Thompson, Joseph, Esq. Surgeon to the General Hospital, Nottingham
 Waring-Curran, J. L.K.Q.C.P.I. Sutton-in-Ashfield
 Watchorn, Isaac, M.D. Nottingham
 White, Joseph, Esq. Surgeon to the General Hospital, Nottingham
 Wilkinson, W. Esq. Harthill, Worksop
 Wright, James, Esq. Bottesford
 Wright, Thomas, M.D. Surgeon to the General Hospital, Nottingham

OXFORDSHIRE.

Number of Members. .24.

Branches { Birmingham & Mid. Counties.
 Reading.
 Acland, Henry Wentworth, M.D. LL.D. F.R.S. Regius Professor of Medicine, and Physician to the Radcliffe Infirmary, Oxford
 Batt, Augustine, M.D. Witney
 Cheate, Thomas H. Esq. Burford
 Chesterman, Shearman, Esq. Banbury (dead)
 Dewar, James, M.D. Banbury
 Douglas, George C. Esq. Sulgrave, Banbury
 Drinkwater, William, Esq. Bicester
 Druce, William, Esq. Oxford
 Freeborn, R. F. M.D. Oxford
 Giles, Richard, M.D. Henley-on-Thames

Gray, Edward B. M.D. Physician to the Radcliffe Infirmary, Oxford
 Hopgood, P. D. Esq. Chipping Norton
 Hyde, W. W. Esq. Bloxham, Banbury
 Jeston, Thos. W. Esq. Henley-on-Thames
 Knight, Charles F. Esq. Sibford Ferris, Banbury
 Lee, Herbert G. M.D. Thame
 Parry, H. H. Esq. Kidlington
 Pemberton, Clarence L. H. Esq. Banbury
 Rolleston, George, M.D. F.R.S. Linacre Professor of Anatomy, Oxford
 Saukey, R. H. H. Esq. Asylum, Littlemore
 Smith, Walter, Esq. Islip
 Spencer, Henry B. M.D. Oxford
 Thompson, William A. Esq. Oxford
 Tuckwell, Henry M. M.D. Physician to the Radcliffe Infirmary, Oxford

RUTLAND.

Number of Members...4.
 Branch...Midland.

Bell, Thomas, L.R.C.P. Uppingham
 Brown, Frederick W. Esq. Uppingham
 Row, William, Esq. Market Overton
 Seaton, Daniel, Esq. Surgeon to the Rutland Dispensary, Oakham

SHROPSHIRE.

Number of Members...76.

Branches { Shropshire Ethical.
 { Shropshire Scientific.
 Andrew, Edwyn, M.D. Surgeon to the Eye and Ear Hospital, Shrewsbury
 Blaikie, Robert, Esq. Medical Officer to the Dispensary, Oswestry
 Bratton, James, Esq. Shrewsbury
 Bromfield, John, Esq. Whitechurch
 Brookes, A. G. Esq. Shrewsbury
 Brookes, W. P. Esq. Much Wenlock
 Brown, John, Esq. Whitechurch
 Burd, Edward, M.D. Physician to the Salop Infirmary, Shrewsbury
 Clendinnen, W. E. Esq. Cheswardine
 Davies, John S. Esq. Medical Officer to the Dispensary, Oswestry
 Davis, Edward, Esq. Ditton Priors
 Downes, Thomas R. C. Esq. Munslow
 Eddowes, William, Esq. Pontesbury
 Eddowes, William, jun. Esq. Shrewsbury
 Edwards, H. Nelson, Esq. Surgeon to the Dispensary, Shrewsbury
 Eyeley, Joseph F. Esq. Llanymynech
 Fenton, Henry, Esq. Shrewsbury
 Fuller, William, M.B. Medical Officer to the Dispensary, Oswestry
 George, Ambrose B. Esq. Dodington, Whitechurch
 Gill, John, Esq. Wem
 Glover, J. Esq. Dorrington, Shrewsbury
 Greene, John, Esq. St. George's, Wellington
 Groom, Thomas, Esq. Whitechurch
 Gwynn, Samuel B. Esq. Wem
 Gwynn, Samuel T. M.D. Whitechurch
 Harries, J. D. Esq. Surgeon to the Salop Infirmary, Shrewsbury
 Hartshorne, F. H. L.R.C.P.Ed. Surgeon to the Ironbridge Dispensary, Broseley
 Haslehurst, T. W. Esq. Surgeon to the Bridgnorth Dispensary, Claverley, Bridgnorth
 Hickman, Joseph, Esq. Brocton, Worthen
 Hickman, R. M. Esq. Newport
 Hodges, Geo. Esq. Haymore, Bridgnorth
 Humphreys, J. R. Esq. Surgeon to the Salop Infirmary, Shrewsbury
 Johnson, Charles H. Esq. Shiffnal
 Johnson, H. M.D. Consulting Physician to the Salop Infirmary, Shrewsbury
 Jones, Robert, Esq. Strefford
 Jones, W. Weaver, Esq. Cleobury Mortimer
 Lamb, W. B. Esq. Albrighton
 Lemon, H. M. M.D. Bishop's Castle
 McCarthy, G. D. R. Esq. Surgeon to the Wellington Dispensary, Wrockwardine Wood, Wellington
 McKnight, George, Esq. Surgeon to the Wellington Dispensary, Mossy Green, Oakengates
 McIntock, J. R. M.D. Church Stretton
 Mathias, Alfred, Esq. Surgeon to the Infirmary, Bridgnorth
 Moorhouse, J. W. Esq. Ellesmere
 Morgan, John, Esq. Waters Upton, near Wellington
 Morgan, Thomas, Surgeon to the Ironbridge Dispensary, Madeley
 Oakley, Charles J. L.R.C.P.Ed. Physician to the Salop Infirmary, Shrewsbury

Pidduck, Thomas, Esq. Shrewsbury
 Pope, Thomas, Esq. Cleobury Mortimer
 Procter, James, Esq. Surgeon to the Dispensary, Ironbridge
 Procter, John W. Esq. Shiffnal
 Rayner, Alfred P. Esq. Shawbury
 Rider, John, Esq. Surgeon to the Dispensary, Wellington
 Roberts, John D. Esq. Surgeon to the Ironbridge Dispensary, Much Wenlock
 Roberts, Thomas, Esq. Ashley, Market Drayton
 Roe, John R. Esq. Surgeon to the Infirmary Bridgnorth
 Roe, John W. M.D. Ellesmere
 Rope, H. J. Esq. Salop Infirmary, Shrewsbury
 Sandford, F. J. M.D. Market Drayton
 Snow, Herbert L. M.D. Shrewsbury
 Soame, C. B. H. Esq. Surgeon to the Ironbridge Dispensary, Dawley Green
 Styrap, Jukes, L.K.Q.C.P.I. Consulting Physician to the Salop Infirmary, Shrewsbury
 Sutton, J. H. Esq. Longden, Pontesbury
 Thompson, Edward T. L.K.Q.C.P.I. Woore
 Thursfield, Thomas G. M.D. Surgeon to the Ironbridge Dispensary, Broseley
 Thursfield, William, Esq. Surgeon to the Dispensary, Bridgnorth
 Thursfield, W. Neale, M.D. Wellington
 Walmsley, John A. Esq. Hodnet
 Webb, Matthew, jun. Esq. Surgeon to the Dispensary, Ironbridge
 Webb, Thomas L. Esq. Ironbridge
 Welsh, Joseph, Esq. Clun
 Wetherhead, Thomas, Esq. Prees
 Whitwell, Francis, Esq. Shrewsbury
 Wilding, Richard, Esq. Church Stretton
 Wilson, Joseph G. L.R.C.P.Ed. Wem
 Withers, R. Walter O. Esq. Shrewsbury
 Wood, Samuel, Esq. Senior Surgeon to the Salop Infirmary, Shrewsbury

SOMERSET.

Number of Members...133.

Branches { Bath and Bristol
 { West Somerset

Adams, George, Esq. Nailsea
 Adams, George E. M.B.
 Adams, Joseph D. M.D. Martock
 Aldridge, Russell, M.D. Yeovil
 Alford, Henry, Esq. Consulting Surgeon to the Taunton and Somerset Hospital, Taunton
 Alford, Henry J. M.B. Surgeon to the Taunton and Somerset Hospital, Taunton
 Alford, Richard, Esq. Consulting Surgeon to the Hospital, Weston-super-Mare
 Ashford, Edwin, L.R.C.P.Ed. Bridgewater
 Ashley, Jacob, Esq. Wick
 Axford, Richard, Esq. Bridgewater
 Axford, William H. M.B. Surgeon to the Infirmary, Bridgewater
 Barham, Alkman H. M.B. Bridgewater
 Barnes, George, L.R.C.P.Ed. Wrington
 Barter, C. S. M.B. Surgeon to the Eastern Dispensary, Bath
 Bartrum, John S. Esq. Surgeon to the Mineral Water Hospital, Bath
 Bendall, James, Esq. Creech St. Michael
 Bent, J. F. V. M.B. Bridgewater
 Brabazon, Anthony B. M.D. Surgeon to the Western Dispensary, Bath
 Bradley, Charles, Esq. Langport
 Bryant, Samuel, Esq. Brislington
 Budd, S. P. Esq. Surgeon to the Eastern Dispensary, Bath
 Burt, Giles Rd. L.R.C.P.Ed. Ilminster
 Busby, Alexander R. Esq. Resident Medical Officer, United Hospital, Bath
 Bush, Edwin, Esq. Frome
 Bush, William, Esq. Surgeon to the Eye and Ear Infirmary, Bath
 Carse, Edward, L.R.C.P.Ed. Weston Zoyland
 Chadwick, P. C. Esq. Wrington
 Church, William J. Esq. Bath
 Clark, Thomas, Esq. Dunster
 Coates, C. M.D. Physician to the Mineral Water Hospital and Royal United Hospital, Bath
 Cockey, Edmund, Esq. Frome
 Cole, Thomas, M.D. Surgeon to the Western Dispensary, Bath
 Collins, Chas. Howell, Esq. Chew Magna
 Collins, John B. Esq. Dulverton
 Colthurst, J. B. Esq. Wincanton
 Colthurst, Richard, M.D. Keynsham
 Cordwell, George, M.D. Taunton

Cornish, C. H. Esq. Senior Surgeon to the Taunton and Somerset Hospital, Taunton
 Cornwall, J. Esq. Ashcott, near Glastonbury
 Cowan, Samuel Brice, Esq. Bath
 Davies, William, M.D. Bath
 Davis, Theodore, Esq. Clevedon
 Davis, Theodora, jun. M.D. Surgeon to the Dispensary, Clevedon
 Day, William W. Esq. Long Ashton
 Dodd, Edward, Esq. Worle, Weston-super-Mare
 Edwards, Walter, Esq. Wellington
 Evans, Evan, Esq. Nether Stowey
 Falconer, R. Wilbraham, M.D. D.C.L. Consulting Physician to the Royal United Hospital, and Physician to the Mineral Water Hospital, Bath
 Farmer, F. Esq. Surgeon to the Infirmary, Bridgewater
 Farrant, Samuel, Esq. Taunton
 Flemming, Thomas H. M.D. Freshford
 Fowler, Richard Sumner, Esq. Surgeon to the Royal United Hospital, Bath
 Fox, Arthur E. W. M.B. Bath
 Fox, Charles H. M.D. Brislington
 Fox, Edward F. Esq. Brislington
 Fox, Francis K. M.D. Brislington
 Fox, John, Esq. Bath
 Freeman, Henry W. Esq. Bath
 French, John G. Esq. Wells
 Gaine, C. Esq. Surgeon-Dentist to the Royal United Hospital, Bath
 Garland, E. C. Esq. Yeovil
 George, Richard Francis, Esq. Bath
 Gillett, George, Esq. Taunton
 Goodridge, Henry F. A. M.D. Physician to the Royal United Hospital, Bath
 Goss, T. Biddulph, Esq. Surgeon to the Eastern Dispensary, Bath
 Gourlay, Frederick, M.D. Physician to the Hospital, Weston-super-Mare
 Harper, Charles, L.R.C.P.Ed. Batheaston
 Harvey, Walter A. M.B. South Petherton
 Heginbotham, Edmund, M.D. Bruton
 Hensley, Henry, M.D. Physician to the Mineral Water Hospital, Bath
 Hopkins, H. Culliford, Esq. House-Surgeon to the Royal United Hospital, Bath
 Howse, Alfred, Esq. Stogursey
 Hughes, John, Esq. Curry Rivel
 Hurman, Henry B. Esq. Bridgewater
 Jenks, George S. M.D. Bath
 Keall, W. P. L.R.C.P.Ed. Bedminster
 Kelly, Wm. Marwood, M.D. Physician to the Hospital, Taunton
 Kidgell, George, Esq. Wellington
 Kinglake, John Hamilton, M.D. Taunton
 Lawrence, Joseph, Esq. Bath
 Liddon, Wm. M.B. Surgeon to the Taunton and Somerset Hospital, Taunton
 Lightfoot, Robert, M.D. Wincanton
 Luce, J. J. M.D. Glastonbury
 McDermot, Ed. Deane, A.M. M.D. Bath
 Maclure, Thomas, Esq. Wellow
 Marchant, R. Esq. North Curry, Taunton
 Martin, Edward, Esq. Surgeon to the Hospital, Weston-super-Mare
 Martyn, Richard W. Esq. Martock
 Mason, Fredk. L.R.C.P.Ed. Surgeon to the Eye Infirmary, Bath
 Maule, John T. Esq. Bath
 Morgan, John, Esq. Chilcompton
 Morris, Beverley R. M.D. Burnham
 Mortimer, R. L.R.C.P.Ed. Bishop's Lydeard
 Nash, R. Esq. Hatch Beauchamp
 Norman, John W. Esq. Dunster
 Norris, G. R. Esq. Surgeon to the Dispensary, Wiveliscombe
 Norris, Hugh, L.R.C.P.Ed. South Pather-ton
 Olivey, Hugh P. Esq. North Curry
 Parsons, H. F. M.D. Beckington
 Parsons, Joshua, Esq. Frome
 Pearse, F. E. L.R.C.P.Ed. Wellington
 Penny, H. J. Esq. Taunton
 Plowman, Thomas, Esq. North Curry
 Pooley, Chas. Esq. Surgeon to the Sanatorium, Weston-super-Mare
 Prankerd, John, Esq. Langport
 Provis, Wilton, Esq. Bath
 Randolph, Henry W. Esq. Surgeon to the Wiveliscombe Dispensary, Milverton
 Reynolds, Wm. Esq. Wellington (dead)
 Ridden, George W. Esq. House-Surgeon to the Hospital, Taunton
 Robinson, R. B. Esq. Dulverton
 Rogers, George, M.D. Long Ashton
 Salter, John R. Esq. Taunton
 Skeate, Edwin, Esq. Bath
 Smart, John N. Esq. Bedminster

Smith, Chas. I. M.D. Physician to the Eastern Dispensary, Bath (dead)
 Spender, John Kent, M.D. Surgeon to the Mineral Water Hospital and the Eastern Dispensary, Bath
 Stockwell, Thomas G. Esq. Surgeon to the Mineral Water Hospital and Royal United Hospital, Bath
 Stone, Robert Nathaniel, L.R.C.P.Ed. Bath
 Surridge, James, M.D. Wincanton
 Taylor, Arthur, Esq. Corfe, Taunton
 Terry, George, Esq. Mells, near Frome
 Terry, John, Esq. Bailbrook, Bath
 Trevor, Wm. Esq. Dulverton (dead)
 Vicary, Chas. Esq. Bath
 Walker, Wm. C. Esq. Shepton Mallett
 Walter, W. W. Esq. Stoke-under-Ham
 Watson, Thomas Sandon, M.D. Bath
 Waugh, A. Esq. Midsomer Norton
 Weatherley, Fredk. Esq. Portishead
 Wigan, George G. H. M.D. Portishead
 Wine, H. C. Esq. Bedminster
 Winterbotham, Washington, L. M.B. Surgeon to the Infirmary, Bridgewater
 Woodforde, Francis Henry, M.D. Taunton

STAFFORDSHIRE.

Number of Members...87.

Branch...Birmingham and Midland Counties.

Alcock, John, Esq. Surgeon to the North Staffordshire Infirmary, Burslem
 Alcock, Annerley, Esq. Smethwick
 Arlidge, John T. M.D. Physician to the North Staffordshire Infirmary, New-castle-under-Lyme
 Belcher, Robert Shirley, Esq. Surgeon to the Dispensary, Burton-on-Trent
 Blackwood, Thomas, L.R.C.P.Ed. Wednesbury
 Browne, Henry W. L. Esq. West Bromwich
 Browne, Wm. M.D. Lichfield
 Buxton, Thomas, Esq. Fazeley
 Carter, — M.D. Lichfield
 Chapman, George, Esq. Brierley Hill
 Clark, James, M.D. Chasetown, Walsall
 Coleman, E. Hayling, Esq. Consulting-Surgeon to the South Staffordshire Hospital, Wolverhampton (dead)
 Coleman, John M. M.D. Wolverhampton
 Collins, Henry, M.D. Wolverhampton
 Cooke, John, M.B. Tettenhall
 Cooke, W. H. M.D. Aldridge
 Cooper, Richard, Esq. Leek
 Cotterell, Peter A. M.D. West Bromwich
 Cotterill, Alfred, Esq. House-Surgeon to the North Staffordshire Infirmary, Hart-hill
 Crawford, Cooper H. M.D. Stafford
 Davis, Robert A. M.D. Medical Superintendent of the Stafford County Asylum, Burntwood, Lichfield
 Day, Henry, M.D. Physician to the General Infirmary, Stafford
 Downes, W. Esq. Handsworth
 Dreury, G. O. M.D. Walsall
 Duncalfe, Henry, Esq. West Bromwich
 Dunn, Fredk. Esq. Wolverhampton
 Evans, Alfred P. Esq. West Bromwich
 Fernie, Edward, M.D. Stone
 Folker, W. H. Esq. Surgeon to the North Staffordshire Infirmary, Hanley
 Fraser, John M.D. Wolverhampton
 Garman, John C. Esq. Wednesbury
 Garman, Wm. C. Esq. Wednesbury
 Greaves, C. H. Esq. Stafford
 Green, John, Esq. Heath Town, Wolverhampton
 Harrison, A. J. M.B. Walsall
 Hayes, John, L.R.C.P.Ed. Beech Cliff, Newcastle
 Heaton, Chas. L.R.C.P.Ed. Leek
 Hichens, J. S. Esq. Lichfield
 Hicks, Chas. Esq. Smethwick
 Holyoake, T. Esq. Kinver, Stourbridge
 Hopkins, E. C. Esq. Wednesbury
 Hopkins, George H. Esq. Stone
 Hopkins, Wm. L.R.C.P.Ed. Handsworth
 Jackson, James F. Esq. Smethwick
 Jackson, Thomas V. Esq. Surgeon to the South Staffordshire Hospital, Wolverhampton
 Jackson, W. F. M. Esq. Smethwick
 Kely, P. M. L.R.C.P.Ed. Walsall
 Kite, W. J. Esq. West Bromwich
 Lomax, H. T. Esq. Surgeon to the General Infirmary, Stafford
 Lowe, George, Esq., Surgeon to the Infirmary, Burton-on-Trent
 Malim, G. W. Esq. Bilston
 Manby, F. E. Esq. Wolverhampton

Manley, John, Esq. Surgeon to the Infirmary, West Bromwich
 Martin, E. N. L.K.Q.C.P. Burton-on-Trent
 Milhington, Wm. M.D. Physician to the South Staffordshire Hospital, Wolverhampton
 Monckton, D. Henry, M.D. Rugeley
 Moore, Richard B. Esq. Wolverhampton
 Moore, Robt. W. Esq. Wednesbury
 Morgan, Herbert M. Esq. Lichfield
 Morgan, M. Butler, Esq. Lichfield
 Newman, Augustus, M.B. Alrewas
 Newnham, Christopher A. Esq. Surgeon to the South Staffordshire Hospital, Wolverhampton
 Norris, W. L. Esq. Brierley Hill
 Orton, Chas. Esq. Medical Officer to the North Staffordshire Infirmary, Newcastle-under-Lyme
 Partridge, S. Esq. Darlaston
 Perks, Chas. Esq. Burton-on-Trent
 Phillips, D. Wild, Esq. Rowley Regis
 Pope, W. H. Esq. Wolverhampton
 Ritchie, John J. Esq. Leek
 Robinson, Thomas, Esq. Alton
 Sansome, T. Esq. Hill Top, West Bromwich
 Smith, Richard W. Esq. Harbourne
 Somerville, James H. Esq. Bloxwich
 Spanton, Wm. D. Esq. Surgeon to the North Staffordshire Infirmary, Hanley
 Standish, Thomas, Esq. Cradley Heath, Brierley Hill
 Sutcliffe, Henry, Esq. West Bromwich
 Taylor, Moses, Esq. Cannock
 Thomson, J. L. R.C.P. Ed. Kingswinford
 Turton, Fredk. Esq. Wolverhampton
 Tylecote, E. T. M.D. Great Haywood
 Tylecote, J. H. M.D. Sandon, Stone
 Underhill, Francis W. Esq. Tipton
 Underhill, Thomas, Esq. Great Bridge, Tipton
 Underhill, Wm. L. Esq. Tipton
 Wades, John W. B. M.D. Hanley
 Welch, John B. M.B. Handsworth
 Welchman, C. E. Esq. Lichfield
 Weston, Edward F. Esq. Surgeon to the General Infirmary, Stafford

SUFFOLK.

Number of Members. .68.

Branch. .East Anglian.

Adams, Edward B. Esq. Bungay
 Andrew, William W. W. M.B. Earl Soham
 Barkway, F. T. Esq. Lavenham
 Barkway, H. Esq. Lavenham
 Bartlet, A. H. M.D. Surgeon to the East Suffolk Hospital, Ipswich
 Bartlet, John H. M.D. Surgeon to the East Suffolk Hospital, Ipswich
 Beck, Henry, Esq. Needham Market
 Blackett, Edward R. M.D. Physician and Surgeon to the Dispensary, Southwold
 Bullen, G. Esq. Consulting Surgeon to the East Suffolk Hospital, Ipswich (dead)
 Chevallier, Barrington, M.D. Physician to the East Suffolk Hospital, Ipswich
 Clarke, F. W. Esq. Bury St. Edmund's
 Clubbe, W. H. Esq. Medical Officer to the Infirmary, Lowestoft
 Cooper, Charles, Esq. Needham Market
 Crickmay, Edward, Esq. Laxfield, Framlingham
 Crowfoot, Wm. Edward, Esq. Consulting-Surgeon to the Dispensary, Beccles
 Durrant, Christopher Mercer, M.D. Physician to the East Suffolk Hospital, Ipswich
 Edden, W. H. Esq. Haughley
 Edwards, George C. Esq. Ipswich
 Ellis, J. J. Esq. Hartest, Bury St. Edmund's
 Elliston, George S. Esq. House-Surgeon to the East Suffolk Hospital, Ipswich
 Elliston, William A. M.D. Surgeon to the East Suffolk Hospital, Ipswich
 Faircloth, Richard, Esq. Newmarket
 Freeman, Spencer, Esq. Stowmarket
 Fuller, Harry, Esq. House-Surgeon to the Suffolk General Hospital, Bury St. Edmund's
 Fyson, Robert, Esq. Newmarket
 Garneys, Thomas, Esq. Bungay
 Gissing, John Stearn, Esq. Consulting Surgeon to the Dispensary, Woodbridge
 Goodwin, John W. M.D. Physician to the Suffolk General Hospital, Bury St. Edmund's
 Gorham, Richard V. Esq. Yoxford
 Growse, John L. Esq. Bildeston
 Growse, Robert, Esq. Bildeston
 Gull, Frederick, Esq. Ipswich

Hammond, Chas. G. Esq. Consulting Surgeon to the East Suffolk Hospital, Ipswich
 Hammond, Charles W. M.D. Ipswich
 Harper, John W. Esq. Stowmarket
 Harris, F. H. Esq. Mildenhall
 Haward, Frederick, Esq. Halesworth
 Hele, Nicholas F. Esq. Aldeburgh
 Hinnell, G. J. Esq. Bury St. Edmund's
 Image, W. Edmund, Esq. Surgeon to the Suffolk General Hospital, Bury St. Edmund's
 Jeffery, Edward, M.D. Lowestoft
 Jones, Robert Edwards, Esq. Long Melford, Sudbury
 Kerry, Thomas, Esq. Lidgate, Newmarket
 Kirkman, John, M.D. Resident Physician to the Suffolk Lunatic Asylum, Melton
 Leech, Henry P. Esq. Woolpit
 Ling, J. C. Esq. Saxmundham
 Long, Charles, Esq. Resident Medical Officer, Bow Asylum, Ipswich
 Mann, Charles P. Esq. Boxford
 Marshall, Charles G. Esq. Surgeon to the Dispensary, Woodbridge
 Matthews, Benjamin F. Esq. Norton
 Mead, George B. M.D. Newmarket
 Miller, Walter W. M.D. Eye
 Moore, H. G. Esq. Ipswich
 Muriel, John Thomas, Esq. Hadleigh
 Pearse, Arthur, M.D. Botesdale
 Pearson, T. Esq. Stowmarket
 Ray, James, Esq. Lowestoft
 Read, Charles G. Esq. Stradbroke
 Rendle, Charles B. Esq. Saxmundham
 Sampson, George G. Esq. Surgeon to the East Suffolk Hospital, Ipswich
 Simpson, Edwin, Esq. Long Melford, Sudbury (dead)
 Taylor, Henry, Esq. Ixworth
 Tench, E. B. Esq. Wickham Market
 Thompson, Robert, Esq. Brandon
 Vandenbergh, Algernon S. Esq. Ipswich
 White, W. M. M.D. Lavenham
 Williams, John, M.D. Sudbury
 Worthington, F. S. Esq. Medical Officer to the Infirmary, Lowestoft

SURREY.

Number of Members. .135.

Branches. { South-Eastern.
 { Metropolitan Counties.

Adams, T. Rutherford, M.D. Surgeon to the Hospital, Croydon
 Anderson, W. M.D. Medical Officer to the Dispensary, Richmond
 Anderson, William, Esq. Stockwell Road
 Armstrong, Henry, M.D. Peckham
 Bailey, Thomas, Esq. Godstone
 Barnes, George R. M.D. Ewell
 Barton, Alfred B. M.D. Hampton Court
 Bateman, W. A. F. Esq. Medical Officer to the Infirmary, Richmond
 Berney, Edward, Esq. Croydon
 Brockwell, John, L.R.C.P. Ed. Norwood
 Brown, Alfred Gardiner, Esq. Trinity Square, Southwark
 Brown, John, M.D. Battersea
 Brushfield, T. N. M.D. Medical Superintendent of the County Asylum, Brockwood, Woking
 Bush, John, Esq. The Retreat, Clapham
 Butler, Thomas M. Esq. Assistant Medical Officer to the Surrey County Hospital, Guildford
 Campbell, John, M.D. Knaphill, Woking
 Carpenter, Alfred, M.D. Croydon
 Chaldecott, Charles Wm. Esq. Dorking
 Chaldecott, Horace, Esq. Dorking
 Chessell, William, M.D. Horley
 Clapton, Edward, M.D. Physician to and Lecturer on Materia Medica at St. Thomas's Hospital, St. Thomas's Street.
 Clark, Frederick Le Gros, Esq. Surgeon to and Lecturer on Surgery at St. Thomas's Hospital, St. Thomas's Street
 Clark, Willington, Esq. Sutton
 Clarke, E. G. Esq. Putney
 Cleaver, Henry A. Esq. Croydon
 Cock, Edward, Esq. Consulting Surgeon to Guy's Hospital, Dean Street South
 Coles, William F. M.D. Croydon
 Connor, William, M.B. Battersea
 Cope, Walter, Esq. Croydon
 Corbould, Francis J. M.D. Penge
 Craigie, John, M.B. Reigate
 Cresswell, Alfred, Esq. South Norwood
 Cuolahan, Hugh, M.D. Bermondsey
 Dalton, Benjamin N. Esq. South Norwood
 Davies, W. Esq. York Town, near Bagshot
 Day-Goss, S. M.D. Kennington Park Road

Diver, Ebenezer, M.D. Caterham
 Duke, Allen, M.D. Norwood
 Evans, Thomas, Esq. Trinity Square
 Eyton, A. Esq. Cottage Green, Camberwell
 Galton, John H. M.D. Anerley
 Gillard, Richard, Esq. Clapham Road
 Graham, A. R. M.B. Holmwood, Weybridge
 Greene, W. T. M.B. Old Kent Road
 Hallows, Frederick B. Esq. Redhill
 Hamilton, T. W. M.D. Mitcham
 Hearnden, W. A. M.D. Sutton
 Hetley, Frederic, M.D. Norwood
 Hicks, J. Braxton, M.D. F.R.S. Obstetric Physician and Lecturer on Midwifery at Guy's Hospital, St. Thomas's Street, Southwark
 Hill, William B. Esq. Camberwell Road
 Holman, Constantine, M.D. Reigate
 Hubbert, Philip, Esq. Croydon
 Jardine, J. L. Esq. Capel, Dorking
 Jeaffreson, Horace, M.D. Wandsworth
 Johnson, Jeffery S. Esq. Croydon
 Jones, Arthur O'Brien, Esq. Epsom
 Jones, Sydney, Esq. Surgeon to and Lecturer on Anatomy at St. Thomas's Hospital, St. Thomas's Street
 Jones, W. Price, M.D. Surbiton
 Kelsey, Arthur, Esq. Redhill
 Kelson, G. Esq. South Norwood
 Kough, Edward, M.B. Bagshot
 La Fargue, George F. H. M.D. Godalming
 Lanchester, Henry T. M.D. Surgeon to the Hospital, Croydon
 Lashmar, Charles, M.D. Croydon
 Leslie, Walter A. Esq. Bletchingley
 Lilley, Frederick J. L.R.C.P. Ed. South Lambeth Road
 Love, Gilbert, Esq. Wimbledon
 Lownds, Thomas M. M.D. Egham
 Lund, George, M.D. Denmark Hill
 Markham, W. O. M.D. Clapham Common
 Marshall, Edward, Esq. Mitcham
 Mason, Charles L. Esq. Surbiton
 Miller, Richard M. M.D. Upper Norwood
 Moore, Daniel, M.D. Upper Norwood
 Morton, John, M.B. Assistant Medical Officer to the Royal Surrey County Hospital, Guildford
 Napper, Albert, Esq. Cranley, near Guildford
 Napper, A. A. Esq. Chiddingfold, Godalming
 Nicholson, David, M.D. Assistant Medical Officer to the Invalid Prison, Woking
 Oswald, J. W. J. Esq. Lambeth Walk
 Owen, Francis, Esq. Leatherhead
 Owens, Henry, M.D. South Norwood
 Parsons, Frederic W. Esq. Wimbledon
 Paul, John H. M.D. Camberwell
 Philpot, H. J. M.D. East Dulwich
 Pinder, Edward, Esq. Camberwell Green
 Pollock, Robert J. Esq. Wimbledon Park
 Ray, E. R. Esq. Dulwich
 Rendle, James D. M.D. Medical Officer to the Government Convict Prison, Park Hill, Clapham Park
 Ridge, John J. M.D. Grafton Square, Clapham
 Roe, Peter H. Esq. Surgeon-Major, Upper Norwood
 Rogers-Harrison, C. H. Esq. Lansdowne Road, Clapham Road
 Roots, W. S. Esq. Kingston-on-Thames
 Roper, Alfred G. Esq. Surgeon to the Hospital, Croydon
 Rugg, George P. M.D. Stockwell Villa, Clapham Road
 Seaton, Edward C. M.D. Surbiton
 Sewell, J. J. Esq. West Dulwich
 Shapland, J. D. Esq. Thornton Heath, Croydon
 Shaw, George, Esq. Battersea
 Shurlock, Mainwaring, Esq. Chertsey
 Skimming, R. M.D. East Moulsey
 Sloman, Samuel G. Esq. Farnham
 Sloman, S. G. jun. Esq. Farnham
 Smart, William R. E. M.D. C.B. Inspector-General R.N. Beverley Road, South Penge Park
 Smith, Rowland, Esq. Cobham
 Soper, William, Esq. Surgeon to the Jews' Hospital, Clapham Road
 Spitta, Robert J. M.D. Clapham Common
 Stedman, James R. M.D. Surgeon to the Royal Surrey County Hospital, Guildford
 Stedman, John B. Esq. Godalming
 Steele, John S. Esq. Reigate
 Stilwell, George, Esq. Epsom
 Stowers, N. Esq. Kennington Park Road

Strong, Henry J. M.D. Croydon
 Sutcliff, Joseph H. Esq. Ripley
 Sutcliffe, W. G. Esq. Ashville Place, Battersea Park
 Sutherland, William, M.D. Croydon
 Tapson, John, M.D. Victoria Road, Dulwich Wood Park
 Tapson, Joseph Alfred, Esq. High Street, Clapham
 Taylor, Charles, M.D. Camberwell
 Taylor, Henry S. Esq. Surgeon to the Royal Surrey County Hospital, Guildford
 Tilley, S. Esq. Paradise Row, Rotherhithe
 Tomkins, Charles P. L.K.Q.C.P.I. Croydon
 Troutbeck, James, M.B. General Lying-in Hospital, York Road, Lambeth
 Turner, A. N. Esq. Clifton Villas, Penge
 Turner, John S. Esq. Anerley Road, Upper Norwood
 Wagstaffe, William W. Esq. Demonstrator of Anatomy, St. Thomas's Hospital, Stangate
 Walters, John, M.B. Reigate
 Warwick, R. A. M.D. Medical Officer to the Infirmary, Richmond
 Webster, George, M.D. Dulwich
 White, J. R. M.B. Redhill
 White, Samuel S. Esq. Mostyn Road, Brixton
 Whitting, Henry T. Esq. Croydon
 Williams, W. Rhys, M.D. Medical Superintendent, Bethlem Hospital
 Willis, Robert, M.D. Barnes
 Wyman, W. S. M.D. Putney
 Yate, Frederic, Esq. Godalming

SUSSEX.

Number of Members. .94.

Branch. .South Eastern.

Addison, W. F.R.C.P. F.R.S. Consulting Physician to the Hospital for Children and the Dispensary, Brighton
 Adey, Charles A. M.D. Physician to the East Sussex Infirmary, St. Leonard's-on-Sea
 Allen, Bryan H. M.D. Surgeon to the Dispensary, Hastings
 Ashenden, Charles, Esq. Hastings
 Austin, Sydney C. Esq. Lingfield
 Axford, C. J. Esq. St. Leonard's-on-Sea
 Bagshawe, F. M.D. St. Leonard's
 Bostock, Edward I. Esq. Horsham
 Bostock, John S. Esq. Horsham
 Boxall, H. Esq. Wisborough Green, Horsham
 Braden, John G. Esq. Lewes
 Braid, James, M.D. Burgess Hill
 Browne, George, Esq. Brighton
 Bull, John Henry, Esq. Lindfield
 Burrows, J. Cordy, Esq. Consulting Surgeon to the Hospital for Children, Brighton
 Byass, Thomas Spry, M.D. Cuckfield
 Cann, Thomas M. Esq. Newhaven
 Caudle, Adolphus W. W. Esq. Henfield
 Collet, Augustus H. Esq. Worthing
 Collet, Henry J. M.D. Consulting Surgeon to the Infirmary, Worthing
 Cooke, John, M.B. Hastings
 Couling, Henry, Esq. Surgeon to the Dispensary, Brighton
 Cunningham, J. M. M.D. Hailsham
 Davies, Robert C. N. Esq. Rye
 Dawson, Richard, M.B. Physician to the Dispensary, Brighton
 Dixon, Joseph, Esq. Surgeon to the Hove Dispensary, Brighton
 Duke, Roger, Esq. Battle
 Fenn, Edwin, Esq. Fletching
 Fuller, Thomas, M.D. New Shoreham
 Furner, Edmund J. Esq. Surgeon to the Sussex County Hospital, Brighton
 Fussell, Edward F. M.B. Assistant Physician to the Sussex County Hospital, Brighton
 Giles, George F. M.D. Hastings
 Goldsmith, John, M.D. Surgeon to the Infirmary, Worthing
 Gravely, Richard, Esq. Newick
 Greenwood, Thomas B. Esq. Horsham
 Hall, Alfred, M.D. Brighton
 Hall, William H. M.D. St. Leonard's
 Harland, H. M.D. Mayfield
 Harris, W. J. Esq. Surgeon to the Infirmary, Worthing
 Hayman, Charles C. M.D. Eastbourne
 Haywood, George, M.D. Brighton
 Hodgson, George F. Esq. Brighton
 Holman, George, Esq. Uckfield
 Holman, Henry, Esq. East Hoathly
 Holman, Henry M. M.D. Hurstpierpoint
 Holman, Thomas, Esq. East Hoathly

Humphry, Frederick A. Esq. Surgeon to the Sussex County Hospital, Brighton
 Johnstone, Athol A. Esq. Surgeon to the Hospital for Children, Brighton
 Lowdell, George, Esq. Surgeon to the Sussex County Hospital, Brighton (dead)
 McCarogher, Joseph, M.D. Consulting Physician to the West Sussex Infirmary, Chichester
 Macrae, John, Esq. Lewes
 Martin, Timothy H. Esq. Crawley
 Mathews, Henry J. D. Esq. Horsham
 Mercer, William, Esq. Wadhurst
 Moon, Henry, M.D. Physician to the Sussex County Hospital, Brighton
 Moore, George, M.D. Hastings
 Moore, W. Withers, M.D. Assistant-Physician to the Sussex County Hospital, Brighton
 Mudd, Frederick C. Esq. Chichester
 Murray, J. Jardine, Esq. Surgeon to the Eye Infirmary, Brighton
 Ormerod, Edward Latham, M.D. Physician to the Sussex County Hospital, Brighton
 Parry, Richard, M.D. Brighton
 Paxton, Francis V. M.B. Physician to the West Sussex Infirmary, Chichester
 Penfold, Henry, Esq. Surgeon to the Eye Infirmary, Brighton
 Porter, William E. Esq. Turner's Hill, Crawley
 Prince, C. Leeson, Esq. Uckfield
 Richards, David, Esq. Brighton
 Roberts, Bransby, Esq. Eastbourne
 Rogers, Robert J. Esq. Brighton
 Rugg, Richard, Esq. Brighton
 Rutter, Joseph, M.D. Brighton
 Smith, Edward, Esq. Battle
 Smith, Heckstall, Esq. Hove, Brighton
 Smith, John P. M. Esq. Brighton
 Smith, Thomas, Esq. Crawley
 Stephens, Joseph, M.D. Brighton
 Taaffe, Richard P. B. M.D. Surgeon to the Eye Infirmary, Brighton
 Tatham, George, Esq. Brighton
 Taylor, John, Esq. Ticehurst
 Ticehurst, Frederic, Esq. Consulting Surgeon to the East Sussex Infirmary, Hastings
 Trollope, Thomas, M.D. Assistant-Physician to the East Sussex Infirmary, St. Leonard's-on-Sea
 Turner, G. B. M.D. St. Leonard's
 Turner, Richard, Esq. Surgeon to the East Sussex County Prison, Lewes
 Tyacke, Nicholas, M.D. Physician to the Infirmary, Chichester
 Underwood, John, M.D. Hastings
 Wallis, Frederick, Esq. Bexhill
 Wallis, William, Esq. Hartfield
 Whately, Edward, Esq. Brighton
 Williams, S. W. Duckworth, M.D. Medical Superintendent of the Sussex County Asylum, Hayward's Heath
 Wilson, Robt. J. M.D. St. Leonard's-on-Sea
 Winter, John N. Esq. Brighton
 Winter, Thomas B. Esq. Brighton
 Wooldridge, Wm. Esq. Preston, Brighton
 Worthington, George F. J. L.K.Q.C.P. Worthing
 Young, Edmund, Esq. Steyning

WARWICKSHIRE.

Number of Members..183.

Branch..Birmingham and Midland Counties.

Adkins, H. Esq. Meriden, near Coventry
 Agar, Samuel H. L.K.Q.C.P. Henley-in-Arden
 Anderson, Mark F. L.R.C.P.Ed. Surgeon to the Hospital, Coventry
 Archer, John, Esq. Edgbaston
 Baker, Alfred, Esq. Senior Surgeon to the General Hospital, Birmingham
 Baker, Robert L. M.D. Leamington
 Barker, John, Esq. Coleshill
 Bartleet, Edwin, Esq. Edgbaston
 Bartleet, Thomas H. M.B. Surgeon to the General Hospital, and Professor of Anatomy and Physiology in Queen's College, Birmingham
 Bassett, John, Esq. Professor of Midwifery in Queen's College, Birmingham
 Bellot, William H. M.D. Moreton Lodge, Leamington Priors
 Berry, Samuel, L.R.C.P.Ed. Professor of Diseases of Women and Children in Queen's College, Birmingham
 Bicknell, Edward, Esq. Coventry
 Bindley, Samuel A. Esq. Edgbaston
 Birt, Thomas, M.D. Leamington

Bodington, George, L.R.C.P.Ed. Sutton Coldfield
 Bodington, G. F. M.D. Sutton Coldfield
 Bottle, Alexander, M.D. Resident Physician to the General Dispensary, Birmingham
 Bourne, Thomas S. Esq. Kenilworth
 Bowen, H. Esq. Kineton
 Bracey, Charles J. M.B. Professor of Anatomy in Queen's College, and Surgeon to the Hospital for Children, Birmingham
 Bracey, W. Arthur, Esq. Surgeon to the Midland Eye Hospital, Birmingham
 Bradley, John P. Esq. Birmingham
 Briggs, — Esq. Birmingham
 Brown, Christopher F. Esq. Leamington
 Brown, John, L.K.Q.C.P. Coventry
 Bucknill, Henry W. Esq. Rugby
 Bucknill, S. Birch, M.D. Rugby
 Carter, Thomas A. M.D. Physician to the Warneford Hospital, Leamington
 Chavasse, Pye Henry, Esq. Birmingham
 Chavasse, Samuel, Esq. Birmingham
 Chesshire, Edwin, Esq. Senior Surgeon to the Birmingham and Midland Eye Hospital, Birmingham
 Clarke, John, Esq. Kenilworth
 Clayton, Mark H. Esq. Birmingham
 Cochrane, William B. Esq. General Dispensary, Birmingham
 Cornhill, John, Esq. Birmingham
 Cox, Henry, Esq. Camp Hill, Birmingham
 Crespi, Alfred J. H. L.K.Q.C.P. Birmingham
 Dartnell, George Russell, Esq. Inspector-General of Hospitals, Henley-in-Arden
 Darwen, John, Esq. Birmingham
 Davies, Francis P. M.B. Birmingham
 Davies, J. Birt, M.D. Coroner for the Borough of Birmingham, Birmingham
 Denne, Henry, Esq. Birmingham
 Dewes, Edward, M.D. Physician to the Hospital, Coventry
 Dowson, Arthur H. Esq. Surgeon to the Infirmary, Stratford-on-Avon
 Drever, John, Esq. Birmingham
 Drummond, Alexander, M.B. Birmingham
 Duke, Abraham, M.D. Rugby
 Ebbage, Thomas, Esq. Leamington
 Edgington, R. W. Esq. Queen's College, Birmingham
 Edwards, John, M.D. Sparkbrook, Birmingham
 Elkington, George, jun. Esq. Surgeon to the Hospital for Children, Birmingham
 Elkington, Thomas, L.R.C.P.Ed. Fenny Compton
 Evans, George F. M.D. Birmingham
 Evans, — Esq. Sutton Coldfield
 Figgins, Henry, Esq. Islington, Birmingham
 Fleming, Alexander, M.D. Senior Physician to the Queen's Hospital, Birmingham
 Fletcher, T. Bell E. M.D. Senior Physician to the General Hospital, Birmingham
 Foster, Balthazar W. M.D. Physician to the General Hospital, and Professor of Medicine in Queen's College, Edgbaston, Birmingham
 Fox, Edward C. M.D. Birmingham
 Gamgee, J. Sampson, Esq. F.R.S.E. Surgeon to the Queen's Hospital, Birmingham
 Garner, John, Esq. Birmingham
 Gibbs, Edward, Esq. Digbeth, Birmingham
 Goodall, William P. Esq. Surgeon to the General Hospital, Birmingham
 Greene, John, L.R.C.P.Ed. Birmingham
 Griffiths, Edwin T. M.D. Birmingham
 Hadley, John Joseph, Esq. Birmingham
 Hadley, G. P. M.D. Lozells, Birmingham
 Hallsworth, Samuel M. Esq. Atherstone
 Hammond, W. Esq. Kenilworth
 Handford, Thomas, Esq. Atherstone
 Harmar, James, Esq. Birmingham
 Heslop, Thomas P. M.D. Physician to the Queen's Hospital, Birmingham
 Hickinbotham, James, Esq. Nechells, Birmingham
 Hill, Alfred, M.D. Professor of Chemistry and Forensic Medicine in Queen's College, Birmingham
 Hinds, William, M.D. Professor of Botany in Queen's College, Birmingham
 Hiron, John Hickman, Esq. Studley
 Hogg, Christopher H. J. Esq. Birmingham
 Hollinshead, F. Esq. Sells Oak, Birmingham
 Hornblow, R. E. B. M.D. Leamington
 Horton, Joseph John, Esq. Birmingham

Hunt, Joseph, Esq. Dispensary, Birmingham
 Jackson, Jabez B. Esq. Birmingham
 Jackson, Thomas, M.D. Leamington
 Jeaffreson, James R. Esq. Surgeon to the Warneford Hospital, Leamington
 Johnston, James, M.B. Physician to the Queen's Hospital, Birmingham
 Jolly, Robert, M.D. Surgeon to the General Hospital, Birmingham
 Jones, George, Esq. Birmingham
 Jones, J. W. L.K.Q.C.P. Coleshill
 Jones, Richard, Esq. Senior Surgeon to the Warneford Hospital, Leamington
 Jordan, T. Furneaux, Esq. Surgeon to the Queen's Hospital, and Professor of Surgery in Queen's College, Birmingham
 Jordan, W. Ross, Esq. Surgeon to the Hospital for Women, Birmingham
 Kettle, Henry, Esq. Birmingham
 Kingsley, Henry, M.D. Physician to the Infirmary, Stratford-upon-Avon
 La Fargue, Peter A. Esq. Fillongley, Coventry
 Lakin, James H. M.B. Sutton Coldfield
 Le Sage, W. Louis, Esq. Stratford-on-Avon
 Leslie, Percy, M.D. Birmingham
 Lloyd, Samuel, Esq. Birmingham
 Lynes, Edward, M.D. Surgeon to the Coventry and Warwickshire Hospital, Coventry
 Maberly, George F. Esq. Leamington
 Machin, Edmund S. Esq. Erdington
 Mackey, Edward, M.B. Professor of Materia Medica in Queen's College, and Physician to the Children's Hospital, Birmingham
 Macpherson, Robert S. Esq. Birmingham
 McVeagh, Dennis I. L.K.Q.C.P.I. Coventry
 Mann, William S. Esq. Birmingham
 Marriott, Charles W. Esq. Surgeon to the Warneford Hospital, Leamington
 Marshall, Henry F. Esq. Broad Street, Birmingham
 Marshall, Walter T. Esq. Birmingham
 Masser, Herbert C. P. Esq. Foleshill, Coventry
 May, Bennett, Esq. House-Surgeon to the General Hospital, Birmingham
 Melson, John B. M.D. Birmingham
 Middlemore, R. Esq. Consulting Surgeon to the Midland Eye Hospital, Birmingham
 Moore, H. C. Esq. Lifford, Birmingham
 Morris, Joseph, Esq. Leamington
 Moyle, Thomas, M.D. Birmingham
 Nason, John J. M.B. Surgeon to the Infirmary, Stratford-on-Avon
 Nason, Richard B. Esq. Nuneaton
 Neal, James, M.D. Birmingham
 Norris, Richard, M.D. Professor of Anatomy and Physiology in Queen's College, Aston, Birmingham
 Nunn, J. Robert, Esq. Surgeon to the Dispensary, Warwick
 Oakes, Arthur, Esq. Birmingham
 Oates, Joseph P. Esq. Erdington
 Orton, Edward W. Esq. Bedworth
 Owen, D. C. Lloyd, Esq. Ophthalmic Surgeon to the Children's Hospital, Birmingham
 Parker, Langston, Esq. Consulting Surgeon to the Queen's Hospital, Birmingham (dead)
 Parsons, William A. Esq. Tanworth
 Peacock, Edwin, Esq. Nuneaton
 Pemberton, Oliver, Esq. Surgeon to the General Hospital, and Professor of Surgery in Queen's College, Birmingham
 Philpot, C. W. M.D. Resident Physician to the General Dispensary, Birmingham
 Pitt, Richard, Esq. Wellesbourne
 Quirke, Joseph, Esq. Lozells, Birmingham
 Rickards, E. Esq. General Hospital, Birmingham
 Robinson, Edmund, M.D. Birmingham
 Russell, James, M.D. Physician to the General Hospital, and Professor of Medicine in Queen's College, Birmingham
 Savage, Thomas, M.D. Lecturer on Comparative Anatomy in Queen's College, and Surgeon to the Hospital for Women, Bordesley, Birmingham
 Sawyer, James, M.B. Physician to the Queen's Hospital and the Children's Hospital, Birmingham
 Scofield, William J. Esq. Birmingham
 Scurrah, John D. M.D. Islington, Birmingham
 Sharman, Malim, Esq. Surgeon to the Children's Hospital, Birmingham
 Shaw, Henry E. F. Esq. Sutton Coldfield

Simpson, A. B. Esq. Resident Medical Officer to the Workhouse, Birmingham
 Slack, Robert, M.D. Physician to the Warneford Hospital, Leamington
 Smith, Edwin G. Esq. House-Surgeon to the Queen's Hospital, Birmingham
 Smith, George, Esq. Birmingham
 Smith, Thomas L. L.R.C.P.Ed. Alcester
 Smith, T. Haywood, Esq. Alcester
 Solomon, James Vose, Esq. Surgeon to the Birmingham and Midland Eye Hospital, and Professor of Ophthalmic Surgery in Queen's College, Birmingham
 Sproston, William H. Esq. Birmingham
 Swain, Thomas, Esq. Professor of Forensic Medicine in Queen's College, Birmingham
 Swete, Horace, M.D. Leamington
 Swinson, Henry, Esq. Leamington
 Tait, Lawson, Esq. Surgeon to the Hospital for Women, Lozells, Birmingham
 Taylor, Thomas, Esq. Birmingham
 Thomas, William, M.B. Demonstrator of Anatomy in Queen College, Bradford Street, Birmingham
 Thompson, James, M.D. Leamington
 Thomson, Thomas, M.D. Leamington
 Thorne, Frederic La C. Esq. Leamington
 Thursfield, Thomas W. M.D. Leamington
 Tibbits, John, M.D. Warwick
 Tomkins, A. W. M.D. Leamington
 Torrance, David, Esq. Rugby
 Torrance, David, jun. M.D. Dunchurch
 Underhill, A. S. M.B. Queen's Hospital, Birmingham
 Wade, Willoughby F. M.B. Physician to the General Hospital, Birmingham
 Walker, Richard P. Esq. Birmingham
 Ward, John B. M.B. Assistant Medical Officer to the County Asylum, Hatton, Warwick
 Warden, Charles, M.D. Surgeon to the Orthopaedic Hospital, Birmingham
 Warnock, John, Esq. Bloomsbury, Birmingham
 Waterson, John, Esq. Birmingham
 West, James F. Esq. Surgeon to the Queen's Hospital, Birmingham
 Whitecombe, Edmund B. Esq. Resident Medical Officer, Borough Asylum, Winton Green, Birmingham
 Whitehead, — Esq. Children's Hospital, Birmingham
 Wilders, John St. S. Esq. Surgeon to the Queen's Hospital and Professor of Materia Medica in Queen's College, Birmingham
 Williams, T. Watkin, Esq. Surgeon to the Orthopaedic Hospital, Birmingham
 Wood, Horatio, Esq. Birmingham
 Woody, John F. Esq. Tanworth
 Wright, M. Hall, Esq. Birmingham
 Wyer, Otho Francis, M.D. Leamington
 Wyley, Francis, Esq. Coventry
 Wyman, George, Esq. Alcester
 Yates, George, Esq. Paradise Street, Birmingham
 Young, Henry J. M.D. Erdington

WESTMORLAND.

Number of Members..11.

Branch..Cumberland and Westmorland.
 Armstrong, Fergus, M.D. Appleby
 Blades, Thomas, Esq. Shap (dead)
 Bywater, Robert T. Esq. Coniston, Ambleside
 Dinwoodie, Frederick, M.D. Appleby
 Green, Thomas, M.B. Kendal
 Harrison, Robert, Esq. Ambleside
 Martindale, John W. Esq. Patterdale
 Mutch, William, Esq. Orton
 Noble, Samuel C. Esq. Kendal
 Page, David, M.B. Kirkby Lonsdale
 Royle, Octavian N. M.D. Milnthorpe
 Sayer, Thomas, M.B. Kirkby Stephen
 Singleton, John, Esq. Kendal
 Whitaker, Thomas H. Esq. Kirkby Lonsdale

WILTSHIRE.

Number of Members..82.

Branch..Bath and Bristol.

Adye, Arthur, Esq. Bradford-on-Avon
 Anstie, Thomas B. Esq. Surgeon to the Dispensary, Devizes
 Bailey, Charles, Esq. Cliffe, Chippenham
 Barrett, Samuel B. C. Esq. Pewsey
 Bleeck, Charles, Esq. Warminster
 Caesar, Richard T. Esq. Downton, Salisbury
 Clapham, Edward, M.D. Surgeon to the County Gaol, Devizes

Cooper, Herbert, Esq. Wootton Bassett
Crisp, James H. Esq. Lacock
Davis, William G. Esq. Heytesbury
Fergus, Walter, M.D. Marlborough
Flower, Thomas, Esq. Codford St. Peter
Flower, Frederick I. Esq. Bower Chalk, Salisbury
Fry, John B. Esq. Swindon
Fulcher, G. F. M.D. Burbage
Gardner, James, L.R.C.P.Ed. Box
Good, Joseph, Esq. Wilton
Green, J. Lardner, Esq. Tisbury, Salisbury
Grubb, Philip, Esq. Warminster
Hinton, Joseph, Esq. Warminster
Jay, Henry M. L.R.C.P.Ed. Chippenham
Jennings, Joseph C. S. Esq. Malmesbury
Kinneir, Richard, Esq. Malmesbury
Kitchener, T. M.D. Chippenham
Little, Edward M. Esq. Sutton Benger
Mayo, Thos. M.D. F.R.S. Corsham (dead)
Nicholls, J. Frederic, M.D. Devizes
Spencer, Francis, Esq. Chippenham
Tayler, George C. M.D. Trowbridge
Thurnam, John, M.D. Medical Superintendent of the Wilts County Asylum, Devizes
Wilcox, R. L. Esq. Warminster
Wintle, H. Esq. Wootton Bassett

WORCESTERSHIRE.

" Number of Members..55.

Branch..Birmingham and Midland Counties.

Addenbrooke, Edward H. Esq. Kidderminster
Badley, James P. Esq. Surgeon to the Dispensary, Dudley
Bennett, Francis I. L.R.O.P.Ed. Resident Medical Officer to the Asylum, Droitwich
Birt, Joseph, M.B. Dispensary, Stourbridge
Bligh, J. W. M.D. Infirmary, Kidderminster
Boswell, Charles S. Esq. Redditch
Buck, Joseph R. Esq. Inkberrow, Redditch
Busigny, Charles E. Esq. House-Surgeon to the Dispensary, Worcester
Campbell, Robert L. M.D. Stourbridge
Carden, Henry Douglas, Esq. Consulting Surgeon to the Infirmary, Worcester
Coates, Frederick W. M.D. Great Malvern
Cooper, Gilbert C. Esq. Oldbury
Darke, James, Esq. Malvern
Dawson, William H. Esq. Great Malvern
Dunn, George P. Esq. Halesowen
Everett, David, Esq. Senior Surgeon to the Ophthalmic Hospital, Worcester
Fitch, Frederick, M.D. Chaddeley Corbet
Freer, Alfred, Esq. Stourbridge
Gabb, John, Esq. Bewdley
Gaunt, J. Smith, Esq. Alvechurch, Redditch
Greensill, John Nicholas, Esq. Great Witley
Hardyman, C. E. Esq. Eye Infirmary, Worcester
Haynes, John B. Esq. Evesham
Haynes, Stanley L. M.D. Malvern Links
Hayward, William H. Esq. Oldbury
Higgs, Thomas F. Esq. Dudley
Horton, George E. Esq. Dudley
Houghton, John H. Esq. Surgeon to the Dispensary, Dudley
Hyde, George E. Esq. Surgeon to the Ophthalmic Hospital, Worcester
Inglis, Alexander M. M.D. Physician to the Infirmary, Worcester
Jotham, George W. Esq. Surgeon to the Infirmary, Kidderminster
Leacroft, J. William, M.B. Feckenham
Malins, Edward, M.D. Cradley, Dudley
Markby, Thomas, Esq. Martley
Martin, Anthony, Esq. Evesham
Nash, James, M.D. Consulting Physician to the Infirmary, Worcester
Niven, D. Graham, Esq. Laughernhill House, near Worcester
Prosser, Roger, Esq. Bromsgrove
Roden, Sergeant S. M.D. Droitwich
Roden, William, M.D. Kidderminster
Rogers, John, Esq. Worcester
Rolls, Thomas, Esq. Blockley (dead)
Rowland, H. M. M.D. Malvern Wells
Sainsbury, Henry, Esq. Oldbury
Smith, Edward R. Esq. Surgeon to the Dispensary, Dudley
Smith, William, Esq. Redditch
Strange, William, M.D. Physician to the Infirmary, Worcester
Tanner, Richard C. Esq. Dudley
Turner, Edwin, Esq. Wordsley, Stourbridge
Tyrrell, Walter, Esq. Surgeon to the Dispensary, Malvern

Walker, Thomas A. Esq. Dudley
Weir, Archibald, M.D. Malvern
West, W. C. L.R.C.P.Ed. Consulting Physician to the Dispensary, Malvern
Wilkinson, E. A. J. Esq. King's Norton
Woodward, Martin, Esq. Pershore

YORKSHIRE.

Number of Members..577.

Branches. { Yorkshire.

{ East York and North Lincoln.

Abraham, James, Esq. Harrogate
Ackroyd, George, Esq. Leeds
Alexander, Wm. M.D. Senior Physician to the Infirmary, Halifax
Allan, William W. Esq. Guiseley, Leeds
Allbutt, T. Clifford, M.D. Physician to the General Infirmary, and Lecturer on Medicine in the School of Medicine, Leeds
Anderson, Francis Byne, Esq. Hessle, Hull
Arden, Septimus, Esq. Sheffield
Armstrong, Leonard, Esq. Whitby
Atkinson, Edward, Esq. Lecturer on Botany in the School of Medicine, and Surgeon to the Dispensary, Leeds
Atkinson, Edward T. Esq. Richmond
Atkinson, George P. Esq. Pontefract
Bainbridge, Frederick, Esq. Harrogate
Baines, Johnson K. Esq. East Cowton, Northallerton
Balbirnie, John, M.D. Sheffield
Barker, William, Esq. Malton
Bartolomé, M. Martin de, M.D. Physician to the Infirmary, Sheffield
Bealey, Adam, M.D. Harrogate
Beardshaw, Ralph, Esq. Leeds
Beaumont, Thos. M. Esq. Knaresborough
Bell, Rev. David, M.D. Goole
Bell, John Henry, M.D. Surgeon to the Eye and Ear Hospital, Bradford
Bennett, William, M.D. Consulting Physician to the Bath Hospital, Harrogate
Benson, John, Esq. Broomhill, Sheffield
Bird, William, Esq. York
Birtwhistle, Wm. Esq. Skipton
Blythman, Clement S. M.B. Swinton
Blythman, R. O. Esq. Swinton, Rotherham
Booth, William H. Esq. Sheffield
Bowes, Richard, Esq. Richmond
Bowman, Robert M. Esq. Surgeon to the House of Correction, Ripon
Boyle, Andrew A. Esq. Hutton-Rudby
Braithwaite, James, M.D. Leeds
Bramley, Lawrence, Esq. Consulting-Surgeon to the Infirmary, Halifax
Bramley, Wm. S. M.D. Leeds
Branson, Henry J. M.D. Doncaster
Bridges, J. H. M.B. Halifax
Britton, Thomas, M.D. Driffield
Bronner, Edward, M.D. Surgeon to the Eye and Ear Hospital, Bradford
Broomhead, George, Esq. Bradford
Browne, J. Crichton, M.D. Medical Superintendent of the West Riding Asylum, Wakefield
Browning, George, Esq. Oughtbridge, Sheffield
Brownridge, Joseph, Esq. Hull
Bryan, Edward, Esq. Idle, near Leeds
Buckley, William H. G. Esq. Bradford
Burke, Martin, M.D. Bradford
Burnie, William, M.D. Bradford
Burman, James W. M.B. Medical Superintendent of the West Riding Asylum, Wakefield
Call, Thomas J. L.R.C.P.Ed. Ilkley
Carter, Joseph B. L.R.C.P.Ed. Chapel-town, Leeds
Carter, Thomas, Esq. Richmond
Cass, William Eden, Esq. Goole
Cautley, Henry, Esq. Hedon, near Hull
Chadwick, Charles, M.D. D.C.L. Consulting Physician to the Infirmary, and Lecturer on Medicine in the School of Medicine, Leeds
Charteris, William, Esq. Hipperholme, Halifax
Clarke, John C. Esq. Gildersome
Clarke, William, M.D. Wentworth, Rotherham
Clarke, William J. Esq. Surgeon to the Infirmary, Huddersfield
Clarkson, Frederick R. L.K.Q.C.P.I. Tockwith, near Yora
Clements, Edwin H. Esq. Rocklands, Wetwang
Coates, John, Esq. Leavening, Grimstone
Cockcroft, John, M.D. Middleham
Cockcroft, William, Esq. Catterick
Colby, William, Esq. Malton

Collier, Thomas, Esq. Surgeon to the Dispensary, Ripon
Connon, William, M.D. Dewsbury
Cooke, Robert T. E. B. L.R.C.P.Ed. Consulting Medical Officer to the Seabathing Infirmary, Scarborough
Cooper, Sir Henry, M.D. Physician to the General Infirmary, Hull
Corrie, James J. Esq. Leeds
Craister, Thomas L. Esq. Bramley, Leeds
Craven, Robert M. Esq. Surgeon to the General Infirmary, Hull
Crawford, William T. M.D. Green Hamerton
Cross, Richard, M.D. Scarborough
Crossby, J. Parker, L.R.C.P.Ed. Leeds
Crowther, James, Esq. Rotherham
Crowther, Thomas, M.D. Luddenden
Dale, George P. Esq. Scarborough
Daly, Owen, M.D. Physician to the General Infirmary, Hull
Dawson, Charles W. Esq. Hunmanby
Deighton, Christopher, M.D. Clapham
Denton, Samuel B. M.D. Hornsea
Des Forges, Edward, Esq. South Cave
Deville, Titus, M.D. Harrogate
Dix, John, Esq. Surgeon to the Dispensary, Hull
Dobie, William, Esq. Keighley
Dobson, Thomas, M.D. Leeds
Dodsworth, Benjamin, Esq. Surgeon to the Dispensary, York
Dodd, H. Esq. Rillington, Malton
Dowker, Frederick W. Esq. Helmsley
Draper, William, Esq. York
Dryden, George, Esq. Bingley
England, William H. M.D. Headingley, Leeds
Easton, Alexander, Esq. Scarborough
Eddison, John E. M.D. Physician to the General Infirmary, and Lecturer on Materia Medica in the School of Medicine, Leeds
Ediss, George N. Esq. Holmfirth
Ellerton, George, Esq. Kippax, Leeds
Ellerton, J. Edward, Esq. Aberford
Elliott, Richard L. Esq. Harewood
Elliott, George F. M.D. Physician to the General Infirmary, Hull
Elliott, William, M.D. Sowerby Bridge
Ellis, John, Esq. Heckmondwike
Ellis, Joseph R. Esq. Mirfield
English, Arthur W. Esq. Whitby
Evans, Thomas M. Esq. Surgeon to the Dispensary, Hull
Farrer, Robert, L.R.C.P.Ed. Brighouse, Halifax
Favell, William, Esq. Sheffield (dead)
Favell, William F. Esq. Surgeon to the General Infirmary, and Lecturer on Surgery in the School of Medicine, Sheffield
Fawcitt, Thomas J. Esq. Bradford
Foster, Francis M. M.D. Hull
Foster, John, Esq. Bradford
Fothergill, J. Milner, M.D. Leeds
Fothergill, Thomas P. M.D. Bedale
Fox, Cornelius B. M.D. Scarborough
Frankland, Thomas T. Esq. Surgeon to the Dispensary, Ripon
Gardiner, John, M.D. Mold Green, Huddersfield
Garlick, William, Esq. Leeds
Gibson, Daniel, Esq. Hull
Gibson, Henry, Esq. Hull
Gibson, J. Haydock, M.D. Physician to the Dispensary, York
Giddings, Wm. K. Esq. Calverley, Leeds
Gill, Henry C. Esq. Assistant Medical Officer to the North Riding Asylum, Clifton
Gisburn, J. Hare, Esq. Hunslet, Leeds
Goldie, George, Esq. Kirkstall, Leeds
Goodworth, William H. Esq. Hatfield, Doncaster
Goyder, David, M.D. Bradford
Graham, Charles, M.B. Pontefract
Granger, H. Homer, Esq. Skipton-in-Craven
Graham, Thomas P. J. M.R.C.P. Scarborough
Greenhow, Thomas M. M.D. Consulting-Surgeon to the Newcastle-on-Tyne Infirmary, Roundhay, Leeds
Greenwood, John, Esq. Ossett, Wakefield
Griffiths, Francis T. M.D. Sheffield
Griffiths, Frederick A. Esq. Ingleton
Haigh, Thomas A. Esq. Meltham
Hall, Frederick, Esq. Leeds
Hall, John, Esq. Sheffield
Hall, J. Charles, F.R.C.P.Ed. Senior Physician to the Public Hospital, Sheffield

Hall, Marriott, Esq. Sheffield
Hall, Wm. Esq. Lecturer on Midwifery in the School of Medicine, Leeds
Hallam, Arthur, Esq. House-Surgeon to the General Infirmary, Sheffield
Hallilay, John, Esq. Leeds
Hamerton, John, Esq. Eiland
Handcock, George, Esq. Leeds
Hartley, James, Esq. Settle
Hartley, Joshua, Esq. Malton
Harvey, R. S. Esq. Harrogate
Haworth, J. Esq. Filey
Haxworth, John, Esq. Sheffield
Haxworth, Walter, Esq. Kirkby Overblow
Hay, William B. M.D. Hull
Heaton, John Deakin, M.D. Physician to the General Infirmary, and Lecturer on Medicine in the School of Medicine, Leeds
Hemingway, C. A. Esq. Dewsbury
Hemingway, Henry, Esq. Dewsbury
Henderson, James F. M.D. Floxton, Hull
Hepworth, Wm. Esq. Guiseley
Hey, Samuel, Esq. Surgeon to the General Infirmary, Leeds
Hey, William, Esq. Consulting-Surgeon to the General Infirmary, Leeds
Hickson, John G. M.D. Scarborough
Hime, Thomas W. M.B. Lecturer on Midwifery in the School of Medicine, Sheffield
Hindle, James, Esq. Askern, Doncaster
Hirst, Samuel C. Esq. Bowling, Bradford
Hodges, F. H. Esq. County Hospital, York
Holden, John F. Esq. Hull
Holdsworth, Samuel, M.D. Physician to the Clayton Hospital, Wakefield
Holmes, Fred. Esq. Burmantofts, Leeds
Hood, William, Esq. York
Hornby, Thomas, Esq. Pocklington (dead)
Horsfall, John, Esq. Surgeon to the Dispensary, Leeds
Horton, Richard G. Esq. Leeds
Hudson, Geo. M.D. South Cave, Brough
Husband, Wm. D. Esq. Senior Surgeon to the County Hospital, York
Hutchinson, R. S. M.D. Scarborough
Ikin, J. Ingham, Esq. Surgeon to the Hospital for Women and Children, Leeds
Ingham, Amos, M.D. Haworth
Jackson, Arthur, Esq. Surgeon to the Public Hospital, and Lecturer on Anatomy in the School of Medicine, Sheffield
Jackson, Joseph, Esq. Beeford, Hull
Jackson, Matthew, Esq. Market Weighton (dead)
Jackson, Thomas, M.D. Hull (dead)
Jackson, Thomas, Esq. Welton
Jay, Frederick F. Esq. Scarborough
Jefferson, Richard, Esq. Market Weighton
Jessop, Adam, Esq. Castleford
Jessop, T. R. Esq. Surgeon to the Infirmary, and Lecturer on Surgery in the School of Medicine, Leeds
Jones, Richard, L.R.C.P.Ed. New Malton
Jubb, Abraham, Esq. Surgeon to the Infirmary, Halifax
Keeling, James H. M.D. Surgeon to the Public Hospital, and Lecturer on Midwifery in the School of Medicine, Sheffield
Keighley, R. D. Esq. Batley, Dewsbury
Kelk, John, M.D. Scarborough
Kelly, Patrick G. Esq. Leeds
Kemp, Benjamin, Esq. Horbury, Wakefield
Kendell, Daniel B. M.B. Wakefield
Kenyon, John, Esq. Hooton Pagnall
Ketchen, Wm. M.D. Middlesbrough
Keyworth, Henry, Esq. Surgeon to the County Hospital, York
King, Kelburne, M.D. Surgeon to the General Infirmary, Hull
Kirby, Christopher, Esq. Halifax
Knaggs, Samuel, Esq. Surgeon to the Infirmary, Huddersfield
Knight, Henry J. Esq. Rotherham
Lamb, George, Esq. Hull
Lambert, John, Esq. Farsley, Leeds
Land, John F. Esq. Patrington, near Hull
Land, Robert T. M.D. Surgeon to the Eye and Ear Department of the Infirmary, and Lecturer on Anatomy in the School of Medicine, Leeds
Lawrie, John D. Esq. Manningham
Leach, Matthew, Esq. Sheffield
Leadman, Alexander, Esq. Headingley, Leeds
Leak, Thos. M. L.R.C.P.Ed. Hemsworth, Pontefract
Lee, Matthew, M.D. Listerhills, Bradford

Leeds, Thomas, Esq. Lecturer on Physiology in the School of Medicine, Sheffield
 Leeson, Joseph F. M.D. Bradford
 Le Tall, Frederick T. Esq. Woodhouse, Sheffield
 Libbey, Henry C. Esq. Hunslet Lane, Leeds
 Lister, John, Esq. Senior Surgeon to the Infirmary, Doncaster
 Locke, Thomas W. S. Esq. Coatham, Redcar
 Locking, Benjamin, Esq. Wellerby, Hull
 Locking, Joseph A. Esq. Hull
 Lodge, Samuel, L.R.C.P.Ed. Bowling, Bradford
 Loe, James S. Esq. Leeds
 Longthorn, George, Esq. Leeds
 Low, R. Bruce, M.D. Burningham, Doncaster
 Loy, Thomas R. M.D. Harrogate
 Lunn, William Joseph, M.D. Surgeon to the General Infirmary, Hull
 McFadden, John, M.D. Batley, Leeds
 McGill, A. F. Esq. Infirmary, Leeds
 Mackay, William M. Esq. Pickering
 Mackenzie, William S. Esq. Normanton
 Mackintosh, John, Esq. Lindley, Huddersfield
 MacLagan, James McG. M.D. Mexborough, Rotherham
 Macmillan, John, M.D. Hull
 Marshall, John I. F. Esq. Hull
 Matterson, William, M.D. Physician to the County Hospital, York
 Meade, Richard H. Esq. Consulting Surgeon to the Infirmary, Bradford
 Medcalf, Henry C. Esq. Howden
 Mercer, Niel Grey, M.D. East Riding Asylum, Beverley
 Merryweather, James, Esq. Guisborough
 Miall, Philip E. Esq. Surgeon to the Infirmary, Bradford
 Mickle, David, Esq. Kirklington
 Mickelthwaite, Benjamin W. Esq. Gomersal
 Milner, Andrew, Esq. Harrogate
 Mitchell, Samuel, M.D. Physician to the Public Hospital, Sheffield
 Morehouse, Henry J. Esq. Holmfirth
 Morris, G. Selwyn, M.D. Guisborough
 Munroe, Henry, M.D. Hull
 Murray, William, M.D. Burley-in-Wharfedale
 Muroft, Henry, Esq. Pontefract
 Myrtle, Andrew S. M.D. Harrogate
 Naylor, George F. Esq. Wakefield
 Needham, Frederick, M.D. Medical Superintendent of the Asylum, Bootham, York
 Ness, John, Esq. Helmsley
 Newstead, Charles V. Esq. Leeds
 Newstead, George, Esq. Eccleshill
 Nicholson, Robert H. B. Esq. Hull
 Nickols, Thomas, Esq. Wortley, Leeds
 North, Samuel W. Esq. Surgeon to the Dispensary, York
 Nowell, William, Esq. Surgeon to the Infirmary, Halifax
 Nunneley, John A. M.B. Surgeon to the Eye and Ear Department of the Infirmary, and Lecturer on Anatomy in the School of Medicine, Leeds
 Oglesby, Robert P. Esq. Leeds
 Oliver, George, M.B. Redcar
 Owen, William H. Esq. Lepton, Huddersfield
 Paley, Temple C. Esq. York
 Parker, Samuel, Esq. Surgeon to the General Infirmary, and Lecturer on Surgery in the School of Medicine, Sheffield
 Parkinson, John T. Esq. Brotton, Saltburn-by-Sea
 Parkinson, William, Esq. Surgeon to the Infirmary, Bradford
 Pearce, — Esq. Infirmary, Sheffield
 Percival, Thomas, Esq. Knottingley
 Pinder, William M. L.R.C.P. Ed. Horsforth, Leeds
 Plaxton, Joseph W. Esq. House-Surgeon to the Infirmary, Hull
 Porter, John T. Esq. Consulting Surgeon to the Public Hospital, Sheffield
 Price, W. Henry, Esq. Leeds
 Price, William N. Esq. Leeds
 Procter, William, M.D. Surgeon to the Dispensary, York
 Procter, William B. Esq. Bradford
 Pugh, John L. P. Esq. Brighouse, Normanton
 Pullan, Richard, Esq. Hunslet, Leeds
 Quin, John H. Esq. New Grimesthorpe, Sheffield
 Ramsay, James, M.D. York
 Ramskill, Josiah, Esq. Leeds

Rhind, George, Esq. Mirfield
 Rhodes, Francis, M.D. Great Horton, Bradford
 Rhodes, George S. Esq. Dewsbury
 Rhodes, George W. Esq. Surgeon to the Infirmary, Huddersfield
 Richardson, Charles, Esq. Leeds
 Richardson, John, Esq. Middlesborough-on-Tees
 Richmond, Sylvester, M.D. Northallerton
 Rickards, Alfred, Esq. Armley
 Ridsdale, William E. Esq. Hull
 Ritchie, Thomas, L.R.C.P. Ed. Otley
 Roberts, Charles, M.D. Northallerton
 Roberts, James D. Esq. Barnoldswick
 Robertson, Robert T. C. M.B. Doncaster
 Robinson, Edmund, Esq. Leeds
 Robinson, Edward, Esq. Rotherham
 Robinson, Major K. Esq. Leeds
 Rockett, Joseph H. M.D. Goole
 Ross, Daniel McC. L.R.C.P. House-Surgeon to the Infirmary, Halifax
 Rowley, Chas. O. Esq. Silkstone, Barnsley
 Rudd, William A. Esq. Hull
 Ruddock, John R. Esq. Leeds (dead)
 Ruddock, William P. Esq. Leeds
 Russell, A. G. M.D. Bradford
 Russell, William C. Esq. Surgeon to the Infirmary, Doncaster
 Ryott, William Hall, F.R.C.P. Ed. Thirsk
 Sadler, Michael T. jun. M.D. Surgeon to the Hospital, Barnsley
 Savage, James, Esq. Bridlington Quay
 Saville, William, Esq. Surgeon to the Dispensary, Rotherham
 Scaife, Christopher, Esq. Low Harrogate
 Scatchard, Thomas, Boston, Tadcaster
 Scattergood, Thomas, Esq. Lecturer on Medical Jurisprudence in the School of Medicine, Leeds
 Scholefield, William S. M.D. Pickering
 Scott, Thomas, Esq. Sherburn
 Scott, William, Esq. Holbeck, Leeds
 Seaton, James, Esq. Surgeon to the Eye and Ear Department of the Infirmary, Lecturer on Anatomy in the School of Medicine, Leeds
 Shann, George, M.D. Physician to the County Hospital, York
 Sharpe, George M. Esq. Hunslet, Leeds
 Simpson, James H. M.D. Pontefract
 Skinner, William, Esq. Lecturer on Anatomy in the School of Medicine, Sheffield
 Slessor, Charles, M.D. Bramley, Leeds
 Smith, George, M.D. Barnsley
 Smith, George Pyemont, M.D. Mount Stead, near Otley
 Smith, W. Frank, M.B. Physician to the General Infirmary, and Lecturer on Medicine in the School of Medicine, Sheffield
 Smith, William T. Y. L.R.C.P. Ed. Barnsley
 Souby, Henry, M.D. Hull
 Spencer, Herbert M. Esq. Bradford
 Statter, William, Esq. Wakefield
 Stawman, William, Esq. Surgeon to the Hospital, Barnsley
 Steele, Henry Octavius, Esq. Gomersal
 Stephenson, William, Esq. Surgeon to the Dispensary, Beverley
 Stewart, William, L.R.C.P. Ed. Barnsley
 Stockwell, George, Esq. Batley
 Stonehouse, Cornelius, Esq. Horsforth, Leeds
 Storrs, Robert, Esq. Doncaster
 Swain, William D. P. Esq. Sedburgh
 Sykes, Benjamin C. M.D. Cleckheaton
 Sykes, John, M.D. Physician to the Infirmary, Doncaster
 Sykes, Richard, Esq. Drighlington
 Synnott, Patrick A. Esq. Halifax
 Tacey, William G. Esq. Surgeon to the Eye and Ear Hospital, Bradford
 Taylor, Christian H. L.R.C.P. Ed. Bradford
 Taylor, Joseph, Esq. Hathersage and Bradford, Sheffield
 Taylor, Thomas, Esq. Methley, Leeds
 Teale, John W. Esq. Scarborough
 Teale, Thomas P. M.B. Surgeon to the General Infirmary, and Lecturer on Surgery in the School of Medicine, Leeds
 Teasdale, William, Esq. Easingwold
 Terry, John N. Esq. Surgeon to the Infirmary, Bradford
 Thomas, Robert, Esq. Rawdon
 Thornton, William H. M.D. Dewsbury
 Tireman, Henry, Esq. Howden
 Todd, Joseph, Esq. Selby
 Trehwella, Henry E. M.D. Headingley, Leeds

Trotter, Charles J. Holmfirth, Huddersfield
 Trousdale, W. Maw, Esq. West Butterwick, Bawtry
 Umpleby, Henry, M.D. Bedale
 Upton, Thomas T. Esq. Tadcaster
 Walker, Bernard, Esq. Masbrough
 Walker, James, Esq. Sheffield
 Walker, John H. L.R.C.P. Ed. Pickering
 Walker, Thomas, Esq. Surgeon to the Clayton, Hospital, Wakefield
 Warburton, Edward, Esq. Pateley Bridge
 Ward, John, Esq. Penistone
 Watmough, Isaac, M.D. Pocklington
 Watson, Samuel, Esq. Cottingham, Hull
 Watts, William F. Esq. Dewsbury
 Wesley, John S. M.B. Weatherby
 Wheelhouse, Claudius G. Esq. Surgeon to the General Infirmary, and Lecturer on Surgery in the School of Medicine, Leeds
 Whythead, Henry Y. M.D. Belton, near Hull
 Widdas, Daniel, Esq. Elvington
 Williams, Caleb, M.D. York (dead)
 Williams, Isaac M. Esq. Micklegate, York
 Wilson, Henry, Esq., Marske-by-the-Sea, Redcar
 Wilson, Knowlton, M.D. Sheffield
 Wilson, R. Esq. Marske-by-the-Sea
 Witten, Edward W. Esq. York
 Wood, Arthur, Esq. Kirkby Moorside, near York
 Woolhouse, Frederick, Esq. Assistant-Surgeon to the Hospital for Women, Sheffield
 Wright, Charles J. Esq. Surgeon to the Dispensary, and Lecturer on Physiology in the School of Medicine, Leeds
 Wright, Frederick, Esq. Stamford Bridge
 Wright, Henry R. M.B. Surgeon to the Dispensary, Knaresborough
 Wright, J. Hodgson, Esq. Surgeon to the Infirmary, Halifax
 Wylie, William, M.D. Skipton
 Young, G. Edward, M.D. Leeds

Edwards, James, M.D. Benarth, Conway
 Griffith, Samuel, M.D. Portmadoc
 Hughes, Hugh Robert, Esq. Surgeon to the Carnarvon and Anglesea Infirmary, Bangor
 Hughes, Robert, M.D. Conway
 Hughes, Thomas Hunter, Esq. Pwllheli
 Jones, Robert A. Esq. Bron Hendre, Carnarvon
 Maugham, William, M.D. Carnarvon
 Prichard, Richard A. Esq. Conway
 Rees, Hugh, Esq. Llanberis
 Richards, John, L.K.Q.C.P.I. Surgeon to the Carnarvon and Anglesey Infirmary, Bangor
 Roberts, Evan, L.R.C.P. Ed. Penygroes, Carnarvon
 Roberts, Hamilton A. Esq. Consulting-Surgeon to the Carnarvon and Anglesea Infirmary, Brynmeurig, Bangor
 Roberts, Watkin W. Esq. Carnarvon
 Roden, Thos. C. L.R.C.P. Ed. Llandudno, Conway
 William, John, M.D. Penygroes, Llanllyfni
 Williams, Edward H. Esq. Carnarvon
 Williams, John, Esq. Carnarvon
 Williams, William, Esq. Bangor
 Williams, William M. Esq. Llansaintffraid

DENBIGHSHIRE.

Branch.. North Wales.

Box, William H. Esq. Chirk
 Broatch, James, Esq. Brynbo
 Davies, Price Lloyd, Esq. Abergele
 Davies, Robert, Esq. Llanfairtalhairn
 Griffith, Robert, Esq. Abergele
 Griffith, Thomas Taylor, Esq. Consulting-Surgeon to the Infirmary, Wrexham
 Heaton, Frederick L. M.B. Wrexham
 Hughes, John Robert, M.D. Surgeon to the Infirmary, Denbigh
 Jenkins, Josiah R. M.D. Ruthin
 Jones, Edward S. Esq. House-Surgeon to the General Infirmary, Denbigh
 Jones, George Turner, L.R.C.P. Ed. Superintendent of the North Wales Lunatic Asylum, Denbigh
 Jones, Thomas Evans, Esq. Tyn Twll, Llanrwst
 Jones, Thomas Eyton, Esq. Surgeon to the Infirmary, Wrexham
 Jones, William, Esq. Ty Newydd, Ruabon
 Manisty, Francis, Esq. Gresford, Wrexham
 Owen, Thomas, Esq. Abergele
 Robertson, John, M.D. Llangollen
 Turnour, Arthur E. M.D. Senior Surgeon to the Infirmary, Denbigh
 Williams, Edward, M.D. Wrexham

FLINTSHIRE.

Branch.. North Wales.

Broughton, Robert D. Esq.
 Brown, Thomas Ll. Esq. St. Asaph
 Davies, J. Conway, M.D. Surgeon to the Flintshire Dispensary, Holywell
 Girdlestone, William T. Esq. Rhyl
 Hughes, Edward T. M.D. Mold
 Jones, Richard, Esq. Flint
 Lodge, Llewelyn, L.R.C.P. Ed. St. Asaph
 Roberts, Owen, M.D., St. Asaph (dead)
 Roberts, Robert P. Esq. Rhyl
 Trubshaw, Alfred, Esq. Mold
 Williams, G. Harvey, M.D. Rhyl
 Williams, James, Esq. Surgeon to the Flintshire Dispensary, Holywell
 Williams, William, M.D. Mold
 Wolstenholme, John H. Esq. Holywell

GLAMORGANSHIRE.

Byrne, William A. Esq., Dowlais
 Couch, James, Esq. Swansea
 Cresswell, Pearson R. Esq. Dowlais
 Davies, Andrew, Esq. Surgeon to the Hospital, Swansea
 Davies, David, L.R.C.P. Ed. Aberdare
 Davies, Ebenezer, Esq. Swansea
 Davies, Henry, Esq. Morriston
 Davies, Henry N. Esq. Cymer, Pont-y-Pridd
 Davies, John, M.B. Maesteg
 Davies, Joseph, Esq. Morriston
 Davis, Edward W. S. Esq. Mountain Ash, Aberdare
 Dyke, Thomas J. Esq. Medical Officer of Health, Merthyr Tydfil
 Eade, Charles H. Esq. Oystermouth
 Edwards, William T. M.D. Physician to the Infirmary, Cardiff

WALES.

Number of Members.. 177.

ANGLESEY.

Branch.. North Wales.

Hughes, Thomas, M.D. Amlwch
 Hughes, T. D. Esq. Menai Bridge
 Jones, D. Kent, Esq. Beaumaris
 Jones, Lewis, Esq. Menai Bridge
 Lewis, William, P. Esq. Beaumaris
 Owen, Robert E. Esq. Beaumaris
 Williams, Evan, Esq. Llangefni

BRECKNOCKSHIRE.

Franco, Massey R. F. Esq. Crickhowell
 Jones, John Talfourd, M.B. Physician to the Infirmary, Brecon
 Smith, J. Evans, Esq. Hay
 Williams, James, Esq. Brecon

CARDIGANSHIRE.

James, James, Esq. Aberayron
 Jones, Thomas, Esq. New Quay

CARMARTHENSHIRE.

Brigstocke, Charles A. Esq. House Surgeon to the Infirmary, Carmarthen
 Davies, Evan P. Esq. Assistant-Medical Officer of the Asylum, Carmarthen
 Hearder, George J. M.D. Medical Superintendent of the Asylum, Carmarthen
 Hughes, John, Esq. Consulting Surgeon to the Infirmary, Carmarthen
 Humphreys, William E. Esq. Kidwelly
 Jones, John, Esq. Tirbach, Llanelly
 Lewis, Thomas, M.D. Llanelly
 Morgan, Edward, Esq. Llanelly
 Rowlands, James, Esq. Surgeon to the Infirmary, Carmarthen
 Thomas, Benj. L.R.C.P. Ed. Llanelly
 Thomas, John Little, Esq. St. Clear's
 Thomas, Richard, Esq. Llanelly

CARNARVONSHIRE.

Branch.. North Wales.

Dalton, Thomas, M.D. Llandudno
 Davies, Thomas, Esq. Colwyn

Evans, Franklen G. Esq. Tynant, Radyr, Cardiff
 Evans, Thomas, Esq. Cardiff
 Granger, Frederick W. Esq. Cardiff
 Green, William E. Esq. Neath
 Griffiths, David, M.B. Pontardulais
 Griffiths, Griffith, Esq. Pontardawe
 Griffiths, Thomas D. M.B. Swansea
 Hall, James G. Esq. Surgeon to the Hospital, Swansea
 Hunter, Robert, L.R.C.P. Ed. Pontypridd
 Jenkins, John, Esq. Maesteg
 Jones, David E. Esq. Cardiff
 Jones, Evan, Esq. Aberdare
 Jones, John, Esq. Castle St. Cardiff (dead)
 Jones, John Thomas, Esq. Dowlais
 Jones, Thos. M. Esq. Dantwyn, Swansea
 Leigh, John, Esq. Pont-y-Pridd
 Lewis, Jas. L.R.C.P. Ty Derwen, Maesteg
 Lewis, J. Esq. Bridgend
 Lloyd, John, Esq. Hospital, Swansea
 Lougher, Richard, Esq. Cardiff
 Milward, James, Esq. Cardiff
 Morgan, John W. Esq. Oystermouth
 Morgan, Walter, Esq. Pont-y-Pridd
 Mowat, George, Esq. Out-door Medical Officer to the Hospital, Swansea
 Nell, Richard F. Esq. Penarth, Cardiff
 Paddon, John, M.B. Physician to the Hospital, Swansea
 Padley, George, L.R.C.P. Physician to the Hospital, Swansea
 Paine, Henry J. M.D. Physician to the Infirmary, Cardiff
 Pegge, Charles, Esq. Briton Ferry
 Phillips, James M. M.D. Taibach
 Phillips, Thomas R. Esq. Treorki, Pont-y-Pridd
 Price, William, Esq. Glan Twrch, Swansea
 Probert, James, Esq. Merthyr Tydfil
 Rawlings, J. A. Esq. Out-door Medical Officer to the Hospital, Swansea
 Rogers, James, Esq. Swansea
 Russell, F. Martin, Esq. Cwm Avon, Taibach
 Russell, John, Esq. Neath
 Ryding, George, M.D. Neath
 Sheen, Alfred, M.D. Surgeon to the Infirmary, Cardiff
 Sylvester, H. T. M.D. House-Surgeon to the Hospital, Swansea
 Symes, James, L.R.C.P. Ed. Briton Ferry
 Taylor, William, M.D. Surgeon to the Infirmary, Cardiff
 Thomas, David, M.D. Ystalyfera
 Thomas, David Howel, Esq. Swansea
 Thomas, Jabez, L.R.C.P. Ed. Medical Officer to the Hospital, Swansea
 Thomas, John H. M.D. Merthyr Tydfil
 Thomas, Robert W. Esq. Neath
 Thomas, William H. Esq. Maesteg
 Vachell, C. T. M.B. House-Surgeon to the Infirmary, Cardiff
 Wallace, Samuel, M.D. Cardiff
 Ward, John L. W. Esq. Merthyr Tydfil
 Webster, Thomas J. Esq. Merthyr Tydfil
 Williams, John, M.D. Swansea
 Williams, Owen G. Esq. Sketty, Swansea
 Yellowlees, David, M.D. Superintendent of the Glamorgan County Asylum, Bridgend

MERIONETHSHIRE.

Jones, J. Foulkes, Esq. Towyn
 Lloyd, Hugh J. Esq. Barmouth
 Prytherch, Thomas, Esq.
 Walker, James R. Esq. Corwen

MONTGOMERYSHIRE.

Branches { Shropshire Ethical.
 { Shropshire Scientific.
 Barrett, Thomas B. Esq. Welshpool
 Brock, William K. Esq. Llandrinio
 Davies, Richard, Esq. Llanfyllin
 Davies, William A. Esq. Llanidloes
 Edwards, Robert, Esq. Llanbrynmair
 Fairles, Nicholas W. Esq. Montgomery
 Hall, Edward, Esq. Newtown
 Harrison, Edward T. D. Esq. Surgeon to the Dispensary, Welshpool
 Huddart, C. H. C. Esq. Llandrinio
 Jones, John, Esq. Llanfyllin
 Jones, Richard, M.D. Newtown
 Parry, William, M.D. Caersws
 Pryce, Richard M. Esq. Surgeon to the Montgomeryshire Infirmary, Newtown
 Thomas, Wm. W. Esq. Llanfaircaereinion
 Williams, Eyton O. M.D. Llanfyllin

PEMBROKESHIRE.

Brown, James D. Esq. Surgeon to the Infirmary, Haverfordwest
 Chater, George, Esq. Tenby
 Evans, Maurice G. M.D. Narberth
 Forbes, John, M.R.C.P. Inspector-General, Tenby
 Havard, David, Esq. Newport
 Lock, John G. Esq. Tenby
 Phillips, Edward P. Esq. Surgeon to the Infirmary, Haverfordwest
 Whitworth, James, Esq. Tenby

RADNORSHIRE.

Covernton, Chas. J. L.R.C.P. Ed. Knighton
 Jones, John M. Esq. Llanbister

ISLANDS.

Number of Members..9.

Annesley, F. C. Esq. Jersey
 Aubin, T. J. M.D. Jersey
 Corbin, M. A. B. Esq. Guernsey
 Godfray, A. Esq. St. Helier's, Jersey
 Greene, George, M.D. Ramsay, Isle of Man
 Nivison, T. R. S. M.D. Medical Officer to the Dispensary, St. Helier's, Jersey
 Smith, Joseph, Esq. Jersey
 Wise, Thomas, Esq. Castletown, Isle of Man
 Yates, Walter, Esq. Jersey

SCOTLAND.

Number of Members..121.

ABERDEENSHIRE.

Davidson, Alexander D. M.B. Surgeon to the Ophthalmic Institution, Aberdeen
 Greig, A. F. Esq. Sunnyside, Fyvie
 Inglis, Andrew, M.D. Professor of Midwifery in the University, Aberdeen
 Jamieson, Patrick, Esq. Peterhead
 Jamieson, Robert, M.D. Physician-Superintendent of the Royal Lunatic Asylum, Aberdeen
 Keith, William, M.D. Consulting Surgeon to the Royal Infirmary, Aberdeen (dead)
 Mackie, George, M.B. Inch
 Marshall, William, M.D. Balmoral
 Milne, Thomas, M.B. New Deer
 Ogston, Alexander, M.D. Ophthalmic Surgeon to the Royal Infirmary, Aberdeen
 Pirrie, William, M.D. F.R.S.E. Surgeon to the Royal Infirmary, and Professor of Surgery and Clinical Surgery in the University, Aberdeen
 Reith, Archibald, M.D. Aberdeen
 Smith, James W. F. M.D. Physician to the Infirmary, Aberdeen

ARGYLESIRE.

Gibson, William, M.D. Campbeltown
 McColl, Hector, Esq. Tobermory
 Sibbald, John, M.D. Deputy-Commissioner in Lunacy for Scotland, Lochgilphead

AYRSHIRE.

MacLachlan, William, M.B. Ayr
 Wilson, William, M.B. Lugar

BANFFSHIRE.

Carmichael, Duncan, M.D. Buckie
 Duguid, William R. M.B. Buckie
 Innes, James A. M.D. Dufftown
 Manson, Alexander J. M.D. Banff
 Wood, A. M.D. Banff

BERWICKSHIRE.

Turnbull, Matthew J. M.D. Coldstream

CAITHNESS.

Smith, John G. Esq. Thurso

DUMFRIESSHIRE.

Carlyle, W. Johnstone, M.D. Langholm
 Gilchrist, James, M.D. Superintendent to the Crichton Institution, Dumfries

McCulloch, James M. M.D. Dumfries
 McBean, R. B. M.D. Annan
 Wilson, James T. Esq. Lockerbie

EDINBURGSHIRE.

Aitken, Lauchlan, M.D. Edinburgh
 Annandale, Thomas, Esq. Surgeon to the Royal Infirmary, and Lecturer on Surgery in Surgeons' Hall, Edinburgh
 Balfour, John H. M.D. F.R.S.S.L. & E. Professor of Botany in the University, Edinburgh
 Begbie, James Warburton, M.D. Edinburgh
 Bell, Joseph, M.D. Assistant-Surgeon to the Royal Infirmary, and Lecturer on Surgery in Surgeons' Hall, Edinburgh
 Bennett, J. Hughes, M.D. F.R.S.E. Physician to the Royal Infirmary, and Professor of the Institutes of Medicine in the University, Edinburgh
 Bishop, John, Esq. Edinburgh
 Brodie, David, M.D. Liberton
 Chiene, John, M.D. Assistant-Surgeon to the Royal Infirmary, and Demonstrator of Anatomy in the University, Edinburgh
 Christison, Sir Robert, Bart. M.D. D.C.L. F.R.S.E. Physician in Ordinary to the Queen in Scotland, Professor of Materia Medica in the University, Edinburgh
 Croom, John H. M.B. Edinburgh
 Duncan, J. Matthews, M.D. Physician to the Royal Infirmary, and Lecturer on Midwifery in Surgeons' Hall, Edinburgh
 Duncanson, J. J. K. M.D. Edinburgh
 Gillespie, James D. M.D. Consulting-Surgeon to the Royal Infirmary, Edinburgh
 Gordon, William, M.D. Edinburgh
 Graham, Charles William, M.D. Dalkeith
 Inglis, Archibald, M.D. Edinburgh
 Laycock, Thomas, M.D. Physician to the Royal Infirmary, and Professor of Physics in the University, Edinburgh
 Lister, Joseph, M.B. F.R.S. Surgeon to the Royal Infirmary, and Professor of Clinical Surgery in the University, Edinburgh
 McKendrick, John G. M.D. Assistant to the Professor of Physiology in the University, Edinburgh
 MacLagan, A. Douglas, M.D. F.R.S.E. Physician to the Royal Infirmary, and Professor of Medical Jurisprudence in the University, Edinburgh
 Miller, Alexander, M.D. Edinburgh
 Moir, John, M.D. Edinburgh
 Muirhead, Claud, M.D. Assistant-Physician to the Royal Infirmary, Edinburgh
 Ritchie, Robert P. M.D. Physician to the Hospital for Children, Edinburgh
 Sheriff, Thomas, L.R.C.P. Ed. Ratho
 Simpson, Alexander R. M.D. Professor of Midwifery in the University, Edinburgh
 Stewart, T. Grainger, M.D. Physician to the Royal Infirmary, Edinburgh
 Wyllie, John, M.D. Edinburgh
 Young, James, M.D. Edinburgh

FIFE.

Alexander, James, Esq. Leslie
 Carmichael, James, M.D. Burntisland
 Courtenay, George T. L.R.C.P. Ed. Colinsburgh
 Troup, Francis, M.D. Auchtermuchty
 Tuke, John Batty, M.D. Medical Superintendent of the Fife and Kinross-shire Asylum, Cupar
 Wiseman, Robert, Esq. Cupar

FORFARSHIRE.

Christie, James, M.D. Consulting Physician to the Royal Infirmary, Dundee
 Crockatt, Wm. M.D. Consulting Surgeon to the Royal Infirmary, Dundee
 Gibson, W. Lockhart, M.D. Consulting Physician to the Royal Infirmary, Dundee
 Nimmo, Matthew, Esq. Consulting Surgeon to the Royal Infirmary, Dundee

KINCARDINESHIRE.

Henderson, Joseph, Esq. Fordoun
 McRae, Alexander E. M.B. Fettercairn

LANARKSHIRE.

Anderson, McCall, M.D. Physician to the Royal Infirmary, and Lecturer on Medicine in Anderson's University, Glasgow

Black, D. Campbell, M.D. Glasgow
 Buchanan, George, M.D. Surgeon to the Royal Infirmary, and Lecturer on Anatomy in Anderson's University, Glasgow
 Caldwell, John, L.R.C.P. Ed. Shots Iron Works, Motherwell
 Coats, Joseph, M.D. Pathologist to the Royal Infirmary, Glasgow
 Fairless, William D. M.D. Bothwell
 Fergus, Andrew, M.D. Glasgow
 Finlayson, James, M.D. Glasgow
 Gairdner, William T. M.D. Professor of Medicine in the University, and Medical Officer of Health to the City, Glasgow
 Howatt, Henry R. M.D. Glasgow
 Kelly, Adam L. M.D. Glasgow
 Leishman, William, M.D. Professor of Midwifery in the University of Glasgow
 Lyell, John, M.D. Cathcart, Glasgow
 Mackintosh, Alexander, M.D. Superintendent of the Lunatic Asylum, Gartnavel, Glasgow
 McLean, Daniel, M.D. Glasgow
 Macleod, Geo. H. B. M.D., Professor of Surgery in the University, and Surgeon to the Royal Infirmary, Glasgow
 Miller, Hugh, M.D. Glasgow
 Morton, James, M.D. Professor of Materia Medica in Anderson's Univer. Glasgow
 Prichard, William, M.D. Partick, Glasgow
 Renfrew, Robert, M.D. Glasgow
 Robertson, Alex. M.D. Medical Superintendent of the Town's Hospital, Glasgow
 Simpson, Pierce A. M.D. Dispensary Physician to the Royal Infirmary, Glasgow
 Weir, William, M.D. Glasgow
 Whitelaw, William, M.D. Kirkintilloch
 Wilson, James G. M.D. Lecturer on Midwifery in Anderson's Univer. Glasgow
 Wolfe, John R. M.D. Lecturer on Ophthalmic Medicine and Surgery in Anderson's University, Glasgow

LINLITHGOW.

Hunter, George, M.D. Linlithgow

MORAYSHIRE.

Innes, John G. Esq. Forbes
 Murray, John, M.D. Forbes

PERTHSHIRE.

Binns, Wildon H. Esq. Trinity College, Glenalmond
 Bramwell, James P. M.D. Perth
 Gairdner, Matthew B. M.D. Crieff
 Irvine, William I. M.D. Craigatin, Pitlochry
 Lindsay, W. Lauder, M.D. F.R.S.E. Physician to the Murray Institution for the Insane, Perth

RENFREWSHIRE.

Bruce, James, M.D. Trees, Barrhead
 Law, A. R. M.B. Infirmary, Greenock
 Marshall, William J. M.D. Greenock
 Milloy, Duncan C. Esq. Greenock

ROSS-SHIRE.

Bruce, William, M.D. Dingwall

ROXBURGHSHIRE.

Blair, William, M.D. Jedburgh
 Mackenzie, William W. M.D. Kelso
 Meikle, John, Esq. Melrose
 Thomson, George W. M.D. Hawick

SELKIRKSHIRE.

Muir, John S. M.B. Selkirk
 Tweedie, Alexander C. Esq. Galashiels

SHETLAND.

Cowie, Robert, M.D. Lerwick
 Pole, Alexander, M.D. Walls

STIRLINGSHIRE.

Robertson, Peter F. M.D. Milngavie

WIGTONSHIRE.

Macneil, William, M.D., Stranraer

IRELAND.

ANTRIM.

Number of Members...27

Aickin, William, M.D. Belfast
 Arnold, Wilberforce, L.K.Q.C.P. Belfast
 Berry, Matthew W. Esq. Belfast
 Corry, Thomas C. S. M.D. Belfast (dead)
 Cuming, James, M.D. Physician to the General Hospital, and Professor of Medicine in Queen's College, Belfast
 Dysart, John, M.D. Portglenone
 Fagan, John, L.K.Q.C.P. Belfast
 Gaussen, J. Laird, M.D. Belfast
 Hannay, Robert S. M.D. Belfast
 Harkin, Alexander, M.D. Belfast
 Hill, James, M.D. Belfast
 Holden, John S. M.D. Larne
 Johnston, David, M.D. Belfast
 Johnston, Henry M. Esq. Belfast
 McCrea, John, M.D. Belfast
 McWilliam, William A. M.D. Belfast
 Moore, John, M.D. Belfast
 Murney, Henry, M.D. Surgeon to the General Hospital, Belfast
 Orr, Gowan, M.D. Ballylessan, Lisburn
 Patten, James, M.D. Lisburn
 Pirrie, John M. M.D. Consulting Physician to the General Hospital, Belfast
 Reade, Thomas, M.B. Belfast
 Reid, James Seaton, M.D. Professor of Materia Medica in Queen's College, and Consulting Physician to the General Hospital, Belfast
 Smith, James W. T. M.D. Physician to the General Hospital, Belfast
 Taylor, William, Esq. Ballmoney
 Wales, George F. M.D. Belfast
 Wheeler, Thomas K. M.D. Belfast

ARMAGH.

Number of Members...8.

Crawford, Samuel K. M.D. Tandragee
 Cuming, Thomas, M.D. Physician to the Armagh District Lunatic Asylum, Armagh
 Frazer, Henry, L.K.Q.C.P. Armagh
 McKinstrey, Robert, M.D. Resident Physician to the District Lunatic Asylum, Armagh
 Patton, Alexander, M.B. Tandragee
 Pratt, Joseph, L.K.Q.C.P. Markethill
 Russell, Philip C. M.B. Lurgan
 Shaw, William, M.D. Lurgan

CARLOW.

Number of Members...1.

McDowell, Charles W. M.B. Carlow

CAVAN,

Number of Members...1.

Lough, J. J. M.B. Ballyjamesduff

CLARE.

Number of Members...5.

Daxon, William, M.D. Asylum, Ennis
 Foley, William, M.D. Kilrush
 O'Donnell Thos. B. L.K.Q.C.P. Kilrush
 Rowan, John F. L.K.C.C.P. Miltown Malbay
 Shannon, James, M.D. Ennistimon (dead)

CORK.

Number of Members...14.

Berry, Parsons, Esq. Mallow
 Bisshopp, Edward, M.B. Kinsale
 Cummins, William J. M.D. Physician to the South Infirmary, Cork
 Hadden, Henry R. M.D. Clonakilty
 Haines, Humphry, Esq. Cork
 Harvey, Joshua R. M.D. Professor of Midwifery in Queen's College, Cork
 Justice, Thomas H. M.D. Mallow
 Nunan, James C. Esq. Kinsale
 Popham, John, M.B. Physician to the North Infirmary, Cork
 Scott, David H. M.D. Queenstown
 Sisk, John O'Neil, Esq. Fermoy
 Slorach, Henry, M.D. Innishannon
 Swanton, James R. M.D. Bantry
 Townsend, Richard N. L.K.Q.C.P. North Esk, Glanmire

DONEGAL.

Number of Members...3.

Browne, Joseph, M.D. Stranorlar
 Eames, James A. M.D. Medical Superintendent of the District Asylum, Letterkenny
 Sheil, Simon, M.D. Ballshannon

DOWN.

Number of Members...13.

Dunlop, Archibald, M.D. Holywood, Belfast
 Filson, Alexander, M.D. Portaferry
 Gray, George, M.D. Castlewella
 Hawthorne, John, M.D. Banbridge
 Johnston, Robert, M.D. Newry
 McBride, Henry, Esq. Gilford
 Maconchy, John K. M.B. Surgeon to the County Down Infirmary, Downpatrick
 May, Joseph, L.R.C.P. Ed. Rathfriland
 Morrow, Benjamin, Esq. Downpatrick
 Nelson, Edwin F. M.D. Assistant-Surgeon to the County Down Infirmary, Downpatrick
 Thetford, Wm. W. L.K.Q.C.P. Strangford
 Thomson, Henry, Esq. Bangor
 Vesey, Thomas A. M.B. Rostrevor

DUBLIN.

Number of Members...116.

Adams, Robert, M.D. Surgeon in Ordinary to the Queen in Ireland, and Regius Professor of Surgery in Trinity College, Dublin
 Athill, Lombe, M.D. Examiner in Midwifery in the King and Queen's College of Physicians, Dublin
 Baker, John A. Esq. Surgeon-Dentist to Stevens' Hospital, Dublin
 Barton, John K. M.D. Surgeon to the Adelaide Hospital, and Lecturer on Surgery in the Ledwich School of Medicine, Dublin
 Banks, John T. M.D. Physician to the Richmond, Whitworth, and Hardwicke Hospital, Dublin
 Barker, William O. M.D. Dublin
 Battersby, Robert, Esq. Dublin
 Baxter, T. H. Esq. Royal Hibernian Military School, Dublin
 Beatty, J. Guinness, L.K.Q.C.P. Dublin
 Beatty, Thomas E. M.D. Consulting Accoucheur to the City of Dublin Hospital, Dublin
 Bennett, Edward H. M.D. Surgeon to Sir Patrick Dun's Hospital, Dublin
 Bigger, Samuel L. M.D. Dublin
 Brady, Daniel F. M.D. Dublin
 Brassington, George, L.K.Q.C.P. Rathgar Road, Dublin (dead)
 Burke, William M. F.K.Q.C.P. Physician to Stevens' Hospital, Dublin
 Cameron, C. M.D. Lecturer on Hygiene in the Royal College of Surgeons, Dublin
 Carroll, Sir William, L.K.Q.C.P. Dublin
 Carte, Alexander, M.D. Director of the Museum of the Royal Dublin Society, Dublin
 Churchill, Fleetwood, M.D. Dublin
 Colles, William, M.D. Surgeon to, and Lecturer on Surgery in Stevens' Hospital, Dublin
 Collins, Thomas, Esq. Dublin
 Corbett, Daniel, Esq. Dublin
 Corley, Anthony H. M.D. Surgeon to Jervis Street Hospital, and Lecturer on Anatomy in the Carmichael School of Medicine, Dublin
 Crotty, Richard S. Esq. Rathmines, Dublin
 Cruise, Francis R. M.D. Surgeon to the Mater Misericordiae Hospital, Dublin
 Cryan, Robert, L.K.Q.C.P. Professor of Anatomy and Physiology in the Catholic University, and Physician to St. Vincent's Hospital, Dublin
 Denny, C. J. Esq. Monkstown
 Duke, Valentine, M.D. Dublin
 Eames, Henry, M.B., Physician to Mercer's Hospital, Dublin
 Egan, Richard W. Esq. Dublin
 Evans, John, M.D. Dublin
 Finny, John M. M.B. Dublin
 Fitzgerald, Charles E. M.B. Dublin
 Fleming, Christopher, M.D. Dublin
 Foot, Arthur W. M.D. Physician to the Meath Hospital, Dublin

Forrest, John K. L.K.Q.C.P. Dublin
 Frazer, William, L.K.Q.C.P. Lecturer on Materia Medica in the Carmichael School of Medicine, Dublin
 Gogarty, Henry J. K. Esq. Dublin
 Goode, W. H. M.B. Finglass
 Gordon, Samuel, M.B. Physician to the Richmond, Whitworth, and Hardwicke Hospitals, and Lecturer on Medicine in the Carmichael School of Medicine, Dublin
 Grimshaw, Thomas W. M.D. Lecturer on Materia Medica in Stevens' Hospital Medical School, Dublin
 Hamilton, Edward, M.D. Surgeon to Stevens' Hospital, and Lecturer on Anatomy and Physiology, Dublin
 Hamilton, John, Esq. Surgeon to the Richmond, Whitworth, and Hardwicke Hospitals, Dublin
 Harrison, William I. Esq. Dublin
 Harvey, Arthur, Esq. Rathmines Terrace, Dublin
 Harvey, R. J. M.B. Dublin
 Hasler, Frederick H. H. Esq. Killiney
 Houghton, Rev. Samuel, M.D. D.C.L. F.R.S. Trinity College, Dublin
 Hayden, Thomas, F.K.Q.C.P. Professor of Anatomy and Physiology in the Catholic University, and Physician to the Mater Misericordiae Hospital, Dublin
 Head, Henry H. M.D. Physician to the Adelaide Hospital, Dublin
 Hewitt, David P. L.K.Q.C.P. Dublin
 Hilles, John R. Esq. Rathmines
 Holmes, Charles, M.D. Dublin
 Hudson, Alfred, M.D. President of the King and Queen's College of Physicians, Dublin
 Hyland, James K. Esq. Dublin
 Johnston, George, M.D. Master of the Rotundo Hospital, Dublin
 Kennedy, Ivory, M.D. Dublin
 Kidd, George H. M.D. Obstetric Surgeon to the Coombe Lying-in Hospital, Dublin
 Kilgariff, Malachy J. Esq. Demonstrator of Anatomy in the Ledwich School of Surgery, Dublin
 Kirkpatrick, Frederick, M.B. Dublin
 Lalor, Joseph, M.D. Medical Superintendent of the Richmond Asylum, Dublin
 Ledwich, Edward, Esq. Lecturer on Anatomy and Physiology in the Ledwich School of Surgery, Surgeon to Mercer's Hospital, Dublin
 L'Estrange, F. L.K.Q.C.P. Dublin
 Little, James, M.D. Physician to the Adelaide Hospital, and Lecturer on Medicine in the Ledwich School of Surgery, Dublin
 Little, T. E. M.D. Dublin
 Lloyd, Hans, L.K.Q.C.P. Malahide
 Lyons, Robert D. M.B. Physician to the Richmond, Whitworth, and Hardwicke Hospitals, and Professor of Medicine and Pathology in the Catholic University, Dublin
 Macalister, Alexander, L.K.Q.C.P. Professor of Zoology in Trinity College, Dublin
 McClintock, Alfred H. M.D. Dublin
 McDonnell, John, M.D. Surgeon to and Lecturer on Anatomy at Stevens' Hospital, Dublin
 McDonnell, Robert, M.D. Medical Poor-law Commissioner for Ireland, Dublin
 McDowell, Benjamin G. M.D. Professor of Anatomy and Surgery in Trinity College, and Physician to the Richmond, Whitworth, and Hardwicke Hospitals, Dublin
 MacNamara, Rawdon, M.D. Surgeon to the Meath Hospital, and Professor of Materia Medica in the Royal College of Surgeons, Dublin
 MacSwiney, Stephen M. M.D. Physician to Jervis Street Hospital, Dublin
 McVeagh, John F. M.D. Dublin
 Mapother, Edward D. M.D. Surgeon to St. Vincent's Hospital, and Professor of Anatomy and Physiology in the Royal College of Surgeons, Dublin
 Marks, Alexander H. M.D. Dublin
 Marks, Hyman, Esq. Dublin
 Mason, Thomas P. M.B. Lecturer on Anatomy and Physiology in the Ledwich School of Medicine, Dublin
 Maunsell, D. Toler T. M.B. Dublin
 Melden, A. S. L.K.Q.C.P. Dublin

Minchin, Humphry, M.B. Professor of Botany in the Royal College of Surgeons, Dublin
 Monks, James H. L.R.C.P. Ed. Dublin
 Montgomery, Robert, Esq. Dublin
 Moore, John W., M.D. Dublin
 Moore, William, M.D. Physician to Sir Patrick Dun's Hospital, and King's Professor of Medicine in Trinity College, Dublin
 Nalty, John, M.D. Dublin
 Nedley, Thomas, M.D. Dublin
 O'Flaherty, Jerome, Esq. Dublin
 O'Flaherty, R. G., M.D. Kingstown
 O'Grady, Edward S. M.B. Surgeon to Mercer's Hospital, Dublin
 Oldham, George St. J., M.D. Dublin
 O'Rourke, —, M.D. Howth
 Osbrey, Gerald, M.B. Dublin
 Porter, Frank T. L.K.Q.C.P. Dublin
 Porter, George H. M.D. Senior-Surgeon to the Meath Hospital, Dublin
 Price, Robert, L.R.C.P. Ed. Dublin
 Quinan, Edward J. M.D. Dublin
 Ringland, John, M.B. Lecturer on Midwifery in the Ledwich School of Medicine and Master of the Coombe Lying-in-Hospital, Dublin
 Savage, Matthew, Esq. Resident Apothecary to Stevens' Hospital, Dublin
 Shannon, Peter, M.D. Dublin
 Smith, Aquilla, M.D. King's Professor of Materia Medica in Trinity College, and Physician to Sir Patrick Dun's Hospital, Dublin
 Smith, Robert W. M.D. Professor of Surgery in Trinity College, and Surgeon to the Richmond, Whitworth, and Hardwicke Hospitals, Dublin
 Smyly, Philip C. M.D. Surgeon to the Meath Hospital, Dublin
 Stewart, Henry H. M.D. Dublin
 Stokes, William, M.D. D.C.L. Physician in Ordinary to the Queen in Ireland, Regius Professor of Physic in the University, and Senior Physician to the Meath Hospital, Dublin
 Stokes, William, jun. M.D. Surgeon to the Richmond Surgical Hospital, and Lecturer on Surgery in the Carmichael School of Medicine, Dublin
 Swanzy, H. Rosborough, M.B. Ophthalmic Surgeon to Adelaide's Hospital, Dublin
 Todhunter, John, M.D. Dublin
 Tufnell, Thomas J. Esq. Surgeon to the Dublin District Military Prison, and to the City of Dublin Hospital, Dublin
 Wade, Robert, Esq. Dublin
 Walshe, Thomas P. L.K.Q.C.P. Surgeon to the Jervis Street Hospital, Dublin
 Wharton, James H. L.K.Q.C.P. Examiner in Surgery in the University, and Surgeon to the Meath Hospital, Dublin
 White, William, Esq. Coroner for the City, Dublin
 Willis, Richard N. M.B. Rathmines
 Willis, Thomas, Esq. Dublin

GALWAY.

Number of Members...6.

Kerans, Thomas G. L.K.Q.C.P. Ahascragh
 Kerr, Alexander S. Esq. Letterfrack
 Nolan, A. O'Kelly, L.K.Q.C.P. Gort
 O'Donoghue, Patrick, L.R.C.P. Ed. Loughrea
 Painter, Matthew G. Esq. Roundstone
 Turner, Thomas B. M.D. Tuam

KERRY.

Number of Members...4.

Egan, John, Esq. Tralee
 Fitzmaurice, Ulysses, L.K.Q.C.P. Listowel
 Hamilton, William, M.D. Tarbert
 Twiss, Robert, Esq.

KILDARE.

Number of Members...2.

Buckley, D. F. Esq. Clare
 Kynsey, Thomas B. M.D. Athy

KILKENNY.

Number of Members...3.
 Briscoe, William O. M.D. Garnereagh,
 Piltown
 Greene, William, Esq. Urlingford
 James, John, Esq. Surgeon to the County
 and City Gaol, and to the Fever Hos-
 pital, Kilkenny

KING'S COUNTY.

Number of Members...3.
 Bewley, Edward, L.K.Q.C.P. Clara
 Fry, Charles D. M.D. Ferbane
 Ridley, John, M.D. Surgeon to the King's
 County Infirmary, Tullamore

LIMERICK.

Number of Members...3.
 Benson, J. Esq. Drumcolloher (dead)
 Gelston, Robert, M.D. Limerick
 White, Hugh, Esq. Ballingarry

LONDONDERRY.

Number of Members...3.
 Bernard, Walter, L.K.Q.C.P. London-
 derry
 Forsyth, James, M.D. Colmore
 Miller, William, M.D. Surgeon to the In-
 mary, Londonderry

LONGFORD.

Number of Members...2.
 Nicolls, Simon, M.D. Longford
 Slevin, Joseph, L.K.Q.C.P. Longford

LOUTH.

Number of Members...5.
 Brunker, Edward O'G. M.D. Surgeon to
 the Infirmary & County Gaol, Dundalk
 Kelly, John B. L.K.Q.C.P. Assistant-Sur-
 geon to the County Infirmary, Drogheda
 McGreevy, Neil, L.K.Q.C.P. Drogheda
 Mulvany, Matthew, L.R.C.P. Ed. Dundalk
 Nugent, Edmond, L.K.Q.C.P. Drogheda

MAYO.

Number of Members...1.
 Twiss, Hastings, M.D. Ballinrobe

MEATH.

Number of Members...3.
 Connolly, Patrick, L.K.Q.C.P. Dun-
 shauglin
 Halton, Richard, L.K.Q.C.P. Kells
 Pentland, Henry, M.D. Kells

QUEEN'S COUNTY.

Number of Members...2.
 Fisher, Maddison W. M.D. Portarlinton
 Long, Oliver J. Esq., Portarlinton

ROSCOMMON.

Number of Members...5.
 Collins, Benjamin, G. Esq. Wellisborough,
 Ballinlough
 Harrison, John, M.D. Medical Officer to
 the Fever Hospital, Roscommon
 Langstaff, Henry H. M.B. Athlone
 O'Donohoe, Michael, L.K.Q.C.P. French-
 park
 Shenley, Michael, M.B., Stokestown

SLIGO.

Number of Members...2.
 McMunn, James, M.D. Dromore West
 Tucker, James, M.D. Sligo

TIPPERARY.

Number of Members...6.
 Carson, Rev. William, M.D. Cashel
 FitzGibbon, Patrick, L.K.Q.C.P. Clon-
 mel
 Kennedy, Matthew S. Esq., Tipperary
 Laffan, Thomas, L.K.Q.C.P., Cashel
 Mahoney, O'Brien, L.R.C.P. Ed. Clonmel
 Somers, James, L.R.C.P. Ed. Roscrea

TYRONE.

Number of Members...3.
 Henry, Robert, L.R.C.P. Ed. Tyrone
 Robinson, Alexander H. L.K.Q.C.P. Cas-
 tletown, Flintona
 Scott, William, M.C. Auchnacloy

WATERFORD.

Number of Members...7.
 Currey, John E., M.D. Lismore
 Mackesy, John, M.D. J.P. Waterford
 Martin, James, L.K.Q.C.P. Portlaw
 O'Reilly, Richard, L.K.Q.C.P. Lismore
 Palmer, James G. Esq. Waterford
 Waters, Eaton W. L.K.Q.C.P. Summer-
 hill, Tramore

WESTMEATH.

Number of Members...2.
 Duigan, Charles, L.K.Q.C.P., Mullingar
 North, David B. M.B. Rochford Bridge

WEXFORD.

Number of Members...2.
 Goodall, Ebenezer, Esq. Wexford (dead)
 O'Rourke, Patrick, M.D. Enniscorthy

WICKLOW.

Number of Members...3.
 Darby, Thomas, L.K.Q.C.P. Bray
 Thompson, C., M.D. Bray
 Truell, Henry, Esq. Bally Henry, Ashford

ARMY AND NAVY.

Number of Members...62.
 Adams, Andrew L. M.B. Surgeon-Major
 22nd Foot, Kinsale
 Alder, Sydney, Esq. Staff-Surgeon 34th
 Foot, Dublin
 Anderson, John, Esq. Assistant-Surgeon
 Royal Artillery, Campbellpore, Punjab
 Archer, Samuel, Esq. Assistant-Surgeon
 98th Regiment, Westport, Mayo
 Armstrong, Sir Alexander, M.D. K.C.B.
 Director-General of the Medical De-
 partment of the Navy, Somerset House
 Atchison, T. Esq. Surgeon-Major, East
 India United Service Club
 Black, W. T. Esq. Staff-Surgeon, Royal
 Army
 Boustead, Robinson, Esq. Assistant-Sur-
 geon Indian Army
 Bredon, Robert, M.B. Assistant-Surgeon
 97th Regiment, Mullingar
 Cockburn, J. Balfour, M.D. Surgeon Royal
 Engineers, Gibraltar
 Corbett, W. H. M.D. Surgeon 107th Regi-
 ment, Bengal
 Creighton, Robert, Esq. H.M.S. In-
 vincible
 Dale, Alfred J. M.D. Surgeon Bengal
 Army
 Daniell, Cyrus O. M.D. Indian Army
 Davies, Richard, Esq. Assistant-Surgeon
 72nd Highlanders, Buttevant
 Douglas, Frederick, M.D. Surgeon-Major
 87th Regiment, Malta
 Duffey, G. F. M.B. Assistant-Surgeon
 24th Foot, Dublin
 Fegen, W. B. Esq. Staff-Surgeon Royal
 Navy, Stoke, Devonport
 Fitzgerald, Thomas G. Esq. Staff-Surgeon
 Royal Army, London
 Forbes, J. G. T. Esq. Staff-Surgeon
 Royal Navy
 Fraser, Thomas, M.D. Surgeon-Major
 10th Hussars, Colchester
 Gabriel, John T. Esq. Surgeon Royal
 Navy
 Greenhow, Henry M. Esq. Bengal Army
 Hulseberg, John W. Esq. Staff-Surgeon
 Royal Army, Bombay
 Irvine, George N. M.D. Assistant-Surgeon
 Royal Artillery, Fermoy
 Mackenzie, John, M.D. Staff Assistant-
 Surgeon, Aldershot
 McSheehy, E. L. M.D. Assistant-Surgeon
 5th Dragoon Guards
 Manifold, M. F. L.K.Q.C.P. Surgeon-
 Major, Birmingham

Mair, John, M.D. Keyham Dockyard,
 Devonport
 Metcalfe, Fenwick, Esq. Indian Army
 McNalty, G. W. M.D. Military Hospital
 Stoke, Devonport
 Moriarty, Thomas, M.D. Staff Assistant-
 Surgeon Royal Army, Control Barracks,
 Woolwich
 Mulvany, John, Esq. Assistant-Surgeon
 Royal Naval Hospital, Gosport
 Murphy, Robert P. Esq. Assistant-Sur-
 geon Royal Army, India
 Murray, John, M.D. Inspector-General
 of Hospitals, Indian Army
 Myers, Arthur B. R. Esq. Assistant-Sur-
 geon Coldstream Guards
 Oliver, W. S. M.D. Assistant-Surgeon 60th
 Regiment, Canada
 Orton, J. W. R. Esq. Assistant-Surgeon
 Royal Artillery, Malta
 Paliologus, William T. Esq. Surgeon
 Royal Army, Clifton
 Pickthorn, Thomas, Esq. Deputy In-
 spector General Royal Navy
 Ross, J. T. C. Surgeon Major Bengal
 Army
 Rudd, T. M.D. Assistant-Surgeon Scots
 Greys, Curragh
 Salaman, Selim M. M.B. Medical Staff,
 Belagaum, Bombay
 Sanders, G. B. Esq. Staff-Surgeon Royal
 Army
 Simpson, John, M.D. R.N. Springfield,
 Inverness
 Skues, W. M. M.D. Staff-Surgeon Royal
 Army
 Sloggett, William H. Esq. Staff-Surgeon
 Royal Navy, London
 Taylor, J. M. Esq. Assistant-Surgeon
 Royal Horse Guards
 Temple, W. M. B. Staff-Assistant-Surgeon
 Woolwich Arsenal
 Terry, Septimus, Esq. Assistant-Surgeon
 H.M.S. *Midge*
 Thring, R. S. O. M.D. Bath
 Turnbull, Alexander, M.D. Surgeon Royal
 Navy
 Turnbull, P. S. M.D. Bombay Army,
 Pomah Inspector of Vaccination
 Turnbull, Gavin A. Esq. Surgeon-Major
 21st Hussars, Bengal
 Wade, Seaton, Esq. H.M.S. *Impregnable*
 Wakefield, William, M.D. Staff-Surgeon
 Military Hospital, Stoke, Devonport
 Wales, John, Esq. Assistant-Surgeon
 Royal Horse Artillery, Gibraltar
 Wells, S. S. D. Esq. Staff-Surgeon
 H.M.S. *Ganges*, Falmouth
 Willes, George I. M.D. Royal Victoria
 Yard, Deptford
 Wright, R. Temple, M.D. Dinapore,
 Bengal
 Woolfreys, J. A. M.D. Surgeon-Major
 Royal Army, Suez
 Wyatt, J. Esq. Surgeon-Major Coldstream
 Guards

COLONIES & FOREIGN COUNTRIES.

Number of Members...58

AFRICA.

Brown, C. W. Esq. Grahamstown

AUSTRALIA.

Blue, W. A. S. Esq. Strathalbyn
 Hester, James, Esq. Wangaretta (dead)
 Moore, J. A. Esq. New Norfolk
 Penfold, Oliver, Esq. Richmond, Mel-
 bourne
 Robertson, James, Esq. Melbourne
 Thompson, W. Esq. South Yarra, Mel-
 bourne

BRITISH GUIANA.

Leary, Samuel, L.K.Q.C.P. New Am-
 sterdam, Berbice

CANADA.

Paton, George, M.D. Petrolea, Canada
 West

CHINA.

Hardey, E. P. Esq.
 Johnstone, James, M.D. Shanghai

FRANCE.

Bishop, J. M.D. Paris
 Cormack, John Rose, M.D. F.R.S.E.
 Paris
 Crossby, H. E. M.D. Nice
 Gueneau de Mussy, H. M.D. Paris
 Siordet, James L. M.B. Mentone
 Whiteley, George B. M.D. Cannes

ICELAND.

Hjaltelin, John, M.D. Reykjavik

INDIA.

Branch Bengal.
 Bainbridge, George, Esq. Civil Surgeon,
 Dhoolie, Klandeisch, Bombay
 Blanc, Henry, M.D.
 Bysack, Baboo Sib C. Calcutta
 Chuckerbutty, Soorjoocomar *G. M.D.
 Physician to the Medical College Hos-
 pital, Calcutta
 Clark, Stewart, Esq. Inspector of Prisons
 North-Western Provinces
 Colles, J. A. P. M.D. Calcutta
 Cooper, Clarence, M.D. Madras
 Dey, Baboo Kanny Loll, Medical College,
 Calcutta
 Fayer, Joseph, M.D. Professor of Sur-
 gery in the Medical College, Calcutta
 Fitzgerald, E. A. M.D. Jounpore
 Ghose, Baboo Judub Chunder, Ehbang-
 pore, Calcutta
 Hewlett, T. Gilham, M.D. Bombay
 Kendall, Bernard, Esq. Calcutta
 Kur, Baboo Doorgo Doss, Medical Col-
 lege, Calcutta
 Mackeddie, G. Esq. Hurdni, Oude
 Murray, John, M.D. Inspector-General
 of Hospitals, Calcutta
 O'Conor, Roderic, Esq. Newgong,
 Upper Assam
 Partridge, S. B. Esq. Medical College,
 Calcutta
 Pringle, R. M.D.
 Sircar, Mohendro Loll, M.D. Calcutta

ITALY.

Hewlett, Richard Whitfield, M.D. Naples
 Sammut, Joseph Balthazar, M.D. Naples.

NEWFOUNDLAND.

Brown, Thomas, Esq. English Harbour,
 Fortune Bay

NEW ZEALAND.

Fitzherbert, Hon. W. H. M.D. Wellin-
 gton
 Kemp, W. G. Esq. Government Hospital,
 Nelson

GERMANY.

Kilian, —, M.D. Aix-la-Chapelle
 Oppert, Francis, M.D. Hamburg
 Riedel, Thomas, M.D. Berlin

SOUTH AMERICA.

Paterson, A. M.D. Bahia
 Rutherford, E. M.D. Buenos Ayres

SPAIN.

Blanchard, T. C. Esq. Linares, Anda-
 lusia
 Jelly, William, M.D. Madrid

UNITED STATES OF AMERICA

Jenkins, J. T. Esq. Yonkers, Westchester.
 New York
 Pinkney, Ninian, Esq. United States
 Navy, Easton, Maryland
 Sims, J. Marion, M.D. New York
 Smith, Frederick A. A. Esq. Warner,
 Oregon

WEST INDIES.

Cuddeford, Thomas, Esq. Port of Spain,
 Trinidad
 Macdonald, J. C. Esq. Jamaica
 Nicholson, Hon. T. M.D. Antigua
 Ogilvie, James, Esq. Colonial Surgeon,
 Tortola, Virgin Islands

HONORARY MEMBERS.

Airy, George B. I.L.D. F.R.S. Astronomer
Royal. Honorary Fellow of Trinity Col-
lege, Cambridge
Armstrong, Sir William G. C.B. Newcastle-
upon-Tyne
Bernard, Claude, M.D. Paris
Brodie, Sir Benjamin C. Bart., F.R.S.
Professor of Chemistry in the Uni-
versity, Oxford
Brown-Séguard, Charles E. M.D. F.R.S.
Paris
Carson, the Rev. Joseph, D.D. Senior
Fellow and Bursar of Trinity College,
Dublin
Carus, Professor Victor, Leipzig
Chadwick, Edwin, Esq., C.B. Richmond

Chapman, Ed. Esq., Frewen Hall, Ox-
ford
Chase, Rev. D. P. M.A. Principal of St.
Mary's Hall, Oxford
Clifton, Robert B. M.A. Professor of Ex-
perimental Philosophy, Oxford
Cookson, Rev. H. W. D.D. late Vice-Chan-
cellor of the University, Cambridge
Cox, Christopher G. M.D. Baltimore, U.S.
Czermak, J. W. M.D. Pesth
De Pietra Santa, Prosper, M.D. Paris
Duchenne de Boulogne, Dr. Paris
Eckhart, — M.D. Giessen
Frerichs, F. T. M.D. Berlin
Galton, Capt. Douglas, C.B. R.E. Lon-
don

George, T. W. Esq. Leeds
Gross, Samuel D. M.D. Professor in
Jefferson Medical College, Phila-
delphia
Gurney, W. H. M.D. Nice
Hastings, George W. Esq. Barnard's
Green, Malvern
Langenbeck, B. M.D. Berlin
Larrey, Baron Hippolyte, Paris
Leighton, Rev. F. K. D.D. Vice-Chancellor
of the University, Oxford
Lloyd, Rev. Humphry, D.D. Provost
of Trinity College, Dublin
Liddell, the Very Rev. Henry G. D.D.
Dean of Christ Church, Oxford
Marey, M. Paris

Mitchell, S. Weir, M.D. Philadelphia
Moore, Rev. John Lewis, D.D. Vice-Pro-
vost of Trinity College, Dublin
Nélaton, M. Paris
Neumann, S. M.D. Berlin
Phillips, John, D.C.L. Professor of
Geology, Oxford
Polli, Giovanni, M.D. Milan
Sedgwick, A. LL.D. F.R.S. Woodwardian
Professor of Geology, Cambridge
Sewell, Rev. James E. D.D. Warden of
New College, Oxford
Stokes, G. G. M.A. F.R.S. Professor of
Mathematics in the University, Cam-
bridge
Virchow, Rudolph, M.D. Berlin

THE MEDICAL INSTITUTIONS AND PRE-
VAILING DISEASES OF VICTORIA.

[FROM A SPECIAL CORRESPONDENT.]

III.

THE GEELONG HOSPITAL is also a two storied building on the cor-
ridor system, and professed, certainly much to my astonishment, to
have room for as many as two hundred patients. It presents no features
of any interest as a building; and its wards are small, dirty, and
badly ventilated, and crowded with the ordinary class of workhouse
inmates, as it is in great part intended to be a benevolent asylum.
About ten years ago, when the present house-surgeon, Mr. D. B. Reid,
entered it, I was assured by him that it was the favourite abode of
pyæmia, erysipelas, and gangrene; and it required no great stretch of
the imagination to conceive that it might readily become so again.
Mr. Reid showed me an amputation at the shoulder-joint, which was
necessitated by the existence of a large fibrous tumour of the humerus,
and was complicated by the fact that the head of the bone had been
resected some years previously. The flaps were granulating well under
carbolic acid and glycerine, on lint covered with oiled silk; and a com-
pound fracture of the leg was also doing well under a similar plan of
treatment. The house-surgeon informed me that he had used Lister's
plan of treatment since its introduction, and that he had only had one
fatal amputation case since, but he could give me no idea of the number
of operations he had performed, and there are no statistics kept. Mr.
Reid occupies one of those anomalous positions which are common in
Australia, though quite unheard of with us. Nominally he is only
house-surgeon, with a regularly appointed staff of visiting physicians and
surgeons over him; but he is not only at full liberty to do with the
patients in the hospital what he pleases, but he is also allowed to prac-
tise privately; and, as a very natural result, he is regarded with consi-
derable jealousy by his professional brethren in Geelong, and even else-
where, as he has managed to acquire (especially among the poorer classes
of the community) the reputation of a bold and skilful surgeon. As to
the ethical propriety of this accumulation of offices in one person,
it cannot be expected that the people of a new colony should retain the
same prejudices, or consider this matter in the same light as profes-
sional men generally do. One good feature of the colonial character
is that great care is taken of the sick poor. In almost every small
town, or large village as we would prefer to call them, there is a
larger or a smaller hospital, according to the size of the place; and
these hospitals have always house-surgeons especially attached to them,
sometimes without, but very frequently, as just mentioned, with liberty
to practise besides. The remuneration of such an office is seldom
very liberal, but it is, in every case, at least infinitely superior to the
salary attached to a corresponding position at home.

DISEASES PREVAILING IN VICTORIA.—Apart from phthisis, of which
I intend speaking at greater length, the prevailing diseases seem to
originate more in the circulatory system than they apparently do at
home; and in walking round one of the larger colonial hospitals the
number of cases of cardiac disease and aneurism struck me immediately,
as being considerably above the average of similar institutions in Europe.
That the great prevalence of rheumatism,* arising from the rapid vicis-

situdes of temperature, may have much to do with the production of this
curious fact, is highly probable; but, so long as there is not direct evi-
dence on the subject, it is safer not to trust in a doubtful explanation.
Aneurism, and particularly thoracic aneurism, seems one of the most
frequent forms of disease in this system, and, so far at least as the Mel-
bourne hospital was concerned, the treatment by large doses of iodide
of potassium had not been tried at the date of my visit.

By far the most striking feature, however, presented to the eye of a
physician, in going round a colonial hospital, is the constant recurrence,
in bed after bed, of cases of hydatids. Hydatids occurring in every organ,
seem one of the most common diseases which affect the Victorians; and
that they originate in a similar way to that which Hjaltelin has con-
clusively demonstrated in Iceland, can scarcely be doubted in the land
of sheep-runs. The treatment in almost every case is surgical, the hyda-
tid cyst being tapped with the greatest boldness, and without any of the
preparatory steps which I have seen employed on the Continent and in
Great Britain. I saw the house-surgeon of the Ballarat hospital, Mr.
Owen, re-tap three cases in one morning, in whom the previous tapping
or tapplings had produced no bad symptoms whatever. It is not custom-
ary to inject anything into the cyst; and in the majority of cases I was
assured that a single tapping was sufficient to insure the contraction of
the cyst, and the recovery of the patient. In one young woman, in
the Melbourne hospital, nearly the whole left lung seemed to be the
seat of a solid tumour, which was tapped by the house-physician; but
the issue of this case I do not know, as I was obliged to leave the
colony immediately afterwards. Tapping being thus considered the
only necessary remedy, Hjaltelin's treatment by kamela does not seem
to have been tried.

Of fevers I have little to say; typhoid, colonial fever as it is called,
is not uncommon, and slight epidemics of scarlet fever, too, seem some-
times frequent rather; but typhus can scarcely be said to exist, and small-
pox has only once been introduced epidemically, in mistake for varicella.
The quarantine rules seem excellent, and are strictly enforced; and it is
well that it is so, for Melbourne, with its open sewers, cesspools, and
neglected sanitary regulations, would prove an admirable field for the
ravages of such an enemy as cholera. The open sewers of Melbourne
are often supposed to be merely drains for the surplus rain and the ordi-
nary supply of water from households, but the stench from them indi-
cates that they are much more, and receive urine and stale water with
all kinds of impurities in it. The cesspools (of which there are said to
be 10,000 within the city limits alone) are known to leak so much that
no cellar or basement in dwelling-houses is safe from pollution by them;
and although some praiseworthy efforts have been lately made to re-
place them by closets, with iron buckets for the collection and removal
of the solid matters, these attempts at ameliorating the evil seem to have
attracted but little attention to what every Melbourne man ought to
consider the chief public question of the day. And besides, this lament-
able system, or rather want of a system, of sewerage, is greatly aggravated
by the large swamps existing between the city and the sea; there being
said to be as many as 3,000 acres still nearly constantly under water,
while about one-half more of the same swampy ground has been built
over. As this land receives a great amount of the drainage from the
city, it is obvious that the effluvia generated over such an extensive space
would alone suffice to poison the whole population. If we take the ab-
sence of epidemics into account, we cannot be surprised to find that the
mortality of Melbourne compares unfavourably with that of many of the
larger English towns, more particularly with that of London.

It has frequently been asserted—and there certainly exists a very
general impression among the public in Melbourne—that the climate of

* In the year 1869, there were received 252 patients with rheumatism into the
Melbourne Hospital, or nearly 1 in every 13 patients admitted.

Victoria, but more especially of Melbourne, is peculiarly fatal to infants and young children; and the attention of the Medical Society has lately been drawn by one of its members, Dr. Singleton, to the statistics bearing on this point. He affirmed that the mortality was even greater than had been very generally supposed, and showed, by the figures which he presented, that for the years 1866, 1867, and 1868, more than 500 out of every 1000 deaths were those of children under five years of age, and that in some of the suburban boroughs of Melbourne the mortality under that age reached the alarming proportion of 70 per cent. Mr. Archer, the Registrar-General of the colony, at a subsequent meeting of the Society, after correcting an error into which Dr. Singleton had fallen about the English mortality at the same ages, merely confirmed the doctor's statements, and supplemented them by showing that in the cool months of the year (June to November) the mortality was only about 33 per cent. of the total deaths, while in the hot months—December to May—it had risen to $66\frac{1}{2}$ per cent. of the whole. Mr. Archer's statement, however, that this mortality, large as it is, does not contrast unfavourably with that of London or of the large English towns generally, must be founded on some serious mistake, to solve which I have gone through the latest returns of the English Registrar-General, Dr. Farr, very carefully. Those returns are for the year 1868—a year in which, Dr. Farr observes, the exceptional character of its meteorological results are most strikingly reflected in the death-rate of children—a comparison of the mortality of males in 1868 with that of the previous year, when no such unusual climatic conditions prevailed, exhibiting an increase at each quinquennium under 15 years of age, while the rate was less than that of the preceding year at the ages 15, 25, and following decennia. Among females, this excess in the mortality of children under 15 was even more remarkable, while in all the successive stages of life above that age the rate of mortality in 1868 was below that of the previous year.

Among males, this excess of mortality was chiefly noticeable, however, in children under five years of age, and this more especially in the unhealthy districts as compared with the healthy. Thus in the former it amounted in this class to a death-rate of 71.36 per 1000 living, while in the latter it was only 43.48 per 1000 living. Among girls under five years of age, the rate per 1000 living, in 1868, was 62.46 in the unhealthy districts, while in the healthy it was only 37.20.

Out of the whole number of male deaths (247,107) occurring in England and Wales in the same year (1868), 108,325, or 43.84 per cent., occurred at ages under five years. At the ages from 5 to 10 the mortality was only 4.10 per cent., while it had fallen to 1.98 at the ages from 10 to 15, so that in reality to every 100 deaths of males at all ages, barely 50 per cent. occurred below 15. Among female children it was even less. Thus of the 233,515 deaths in this class at all ages in 1868, 94,804, or 40.60 per cent., were those of children under five years of age. At the ages from 5 to 10 the mortality was 4.12 per cent., and at 10 to 15 it was 2.06, or a total mortality under 15 years of age of 47 per cent. Of the total male and female deaths occurring in England and Wales in the year, the mortality under five years of age is thus easily seen to be only 42.26 per cent.

In London in the same year the male mortality under five years of age was 46.16 per cent., or 17,427 deaths during this period, out of a total male mortality for the year of 37,753. Among females it was lower; the total number of female deaths for the year being 36,045, of whom 15,353, or 42.59 per cent., were under five years of age, while the combined male and female mortality in those years of life is thus only 44.41 per cent., or considerably lower than that of Melbourne. Indeed, the total male and female mortality under 15 years of age in London is not quite equal to the Melbourne death-rate under five years of age, as the same returns from which I quote show it to be only 49.48 per cent. In my opinion, too, it is scarcely fair to compare the two places without taking into account the gigantic size of London, and its epidemics and constantly prevailing zymotic diseases. The latter class of diseases, indeed, is always very destructive in our large English towns, and more particularly to the children under the ages we have been speaking of; nor was the year 1868 any exception to the general rule of a large zymotic mortality in London. The total numbers of specified causes of deaths of all classes in the year 1868 in the metropolis were only a very few hundred fewer than the total number of deaths, or 73,481 out of 73,798, as we have already mentioned. Of those, no fewer than 18,651 deaths are registered as from zymotic diseases, or nearly one-fourth the whole number. Unfortunately, the number of deaths of children under five years of age from this class of diseases is not given; but it may be taken as granted that the mortality from zymotic causes in Melbourne is fortunately by no means so large. As London, however, has too large a population to compare it fairly with a small city like Melbourne, let us see how the mortality of children in Edinburgh contrasts with that in the capital of Victoria. The

population of Edinburgh has just been returned by the census of this year as 196,500, while that of Melbourne is estimated in 1869 as nearly 180,000; and in the last report of the Registrar-General for Scotland for the year 1870, we find that the mortality of all children under five years of age in Edinburgh only amounts to 33.5 per cent.—a most favourable state of affairs as contrasted with the Melbourne returns; while in reality the average mortality of the entire population is considerably greater in the northern city than in the Queen of the Antipodes, the death-rate for this year being 26.3 per 1000 living in Edinburgh.

The connection between this excessive mortality among the young, and the open drains, cesspools, and swamps, of the southern city, with their poisonous exhalations, is, fortunately for the inhabitants, very evident: fortunately, I say, for, with such facts before them, the remedial measures are obvious.

While dealing with the question of diseases prevailing in Victoria, let me here state that one very important alleged discovery by an Australian physician is still *sub judice*—I allude to Professor Halford's cure of snake-bite by the injection of ammobia into the veins. That it is not an antidote to the snake-poison—as the public erroneously suppose—is a matter of course; but Dr. Halford claims that many cases of recovery which had been treated in this way would inevitably have perished if left to the old methods; while others—as Dr. Scott of Hamilton, and Mr. Webb of Ansherot—report cases of failure in its use. It is impossible as yet to arrive at any just conclusion from the facts which have been brought forward.

[To be continued.]

SPECIAL CORRESPONDENCE.

BERLIN.

[FROM A SPECIAL CORRESPONDENT.]

The Minister of Education and the Scientific Board.—Politics and Professorships.—How Professors are appointed.—New Pathological Laboratories.—Increase of Medical Students at Greifswald.

IN Germany, the Minister of Education has to attend to a number of other matters besides education. His title, indeed, is that of *Cultus-Minister*, or Minister of Public Worship; and his portfolio includes, in addition, everything relating to public hygiene, education, and the fine arts. There are many people in Berlin who think that to take charge of the State religion on the one hand, and to superintend the amusements, health, and education of the people on the other, are duties requiring administrative talents that cannot well coexist in the same individual; and, as regards the present Cultus-Minister, Herr von Mühler, there can be no doubt that he often encounters circumstances in which he sees a divided duty. The most recent act of the unpopular minister has created no small stir in medical circles, and has even furnished one of the comic papers with a subject for its cartoon. The Cultus-Minister has certain committees or boards under him, one of which, the Scientific Board, takes action in all matters relating to the public health. The members of this Board are the most distinguished of the medical professors in Berlin; and it was presided over till lately by an eminent member of the medical profession, with the rank of an Under-Secretary of State. On his death a short time ago, the vacancy was filled by the appointment of Professor Frerichs, already a member of the Board, but, in point of priority, not one of the senior members. As soon as the appointment was announced, three of the most active and eminent members, Von Langenbeck, Martin, and Virchow, resigned their seats; and the last named professor wrote to the papers that Dr. Frerichs had not that weight among his colleagues to entitle him to the post, and that the Board must inevitably lose its usefulness under his presidency. Various reasons for Dr. Frerichs' appointment have been suggested, one of which is, that the professor is the family physician of Herr von Mühler. This, however, has been semi-officially denied. It is, however, perfectly well known that Professor Frerichs, like Herr von Mühler himself, is a man of conservative, not to say reactionary, principles in politics; and the real ground of offence in the appointment is probably that it has been dictated by party spirit or other considerations not pertinent to the case. It does not seem probable that the resignations of three of the ablest members of the Board will have any effect on Herr von Mühler, although he has been defeated before now through the same tactics.

It cannot but seem surprising that the appointment of a man so widely and favourably known as Frerichs is should have called forth so outspoken an opposition; and one can only find in this incident another illustration of the maxim that, in appointments such as this, and in the election of university professors, no other consideration but

that of efficiency is to have any weight. Another illustration of the same thing is to be found in the circumstances connected with the election of a successor to Oppolzer at Vienna, where a great clinical professorship has been standing vacant; and, though this delay points to a conflict of interests, it also betokens clearly enough a high sense of responsibility impressed upon those who have the patronage. From the opposition that they have excited, both the Frerichs affair and the appointment at Vienna may be regarded as exceptions of the kind that prove the rule; and they at the same time prove clearly enough that, if in Germany the best man is usually chosen for the post, the cause of this is not, as has been alleged, that the patronage is exercised by a Minister of State. It is hardly an exaggeration to say that the man who is best entitled to this or that vacant professorship in science or in medicine can be pointed to in much the same way as at Cambridge one may hear who is to be the first wrangler on the next occasion. In both cases, the antecedents of the individual—the work that he has done—are freely canvassed; and they constitute the reliable data to judge by. The whole system of study at a German University is calculated to bring the able and zealous workers in any department into the clearest prominence. A student, as he advances in his studies, develops a talent for this or that particular branch, which he is at liberty to follow out unrestricted. He enters a laboratory, and there undergoes a course of training; and, when he has passed his professional examination, if he have a mind, he is encouraged to resume his work in the laboratory; and in course of time he completes some original research, as in physiology or pathology. Then, if he have shown himself a capable worker, he gets the next vacant assistantship; and if, as an assistant, he do not in the course of a year or two make some considerable contributions to the researches in his department, he is looked upon as falling short of his duties, and he will probably lack advancement. If, however, as is usually the case, he avail himself of his many opportunities, and undertakes researches to clear up this or the other doubtful point, he becomes favourably known to the scientific world; and in due time, and while he is yet a young man, he is rewarded with a professorship. And so, within a very few years, the Pathological Institute at Berlin has furnished from its assistants no fewer than five professors to various universities. These are Hoppe Seyler, Von Recklinghausen, Klebs, Kühne, and Cohnheim; and the important work that these men have done testifies to the excellence of the system in which they were trained, and according to which they were promoted. Another series of names, though perhaps not so remarkable, could be furnished from the annals of the Physiological Institute; and, indeed, there is hardly a great laboratory or a great *clinique* in Germany but can point to similar instances. Again, there are the *dozenten* or lecturers, who reach their position through the same steps as the assistants, and who may have been assistants also. From them, too, the professors are chosen, although this is more the case in the non-medical faculties.

Thus it will appear that efficiency in professorial chairs is secured, more than anything else, by the completely organised system in which the rising generation of scientific workers are trained. When an appointment comes to be made, it is usually done very quietly and to the general satisfaction. The other professors of the faculty in which the vacancy has occurred, agree upon some name, which they submit to the education minister. It does not appear that the professors have an actual privilege in this matter, but no doubt their recommendation is invited, and is seldom or never set aside. The assistant or *dozent* who has been thus nominated, "receives a call" to the professorship, and departs to take charge of an institute, or laboratory, or clinic of his own. He has not canvassed heaven and earth for testimonials; the custom is not known in Germany; and when a German *savant* receives a letter from foreign parts, requesting him to certify to what he can about his foreign *confrère*, he is as much puzzled as if the request had been for a lock of his hair; he has not issued a bulky volume of those monotonous documents translated from every language under the sun, and gathered together from the remotest corners of the educated world—the more remote the better. He finds, however, that his qualifications are known without any effort on his part; and those who have nominated him are content to rely on the long and testing apprenticeship which he has served to his special study. In other countries, again, it sometimes happens that natural, or even hereditary, genius is the only thing that can be appealed to.

Although a stranger visiting Germany is in admiration at the number of laboratories and institutes that he sees everywhere, the Germans themselves are in the habit of grumbling that they have not enough; and, just recently, provision has been made, in the budgets adopted by the legislature, for some considerable extensions. Munich is to have a new pathological institute, separate from the hospital, at a cost of about £16,000, and £4,000 is to be spent on extending the physiological

laboratory. Erlangen, also, another Bavarian University, is to have a new pathological institute. The University of Berlin has had the sum of half a million *thalers* (about £75,000) voted to it for similar purposes. A fourth part of this sum is to be expended on a new physiological laboratory; and it is expected that a laboratory for physics will be built adjoining it. The pathological institute, already very complete, will be enlarged, at the cost of about £3,000, the extension being mostly in the department for pathological chemistry, to which a suite of five rooms will be added, providing accommodation for physiological and physical apparatus. It may be useful to mention that there is a description of the pathological institute at Göttingen, accompanied by plans, written by Professor Krause, the director of the institute. In about one half of the German universities there is an institute for pathology separate some little distance from the hospital; and this arrangement is found to be so convenient, that it will no doubt soon be universal.

Whether it can be attributed to a high degree of efficiency in the teaching staff, and to opportunities for study such as have been mentioned, or whether it be owing to other causes, it is a fact that the students in the medical faculty at Greifswald, a small Baltic town of twenty thousand inhabitants, have increased within the last ten years from 140 to no fewer than 340, which is the number of entries for the present winter. The other faculties appear to have remained stationary.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 6TH, 1871.

J. BRAXTON HICKS, M.D., F.R.S., President, in the Chair.

Gynæcometer.—Dr. AVELING exhibited his gynæcometer, which consists of a number of uterine sounds capable of being combined in various ways so as to form a hysterometer, a vaginometer, or a pelvi-meter. By its means the dimensions of tumours and the angle caused by the deviation of the uterus from the vertical line may be accurately ascertained and transferred to paper.

Abdominal Pregnancy.—Dr. ALFRED MEADOWS related a case of so-called ventral or abdominal pregnancy. The patient was aged 22, and was admitted under his care into the Hospital for Women. The abdomen was enlarged to at least the size of pregnancy at full term, though she had only arrived at about the sixth and a half month. The foetal heart could be heard. At the end of a week, symptoms of collapse supervened from internal hæmorrhage, and the patient died. The foetus was found free in the abdominal cavity, its only attachment being by the umbilical cord to a kind of placental mass formed at the fimbriated extremity of the Fallopian tube. Dr. Meadows advocated a more frequent resort to gastrotomy in such cases, not so much with a view of saving the child nor of rescuing the patient when collapse had supervened, as to anticipate that collapse, and, in fact, to remove the growth as soon as a true diagnosis could be formed. Possibly in cases such as this one, and perhaps in certain others, it might not be necessary to remove the placental mass, as this might gradually be absorbed by slow physiological atrophy.—Dr. PROTHEROE SMITH had no doubt of the propriety of performing gastrotomy in such cases, but a difficulty suggested itself in the previous diagnosis.—Dr. GRAILY HEWITT believed that the operation of opening the abdomen ought to be performed when hæmorrhage from rupture of an extrauterine pregnancy threatened to be fatal; but the great difficulty was the diagnosis.—Mr. SPENCER WELLS said that the propriety of operating when a woman was dying of bleeding into the peritoneal cavity, was a very different question from that of operating when her life was not in immediate danger, although extrauterine foetation had been ascertained to exist. In the former case, it might be the clear duty of the surgeon to try to save a patient at any risk from inevitable death. In the latter case, he would give full weight to the consideration that a spontaneous termination of extrauterine foetation was not very uncommon.—Dr. GREENHALGH gave brief particulars of seven cases of extrauterine foetation, with three recoveries and four deaths. Of the former, in one the foetal bones were discharged through an abscess in the left groin; in another, a full grown foetus, in an advanced stage of decomposition, was extracted through an incision in the roof of the vagina; and in the third, the liquor amnii was drawn off by a small trocar and cannula. He was of opinion that gastrotomy might, in many cases, give the patient a better chance than permitting the development of the foetus and secundines to progress.—The PRESIDENT said his opinion, based on many cases, was that a number recovered from severe internal hæmorrhage, while a greater number gave no serious anxiety. If, then, these cases were

not so fatal, he should prefer not to interfere till urgent symptoms arose. The opportunity for such an operation as that suggested seldom presented itself. If any one would look over the records of the cases in the Society's *Transactions* he would see the exceeding difficulty which would have attended the removal by gastrotomy: adhesions in all directions, enlargement of the vascular system into sinuses, the hæmorrhage resulting from the rupture of which would be excessively difficult to stop.—Dr. PLAYFAIR thought the difficulty of diagnosis at an early stage almost insuperable. If the patient survived the shock, or in advanced cases of extrauterine foetation from the first abdominal, it seemed to him that there was much less chance of gastrotomy being successful, owing to the extensive adhesions and matting together of surrounding parts. He thought this procedure a much more doubtful practice than in early cases of Fallopian gestation.—The specimen was referred to a Committee for a report.

A Tumour exhibited by Mr. SCOTT at the June meeting, which he had removed from a patient who recovered, was reported upon.—Dr. MEADOWS and Mr. SCOTT believed that the growth was ovarian in its origin. Their report stated that it was almost entirely composed of hard dense fibrous tissue, but having in some places a distinctly reticulated appearance. There were visible under the microscope white fibrous tissue, some elongated fibre-cells, and a few rounded granular cells and granules. At one end of the tumour there was found a portion of the ovary which contained the remains of a ruptured ovisac, half filled with blood. The ovary itself could not be separated from the tumour, and it seemed to the reporters possible that the tumour originated in the fibrous stroma of the ovary, and that its growth in one direction did not interfere with that portion of the ovary which still maintained its normal character, and, so far as could be judged, performed its ordinary function.—Mr. SPENCER WELLS appended to the report, that there appeared to be a great number of non-striated muscular fibres in the growth, there being a number of broad banded fibres not affected by acetic acid (as the surrounding bundles of fibrous tissue were), and containing long fusiform nuclei. The remains of the ovary seemed to him separable from the tumour, and while not denying the possibility of a tumour largely made up of non-striated muscular fibres originating in the ovary, he thought it must be excessively rare, as he had never seen one; whereas such tumour originating from the uterus were among the most common of morbid growths.

Malformed Fœtus.—A report by Drs. AVELING and EDIS, on the malformed fœtus exhibited at the last meeting, was read. The sac which protruded from, and communicated with, the abdominal cavity, was as large as a fœtal head. It was formed chiefly by an expansion of the sheath of the umbilical cord, but partly also by the abdominal parietes, which were continued up around its base. The sac contained the liver, the spleen, the greater portion of the small intestine, and a small portion of the sigmoid flexure distended with meconium. No trace of a gall-bladder could be detected.

Ovariectomy during Pregnancy.—Dr. EUGENE GODDARD read the particulars of a successful case of ovariectomy during pregnancy. The patient was twenty-nine years of age, and in 1870 was found to be the subject of an ovarian cyst, but, as there was no urgent symptoms, the consideration of any surgical treatment was deferred. She then became pregnant; and, about the end of the second month of utero-gestation, Mr. Spencer Wells removed the ovarian cyst. Eleven pints and a half of fluid were withdrawn. The clamp was removed, and the bowels acted on the eighth day. Pregnancy went on uninterruptedly, and a living child was born at the full period. Dr. Goddard said that the compound nature of the cyst precluded the idea of tapping, as also did the risk of peritonitis, suppuration of the cyst, and the formation of adhesions. Premature labour was not induced, because the patient was already beginning to suffer constitutional disturbance from the double burden, and it was doubtful whether, by the time a viable child could be born, they would not have assumed such magnitude as to imperil the patient's safety; whereas, if abortion were induced, the child would be lost and the tumour would remain.—Dr. ROSS related a case in which Mr. Wells had operated under more adverse circumstances, as the lady was much broken down in health at the time of the operation. A small ovarian tumour was diagnosed eighteen years ago. The patient was subsequently married, and Dr. Ross had attended her in four labours. In no instance was parturition attended with any serious difficulty. During gestation the tumour appeared to become smaller. The tumour rapidly increased about a year ago, and Mr. Wells removed it successfully, the patient being about two months pregnant.—Mr. SPENCER WELLS said that the existence of the cyst for eighteen years, and the pressure on its walls of hard bone-like masses, had led to the diagnosis of a dermoid tumour. He had performed ovariectomy four times during pregnancy, and all the patients had recovered.—Dr. BANTOCK said that the diagnosis of pregnancy at an early stage, com-

plicated with an ovarian tumour, was not always easy. In considering the performance of the radical operation in these cases, one fact was worth any number of theoretical objections.—Mr. SCOTT referred to a case of ovariectomy which he had recently performed. The patient had passed through two labours at term in safety.

Fibrous Elongation of the Uterus.—Dr. BRUNTON detailed a case of fibrous elongation of the uterus, successfully treated by ergot of rye. The patient was unmarried, and aged 47. The uterus was enlarged to the size of a four months' pregnancy.—Dr. TILT had met with two cases in which the womb had become fibrous in its totality. In one case the uterus was about the size of an ostrich's egg.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, DECEMBER 16TH, 1871.

W. T. G. WOODFORDE, M.D., in the Chair.

The Water-Supply.—A report was brought up from the General Purposes Committee on the subject of the unsatisfactory state of the water-supply, embodying a resolution that the association requested Government to institute an early inquiry into the quality of the metropolitan waters by an independent skilled analyst, in consequence of the anticipated approach of cholera, and of the uneasiness produced by the Registrar-General's reports, especially as all investigations led to the establishment of a connexion between water and cholera. The report was adopted.

Sanitary Legislation.—Mr. W. H. MICHAEL, Barrister-at-Law, delivered an address On Future Sanitary Legislation. He asked at the outset, what were the proper limits of legislation in respect of sanitary measures. Property must have some laws respecting sanitary matters. It was abundantly proved that something more than individual supervision was necessary. One of the greatest difficulties in the future was found to arise from neglect in the past. Men had been allowed to do with their property pretty much as they liked, and defaulting owners were frequently men influential in local boards. These men were a great obstacle to all sanitary improvement. It was, moreover, hard, when men had been suffered without let or hindrance to build houses as they liked, to be called upon now to arrange their houses after a prescribed fashion. How far, then, was sanitary legislation to be compulsory? hitherto it had been, practically, permissive; the infliction of a small fine was ineffectual. The public had plainly a right to say to the owner "*Sic utere tuo, ut alienum non ledas.*" Another difficulty where the population was only sparse. Dividing the matter under two heads, (1) the law as it is; (2) as it ought to be, Mr. Michael said that the present state of things was most unsatisfactory. There were Acts within Acts so complicated and so embroiled that the most learned judges had said it was impossible to understand them. Government itself had proved unable to advise local boards. The consequence was that in some places the boards had fallen through, while in others action was paralyzed. Consolidation of sanitary authority had long been urged, and last session an important step had been made. The next thing to be aimed at was the establishment of one local power. Areas would then have to be rearranged, not in accordance with political boundaries, but actual need and physical conditions. As to the sanitary officers, the medical officers were, at present, mostly men in private practice, and dependent on the very men against whom action ought to be taken. Thus, except in times of epidemic, their hands were tied, and their operations limited to the more obvious nuisances. It was necessary, then, that one general statute should be framed, embodying all existing enactments; and a central authority should be established to supervise its execution. While approving of the measure of last session, he considered that sanitary measures ought not to be confined to the houses of the poor; all ought to be included. He was also averse to the connexion with Poor-law relief. In respect of the mapping out of areas it was hard to draw a fast line; divisions ought to be determined by physical condition, drainage necessities, water-shed, and the like. The areas ought to be extensive enough to pay for thoroughly efficient officers. As to the constitution of local boards, and the difference between urban and rural populations, Mr. Michael maintained that a difference in manner, not in matter, was needed. There ought to be only one authority in each district, and that thoroughly representative. He would propose also the establishment of an intermediate authority of a higher character, such as the Metropolitan Board of Works was to the London vestries, to hear appeals on the spot, and step in when local boards failed to do their duty. It was to be regretted that Sir Charles Adderley's Bill contained no provision of this kind. Inspectors sent down from London would not do; their action came too late. An authority on the spot was needed to prevent in time. Nor were Boards of Guardians competent, as had been seen in the past. The sanitary

officers to be appointed should be thoroughly trained medical officers of health. These must not be, as in times past, merely ornamental adjuncts, but moving powers. They must be men of high intellect, and the field of their operations large enough to afford them a high salary, and to liberate them from private practice. Registration of death and of sickness, instead of being in its present unsatisfactory state, ought to be put under their control. Mr. Michael likewise insisted upon the appointment of a Minister of Health to preside over the Central Sanitary Authority; that compulsory power should be given to join districts for drainage purposes; that additional borrowing powers should be granted; that the incidence of rates should be modified in accordance with advantage received; that medical officers of health should have greater powers for preventing overcrowding, and for dealing with contagious diseases; and that private practitioners should be compelled to give all necessary information.—Dr. STALLARD maintained that it would be impossible for any authority to carry out what was against the public opinion of a district. He objected to harsh compulsion; people must be educated. If the Central Authority had the power of granting or withholding a certain share of the expense, that would prove a far more efficient weapon than compulsion.—Mr. HOLLAND advocated inspectors sent down from London, as being free from local jealousies and prejudices, and as having wider experience. He was in favour of the medical officer devoting his whole time to his office.—Dr. HARDWICKE agreed as to the desirability of most of the proposals of Mr. Michael, but doubted whether the sanction of Parliament could ever be obtained for them.—Dr. BARCLAY spoke highly of the competency of the Poor-law Medical Officers to act as deputies under the Health Officer. He disagreed with Dr. Stallard as to compulsion.—The CHAIRMAN said that the mere possession of compulsory power was in most cases sufficient. He was in favour of large areas of operation, and of the registration of deaths and sickness being in the Health Officer's hands.

MEDICAL SOCIETY OF LONDON.

MONDAY, NOVEMBER 27TH, 1871.

ANDREW CLARK, M.D., F.R.C.P., President, in the Chair.

Case of Impalement.—Mr. ALFRED STEER, of Stourbridge, communicated the following case. On the evening of August 9th, 1870, he was called to an Irishwoman, aged 33, who was said to be dying. It appeared that, having finished her work at the top of a corn-rick, she slid off, instead of going down by the ladder. In doing this, she became impaled on the handle of a hay-fork which had been left resting against the stack. With much difficulty the farmer succeeded in pulling the fork out of her body. The woman fainted and was sick; some brandy was given to her. She was placed in a carriage and brought home. Mr. Steer found her lying on a brick-floor; she had lost much blood, was cold and almost pulseless, but sensible, and complaining of great pain in the region of the heart. Breathing was very hurried and irregular. A little blood was flowing from the vagina. On examination, he found this organ uninjured, but on the left side of the uterus, about two inches or less from the os, his index-finger passed to its root into a large, irregularly cut wound, apparently formed at the junction of the uterus with the left ligament. On withdrawing his finger, there was a great gush of blood. Mr. Steer filled the wound with strips of lint, and could have pushed in any amount of this evidently into the peritoneal cavity. The sixth rib was broken midway between the spine and the sternum, and there was considerable emphysematous crackling. A large plaster and body-bandage were applied, and an ether mixture was given. The woman was too ill to be moved, and lay all night on the floor. She vomited frequently the day after the injury, and there were for some days signs of pleurisy. On August 14th, the last of the plugs was withdrawn. From this date the woman steadily improved. On the 21st, all emphysematous swelling had disappeared, and she had become bright and cheerful. The only medical treatment had been a dose of castor-oil repeated two or three times, and a full dose of calomel and opium on the 12th to allay pain and produce sleep. On December 4th, she seemed perfectly well. She has menstruated twice since the accident, and said she sometimes felt a pain after hard work just where the fork struck her. The pike, beyond doubt, penetrated by the side of the body of the uterus, traversed the abdominal cavity, and, impinging on the diaphragm, pushed with such force against the rib as to break it. Mr. Steer attributed her recovery to the circumstance that the rounded smooth large end of the pike entered her body, and not one of the forks; and that, therefore, the intestines were pushed before it, and thus escaped injury.

Edema of the Lung after Small-Pox.—The following case was communicated by Dr. WILTSHIRE. Miss P. had small-pox somewhat

severely in July last, and six months afterwards there was considerable anasarca of the lower extremities. There was also a slight cough. One day the dropsy of the legs suddenly disappeared almost completely; and about twelve hours afterwards, severe dyspnoea, violent cough, and expectoration of enormous quantities of glairy phlegm, came on. The attack was so severe that the patient's life was in great jeopardy. In addition to all the signs of oedema of the lungs, the heart was feeble, and there was a little, but by no means a marked, amount of albumen in the urine, which latter was not scanty. The administration of repeated doses of compound jalap powder, ammonia, ether, and digitalis, sweating in hot blankets, and the administration of brandy gave the patient great relief; and under this treatment she rallied, and made a good recovery.

Webbed-Fingers.—Mr. WILLIAM ADAMS showed a boy who was suffering from a webbed condition of several of his fingers. He was being treated by Mr. Tamplin's instrument. The case was in the first stage of the treatment. A hole, with its circumference cicatrised, had been made at the base of the webbed-fingers, and a pencil-case could be passed through it. Simple division, Mr. Adams remarked, gave only a slight improvement; a plastic operation gave a better result. Silver rings to make an opening had been used; but Mr. Tamplin's operation, by which a piece of skin was screwed out by means of two plates of metal, was the best. The compressed tissues soon sloughed out, and the hole was well stuffed with oiled lint. The inflammation and general swelling soon passed off. The operation had been done a month, and the edges of the opening were well cicatrised. The remainder of the web would be treated in the usual way by division with the knife.

Ophthalmic Cases.—Mr. BRUDENELL CARTER demonstrated the following interesting ophthalmic cases. 1. Injury of the ciliary nerves and choroid in a boy through a blow on the eye (the lids being closed) with a cricket-bat. 2. Double optic neuritis from the presence of a cerebral tumour, without, at present, any cerebral symptoms. 3. Albuminoid retinitis. 4. Injury of the head and spinal column in a boy, with hæmorrhage into the orbit, and protrusion of the ball of the eye after atrophy of the optic nerve. 5. A case of syphilitic retinitis, nearly well.

MONDAY, DECEMBER 4TH, 1871.

ANDREW CLARK, M.D., F.R.C.P., President, in the Chair.

Apoplexy after Renal Disease.—Dr. BROADBENT exhibited morbid specimens from a case of apoplexy following disease of the kidney. One kidney had undergone granular degeneration; the other was not much changed. The heart was hypertrophied, and in the left hemisphere of the brain there was a large irregular cavity; the minute arteries were also hypertrophied. The patient was pregnant, but had menstruated regularly. She was seized with convulsions, coma, rigidity, and paralysis of the left limbs. Hæmorrhage came from the middle cerebral artery, and the cavity was situated external to the motor ganglion and motor tract. Dr. Broadbent thought the rigidity was due to disturbance of the motor ganglion and motor tracts.

Syphilitic Ulcers cured by Skin-grafting.—Mr. WALTER COULSON exhibited two patients with syphilitic ulcers cured by skin-grafting. The first patient had suffered severely for three years and a half from syphilis. There had been ulcerations in the face, loss of a portion of the nose, and one extensive ulcer on the leg. He was given, at the Lock Hospital, as much as eighty grains of iodide of potassium three times a day. The ulcers on the face healed, but the leg did not. He was also treated at Birmingham with mercurial baths, but without much success. On his return, the man was treated with bark and nitric acid. On October 3rd, five pieces of skin were taken from the left arm, about the size of a pin's head, and transplanted. On October 26th, five more pieces were grafted. On November 1st, all the five last grafts had taken; and on the 20th, the ulcer had healed with the exception of a small spot. The second man had been suffering for two years and a half from a large syphilitic ulcer of the size of a cheese-plate, and had taken seventy grains of iodide of potassium three times a day. On October 3rd, skin-grafting was done, as in the first case, with great success.—Mr. JABEZ HOGG recommended bromide of potassium in syphilis.—Dr. BROADBENT said that the action of the bromides was quite contrary to that of the iodides.—Mr. DE MÉRIC condemned the use of bromides when the iodide could be given. He had advised a little mercury combined with the iodide. He had also transplanted in some cases, but had failed.

Disease of Cerebellum.—Dr. HUGHLINGS JACKSON gave the particulars of a case of tumour with cyst in the right lobe of the cerebellum. The striking point in the case, was the existence of double optic neur-

itis without obvious impairment of sight. There were severe headache and urgent vomiting. Very remarkable intermissions in these symptoms occurred, the patient seeming to be quite well in the interval. Later, palsy of both sixth nerves occurred, one before the other, and there seemed trifling difficulty in walking, but there was no limb affection.

CORRESPONDENCE.

ON TRIPLE SOUNDS OF THE HEART.

SIR,—In your last number's report of the discussion on Dr. Habershon's case of triple heart-sounds, at the Clinical Society on December 8th, I am erroneously reported as ascribing the aggravation in the case to the fresh complication of aortic disease, whereas I really attributed it to the addition of the mitral lesion. I further associated with this my explanation of the triple sound of the heart, which is altogether suppressed in the report. Now, as this explanation is connected with a proper comprehension of the causes of the sounds of the heart in health and disease, which seem to be still imperfectly understood, I trust that I may be excused for briefly adverting to the subject.

Although many views have been broached and experiments performed since those which I conducted in 1835, yet, so far as I know, the conclusions then arrived at, as to the causes of the heart's sounds, have never been set aside. At that time, and ever since, in all my works and lectures, I have ascribed the first or systolic sound to the tightening of the walls of the heart—valves as well as muscles—by muscular contraction; and the second, or diastolic sound, to the tightening of the arterial valves by the recoil of the arterial column of blood on them.

The first, or systolic sound, although normally one, has not the same quality or duration in all parts of the heart. In the auricular valves, and in the thin walls of the right ventricle, the sound is loud and short, from their more sudden and simple transition from slack to tight. In the walls of the left ventricle, the sound is duller and more prolonged from the more gradual tightening of their thicker mass. The first tightening of the valves gives the flapping commencement of the first sound, which is prolonged by the continued vibration of the thicker muscular walls to the end of the systole: but, although varying in quality and loudness in different parts of the heart, the systolic sound is normally one and continuous.

"Sometimes the systolic sound, without being longer than usual, seems broken into two by something like a flap in the middle; or, to enunciate it, instead of being 'lubb-dup' as usual, the first and second sounds are 'bullub-dup'." I am doubtful as to the cause of this variety, but I think it probable that it may depend on some irregularity in the action of the auricular valves, by which their tightening, with its attending flap, is either delayed or takes place in two successive jerks" (*Lectures in London Medical Gazette*, 1838). Subsequent experience has verified this conjecture, for I have observed several instances in which mitral regurgitant disease was preceded by a double systolic sound, as in Dr. Habershon's case.

This is not the only mode in which the systolic sound may become double, for I have proved that the striking of the apex against the ribs, and possibly even the contraction of the auricles, is capable of producing an apparent reduplication of the first sound (*Pathology and Diagnosis of Diseases of the Chest*, 4th ed., p. 212). The possibility of two ventricles contracting, not simultaneously, but in succession, is much more questionable, when the continuity and close interlacing of their fibres is considered; but, although they act simultaneously, if one act on a normal, and the other on an abnormally, loose valve, the sound of one tightening before the other is quite possible and intelligible: and when the loose valve recedes into the auricular orifice, so far as to permit regurgitation, then there is no tightening flap at all, but the prolonged vibration of the reflux murmur. I have met with cases of mitral disease, in which some beats were attended with a murmur and others with the double sound, the regurgitation being only occasional.

It is obviously desirable to distinguish this class of *cantering* or triple heart-sounds from those which arise from reduplication of the *second* sound, which long ago I endeavoured to express phonetically by the words *lubb-durup*, or *lubb-dupup*, and ascribed to successive (instead of simultaneous) tightening of the two sets of arterial valves. It is by no means easy, however, in all cases to make this distinction—to determine whether the reduplication is in the first or second sound. The ventricular impulse, when distinctly felt, is the surest index of the systole: where this fails, the pulse felt in the carotids comes next as a guide. A double sound accompanying these may be pronounced systolic; a double sound distinctly following them may be judged to be

diastolic, and may often be traced also into singularity respectively along the aorta and pulmonary artery.

The diagnosis of valvular murmurs, which I had the good fortune first to describe and to designate by the terms "obstructive" and "regurgitant",* are also in some degree available to distinguish between ventricular and arterial valvular sounds, as well as murmurs. The mitral and tricuspid share in the natural systolic sound will be heard best where they are best conducted to the walls to which we listen—at or near the apex in the case of the left ventricle; higher up and to the right in case of the tricuspid. The double arterial sound will be heard over the valves at and to the left of the mid-sternum; but the sound of each set will be separate and single on following the course of their respective arteries.

I should expect that the sphygmograph and cardiograph would supply additional information on these lesions.

Dec. 18th, 1871.

I am, etc.,
C. J. B. WILLIAMS.

THE MEDICAL DECLARATION RESPECTING ALCOHOL.

SIR,—Will you do me the favour to publish the following remarks, the substance of a letter which I addressed to the President of the Royal College of Physicians in reply to a letter he wrote to me enclosing a printed copy of the medical declaration respecting alcohol?

Who of us has a right to charge any members of our profession with "inconsiderately prescribing" for their patients? Surely such a charge, if I rightly interpret the words, infers incapacity, or something worse, in the prescriber—a charge which, I presume, no medical man, however eminent, would thoughtlessly, and still less wilfully, direct against a fellow-practitioner.

The "Declaration" declares that this inconsiderate resort to the employment of "large quantities" of alcoholic liquids or "beverages" has given rise, in "many instances", to the formation of intemperate habits. On whose authority is this statement made? Will it bear the test of critical inquiry? Judging by my own experience, such a result is most exceptional—indeed, I can hardly recall a single well-marked example in which a habit of intemperance has been fairly attributable to treatment of which alcoholic stimulants formed a prominent part. I have rather observed the contrary—viz., that repugnance to alcoholic drinks has followed treatment by such agency, excepting in persons previously addicted to the consumption of spirituous liquors.

Is it quite true that no medical man should prescribe alcoholic stimulants without a sense of grave responsibility? I presume it may be inferred that no practitioner prescribes alcoholic stimulants except on *principle*, and in the belief that such treatment is more suitable to the case than any other. If so, what becomes of the grave responsibility? In the passage, that every medical practitioner should endeavour to inculcate habits of moderation in the use of alcoholic liquids, I quite concur, though I do not see very clearly the mode or the opportunity that may be afforded him of giving other than general advice on the subject of such simple and unstimulating diet as I presume every medical man would recommend for adoption. But all this refers to health and not to disease. There can be no doubt that treatment by stimulants is adopted more liberally by some practitioners than by others; but this is the result of experience, based, we may presume, on principle. Can you induce those persons who are termed in the "Declaration" "inconsiderate", to change their principle and forget their experience? I am as fully alive to the evils of intoxicating drinks as any man, and I have not been unobservant of their influence whether in the persons of invalids, of general society, or of the working class.

With respect to the alleged excesses charged against and constituting a habit of society, I believe they are greatly exaggerated, though I acknowledge that the consumption of wine by young persons under social excitement occasionally exceeds the boundary of moderation.

With regard to the influence of alcoholic drinks and of intoxicating liquors on the working class of society, my sentiments are expressed in a letter which I wrote to Dr. Burrows last August, which an attack of illness prevented my sending him, and in which I addressed the President to the following effect.

"There is, as we all know, a great contest in progress between the sellers of intoxicating liquors and the law-makers of this country. It is acknowledged that the authority of the Government is scarcely sufficient to amend the law with a view to check the very injurious supply of intoxicating drinks, now consumed by the people, so fatal to their

* *Pathology and Diagnosis of Diseases of the Chest*. Third Edition. 1835. In March 1836, I published in the *Medical Gazette*, illustrating the successful application of these rules of diagnosis, verified by *post mortem* examination. Dr. Hope proposed similar rules, but not till three years later.

moral and physical health throughout the land. I conceive there to be no class of society so competent as the members of our profession to give testimony to the injurious influence on the constitution from habits of intemperance; and that the expression of this conviction on their minds, emanating from the governing bodies of the Colleges of Physicians and Surgeons, could not but exercise a powerful influence on the mind of the Government."

The remainder of the letter merely referred to the best means I could suggest for carrying this object into effect, and requesting that Dr. Burrows would give the subject his earliest consideration.

I object to the "Declaration". 1. Because it is dictatorial, assailing the deliberate judgment of a large number of honourable and intelligent members of our profession; 2. Because the facts on which it is based are very questionable; 3. Because I believe the first two paragraphs will prove inoperative to any useful purpose.

I am, etc.,

F. C. SKEY.

24, Mount Street, Grosvenor Square, Dec. 26th, 1871.

OBITUARY.

PATRICK MILLER, M.D.

DR. PATRICK MILLER, Senior Fellow of the Royal Society of Edinburgh, Fellow of the Royal Medical and Chirurgical Society, and Consulting Physician to the Devon and Exeter Hospital, died at his residence, The Grove, near Exeter, on December 24th, aged 89. He was born on May 21st, 1782, and was the eldest son of the Rev. Thos. Miller, minister of Cumnock, Ayrshire, and of Janet, daughter of Dr. Matthew Stewart, D.D., the celebrated Geometrician and Professor of Mathematics in the University of Edinburgh. He was educated at the High School, Edinburgh, under the accomplished Alexander Adam, and subsequently at the University of Edinburgh, under the eye, and for a large portion of the time beneath the roof, of his celebrated maternal uncle, Dugald Stewart, Professor of Moral Philosophy, and author of the *Elements of Moral Philosophy*. The beautiful marble bust of Dugald Stewart which is now in the library of the University was a recent present from his nephew now deceased. While he was thus pursuing his general and medical studies, his social advantages were very great, and he formed friendships with many who, in subsequent years, became eminent for their talents and usefulness. Amongst others, were the late Lord Palmerston, Lord Lansdowne, and Lord Brougham. His friendly intercourse with these only ceased with their deaths. The medical and scientific schools of Edinburgh were at this period brilliantly upheld by men of surpassing talent, including Cullen, Duncan, Monro *secundus*, Home, and Joseph Black, the celebrated physician and chemist. From these Dr. Miller received the impulse which directed his studies to the accomplishment of a vast field of information and usefulness.

In 1804, Dr. Miller graduated as M.D., and three years afterwards (1807) took up his residence in Exeter. In 1809, on the resignation of Dr. Dyer, he was elected one of the physicians of the Devon and Exeter Hospital, an office which he retained for fifty years, only resigning it in 1860. In connection with this a somewhat remarkable fact may be mentioned, that the person who proposed his election on the former occasion, moved the vote of thanks which was passed to him on the latter; and this was the late Sir Thomas Dyke Acland, who died only three months before him. In 1818, on the foundation of the Exeter Dispensary, Dr. Miller became one of the physicians. In 1822, Dr. Daniell resigning, he was elected Physician to the Lunatic Asylum at St. Thomas, near Exeter. This office he retained for forty years, resigning it in 1861. He early gained the esteem of the public, and became, with the late Dr. Blackall, a leading physician of the county.

He had a large and capacious mind, and brought to bear upon the practice of his profession the resources of that mental culture which had distinguished his early career. He was the safe and judicious practitioner; the friend that advised with kindness, and solaced the sufferings of disease; always courteous in consultation. His softness and kindness of manner were nevertheless characterised by great and unusual energy, and he by no means limited his time and activity exclusively to his professional duties. A robust frame and great bodily health and strength enabled him to accomplish more than most men could have ventured to engage in. He took his share in the service of the public as a magistrate, as a trustee of the Exeter charities (his name being on both the church and general lists), and as a member of the committees of the various charitable institutions of the city. He was one of the original promoters of the Devon and Exeter Institution, the Central School, the Savings' Bank, the Penitentiary, the Institution for the Deaf and Dumb, the Infant School, the Institution for the Blind,

the Dispensary, the Water Company, the Refuge, etc. On the development of the railway system, and when people for the most part looked coldly and opposingly on the schemes proposed, Dr. Miller gave them his cordial approval and support, and assisted as director in the projecting, construction, and management of the Bristol and Exeter railway, and subsequently of the South Devon and Cornwall railways. Until the last eight years, when bodily suffering, from rheumatism, interfered with his activity, he continued in the unceasing discharge of his various duties, and he brought to them not only a matured judgment, but a refined mind. He was courteous in all his transactions with his fellow men, and his conduct was characterised by the sincerest friendships for those whom he esteemed; while at the same time he displayed a marked reticence concerning the faults and failings of those of whose conduct he could not approve. It was rare, indeed, to hear Dr. Miller utter a word or a sentiment which could in any way be grating to the feelings of another. When locomotion became difficult to him from the increase of his rheumatic pains, he took interest in books and the current literature; he read the livelong day. The vigour of his mind was complete to the very last moments of his existence, and he retained the most accurate and particular memory of things gone by, while taking the minutest interest in all the notable events of the passing time. The past summer witnessed him wheeled in his chair round his garden, noticing with interest the trees, fruits, and flowers which he had himself planted, and often calling attention to roses, many of which had been budded by his own hand. Amid all his anxious duties, his garden had been to him a solace and a delight.

In 1818, he married Ann Julia, third daughter of General the Right Hon. Sir George Hewett, Bart., G.C.B. She died in 1833, having had ten children, of whom four only now survive; viz., two sons, Colonel Dugald S. Miller, formerly of the 67th Regiment, and Captain Henry M. Miller, R.N., and two daughters. He married secondly, in 1842, Elizabeth, daughter of the late Rev. William Barker, Rector of Silverton. She died in 1851 without surviving issue.

JOHN NALTY, M.D., DUBLIN.

DR. JOHN NALTY died on Dec. 6th, aged 73, in Dublin. His practice was considerable, especially amongst families of respectability, who reposed a trust which was well founded in his knowledge and experience. He received originally a fair classical education, and completed his apprenticeship to the late State Apothecary, Mr. Hunt. Upon the death of that gentleman, Dr. Nalty was elected resident apothecary to Sir Patrick Dun's Hospital, a situation which he held for some years. He afterwards proceeded to Edinburgh, where he obtained his degree in 1834. He subsequently went to London, and became a member of the Royal College of Surgeons. Returning to Dublin, he followed his profession as a general practitioner for forty years with credit and success. For many years he took, as Vice-President, an active part in the administration of the Poor-law in the South Dublin Union. Here his medical knowledge, his rare punctuality, and assiduous attention to whatever he undertook to do, with his thoroughly impartial mind, enabled him to render essential service to the public, and, in a country distracted by parties, to be respected by all.

MATTHEW JACKSON, ESQ., MARKET WEIGHTON.

WE regret to record the death of Mr. Matthew Jackson, of Market Weighton, which occurred on November 30th, from an attack of apoplexy lasting but a few hours. He was a man universally respected, following his profession quietly and without ostentation. Few men, perhaps, in his sphere possessed more eminently the esteem and confidence of his patients, and his death will long be felt by those who knew his many and varied qualifications. He was an old member of the British Medical Association, of the Medical Benevolent Society, etc., and had been in practice at Market Weighton for above forty years.

WILLIAM T. GILDER, ESQ., MARGATE.

MR. GILDER, who died in the eighty-fourth year of his age on December 10th, was born at Margate in 1788. For several years he served as Assistant-Surgeon in the Scots Fusilier Guards, being with his regiment at Walcheren and the Peninsula. He received from the Horse Guards a war-medal with three clasps, having been present at Nive, Nivelles, and Vittoria. On leaving the army, he settled in Queen Anne Street, London, and practised successfully for nearly forty years. On retiring from practice in 1850, he took up his residence in Margate, where he died. He was a justice of the peace for the Cinque Ports.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 21st, 1871.

Beardsley, Arthur Arnold, Grange, Lancashire
Chilcot, James, Southsea
Cowley, John Selwyn, Upton-on-Severn
Griffiths, William Edwin, Kensington
Langley, Frank, Lewes, Sussex
Parkes, William Edmund, Handsworth
Richards, John Edward, Ruabon, North Wales
Sayer, Charles Wathen, Sutton, Somerset
Searle, George Clement, Tewkesbury
Sergeant, Edward, Leeds
Sharpe, George Metcalfe, Hunslet, Leeds
Wallis, Edward Darley, Bodmin, Cornwall
Wilkinson, Joseph Cradock, Spalding
Willis, George, Soham, Cambridge

The following gentlemen also on the same day passed their first professional examination.

Atkins, Francis Thomas, Guy's Hospital
Barrow, Frederick, King's College
Bromley, John Maddan, University College
Bryan, Clement Frederick, Guy's Hospital
Crouch, Ernest John, Charing Cross Hospital
Keer, George Edwardes, Guy's Hospital
Nash, William Gunner, Guy's Hospital
O'Brien, James Octavius, Guy's Hospital
Page, Herbert Markant, Birmingham Hospital
Saer, David Protheroe, St. Mary's Hospital
Tayler, Herbert Price, Guy's Hospital

As Assistants in compounding and dispensing medicines.

Anthony, David, Cardiff
Bannerman, Charles Alexander, Preston
Hensley, Robert Place, Mildenhall
Perks, Samuel Woodhouse, Hitchin

UNIVERSITY OF DUBLIN.—Winter Comitia, December 20th, 1871.

Bachelors in Medicine.

Blunden, Maurice R.
Browne, Thomas John
Comyn, Henry
Elliott, Thomas
Irvin, Fitzjohn Robert

M'Allister, Alexander
MacMullen, Hamilton
Nesbitt, Dawson
Scott, Harvie
White, Richard Dormer

Masters in Surgery.

Blunden, Maurice R.
Comyn, Henry

O'Connor, James
White, R. D.

Doctors in Medicine.

Browne, Robert
Duffy, George Frederick

Skelton, James Marshall
Steele, William Henry

MEDICAL VACANCIES.

The following vacancies are announced:—

AXBRIDGE UNION, Somersetshire—Medical Officer and Public Vaccinator for District No. 11: £60 per annum, and extra fees.
BELFORD UNION, Northumberland—Medical Officer for the Eastern District: £25 per annum.
BRIGHTON and HOVE DISPENSARY—Two Surgeons.
CARMICHAEL SCHOOL OF ANATOMY, MEDICINE, and SURGERY, Dublin—Lecturer on Anatomy.
CARNARVONSHIRE and ANGLESEY INFIRMARY and DISPENSARY, Bangor—House-Surgeon: £80 per annum, board and lodging.
CHONTALES CONSOLIDATED MINING COMPANY, Nicaragua—Resident Surgeon: £300 per annum, passage and house free.
COOTEHILL UNION, co. Cavan—Medical Officer for the Drum Dispensary District: £85 per annum, and fees.
EAST LONDON HOSPITAL FOR CHILDREN and DISPENSARY FOR WOMEN—Surgeon.
EAST SUSSEX, HASTINGS, and ST. LEONARD'S INFIRMARY—Physician; Assistant-Physician.
FEVER HOSPITAL and HOUSE OF RECOVERY, Dublin—Temporary Physician; Temporary Surgeon.
GOREY UNION, co. Wexford—Medical Officer and Public Vaccinator for the Killenagh and Wells Dispensary District: £100 per annum, and fees.
HOLLOWAY and NORTH ISLINGTON DISPENSARY—Assistant to the Resident Medical Officers: £400 per annum, to commence.
JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer: £100 per annum, furnished rooms, attendance, coal, and gas.
KILMUIR, Skye—Medical Officer: £140 per annum, house and enclosure.
KILRUSH UNION, co. Clare—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cragaknock Dispensary District: £100 per annum, and fees.
LANCASHIRE LUNATIC ASYLUM, Prestwich—Medical Superintendent: £600 per annum, house (partially furnished, and free of rates and taxes), coal, gas, and washing.
LISMORE UNION, co. Waterford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Lismore Dispensary District: £100 per annum, and fees.
LLANFYLLIN UNION, Montgomeryshire—Medical Officer for the Llanrhaiadr District: £60 per annum.
LONDONDERRY UNION—Medical Officer for the Killea Dispensary District.
LOYAL UNITED BRETHREN BENEFIT SOCIETY—Surgeon.

MEATH HOSPITAL and COUNTY OF DUBLIN INFIRMARY—Surgeon.
MIDDLESEX COUNTY LUNATIC ASYLUM, Hanwell—Medical Superintendent of the Female Department: £600 per annum, furnished house, rates and taxes free, coal and gas.
MIDDLESEX HOSPITAL—Resident Physicians' Assistant; Resident Obstetric Assistant.
NEWARK HOSPITAL and DISPENSARY—Resident Medical Officer and Secretary: £100 per annum, board and lodging.
NORTH WALES COUNTIES LUNATIC ASYLUM, Denbigh—Assistant Medical Officer: £80 per annum to commence, rooms, board, and washing.
POCKLINGTON UNION, Yorkshire—Medical Officer for the Pocklington No. 2 District and the Workhouse: £40 per annum, and extra fees. Medical Officer for the Market Weighton No. 2 District: £19 per annum, and extra fees.
POOLE UNION, Dorset—Medical Officer for District No. 3: £75 per annum.
ROCHDALE INFIRMARY and DISPENSARY—Resident Medical Officer: £80 per annum, board and lodging.
ROYAL CORNWALL INFIRMARY, Truro—House-Surgeon, Secretary, and Dispenser: £120 per annum (rising £10 per annum for three years), furnished apartments, firing, gas, and attendance.
STOCKWELL FEVER HOSPITAL—Resident Medical Superintendent: £400 per annum, unfurnished residence, coal, and gas.
SUDBURY UNION, Suffolk—Medical Officer and Public Vaccinator for the First District: £55 per annum, and extra fees.
SUNDERLAND INFIRMARY—Junior House-Surgeon: £60 per annum, board, lodging, and washing.
THINGOE UNION, Suffolk—Medical Officer and Public Vaccinator for District No. 8: £13:18 per annum, and extra fees.
THOMASTOWN UNION, co. Kilkenny—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Knocktopher Dispensary District: £95 per annum, and fees.
TUAM UNION, co. Galway—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Headford Dispensary District: £120 per annum, and fees.
WEST HAM UNION, Essex—Medical Officer for the West Ham No. 2 District: £80 per annum.
WHITECHAPEL, District of—Certifying Factory Surgeon.
WHITECHAPEL UNION—Medical Officer for District No. 4.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ALEXANDER, Reginald G., M.D., appointed Honorary Visiting Physician to the Bradford New Fever Hospital.
ALLEN, John Burgess, L.K.Q.C.P.Irel., appointed Medical Officer to the Workhouse, Infirmary, and Fever Hospital of the Gorey Union, co. Wexford.
LEWIS, Lewis, Esq., appointed Resident Medical Officer to the St. Pancras and Northern Dispensary.
NICOL, Patrick, M.D., appointed Honorary Visiting Physician to the Bradford New Fever Hospital.
ROCHE, E. B., Esq., appointed Surgical Registrar to King's College Hospital.
THOMAS, Alexander, F.R.C.S.Edin., appointed Parochial Medical Officer for Maudert, Perthshire.
WALKER, T. Shadford, Esq., appointed Lecturer on Ophthalmic Medicine and Surgery at the Liverpool Royal Infirmary School of Medicine.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

VERNON.—On December 26th, at Wimpole Street, the wife of *Bowater John Vernon, Esq., prematurely, of a son.

DEATHS.

HUNTER.—On December 19th, at Wilton Place, Belgrave Square, John Charles Hunter, L.R.C.P.Lond., aged 72.
***MILLER**, Patrick, M.D., Consulting Physician to the Devon and Exeter Hospital, at Mount Radford, Exeter, aged 89, on December 24th.
RICHARDSON, Edward, M.D., at Hastings, aged 47, on December 16th.
VERNON.—On December 26th, at Wimpole Street, aged 22, Emmeline Agnes, wife of *Bowater John Vernon, Esq.

CARBOLIC ACID PAPER.—A carbolic acid paper, which is now much used in America for packing fresh meats, for the purpose of preserving them against spoiling, is made by melting five parts of stearine at a gentle heat, and then stirring in thoroughly two parts of carbolic acid after which, five parts of melted paraffine are to be added. The whole should be well stirred together, until it cools; after which, it is again melted, and applied with a brush to the paper, in quires, in the same way as in preparing the waxed paper used for wrapping various articles.

BEQUESTS, DONATIONS, ETC.—Mrs. Swan Hood Robinson, of Montagu Square, has bequeathed, in pursuance of her late husband's request, £3500 to the Pension Fund of the National Hospital for Paralysis; £3000 to the Royal Free Hospital; £2000 to St. Mary's Hospital; £500 to the Middlesex Hospital; and £300 to the Western General Dispensary.—"R. T. W." has given a third £1000 to the Hospital for Women.—"H. G." has given a third £1000 to the East London Hospital for Children and Dispensary for Women, Ratcliff Cross.—Mr. J. Horniman, of Coombe Cliffe House, has given £1000 to the Building Fund of the proposed new Croydon Hospital.—The Worcester General Infirmary has received £145:8:1 under the will of Mrs. Frances Penn.—The Mercers' Company has given Fifty Guinea to the Royal Free Hospital.—The Sheffield Church Burgesses have granted £140 from their surplus funds to the General Infirmary.

OPERATION DAYS AT THE HOSPITALS.

MONDAY Metropolitan Free, 2 P.M.—St. Mark's, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY Guy's, 1.30 P.M.—Westminster, 2 P.M.—National Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

WEDNESDAY.. St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 2 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic Hospital, 2 P.M.

SATURDAY... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Lock (Clinical Demonstrations and Operations), 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Pathological Society of London, 8 P.M. Annual Meeting. Election of Officers, etc. Specimens to be exhibited:—Mr. Sibley (for Mr. Bakewell): Photograph from a Case of Leprosy. Dr. Dickinson (for Mr. Bradley of Manchester): Deformity of Pharynx. Mr. Hulke (for Mr. Hickman): Pea in Lachrymal Canal. Mr. Galton: Perforations of Bowel in Typhoid. Mr. Arthur Norton: Malignant Growth of Femur. Dr. Kelly: Ulcer of Bronchus opening into Pulmonary Artery. Dr. Clifford Allbutt: Sections of Medulla in Hydrophobia. Dr. Clifford Allbutt: Syphilitic Disease in Encephalic Arterioles. Dr. Leared: Renal Calculi of Cystic Oxide. Mr. Lawson: Sequel of a Case of Blood Cyst.

WEDNESDAY.—Royal Microscopical Society, 8 P.M. Dr. Carruthers, "Fossils of the Coal Measures"; Mr. James Bell, "Fermentation and its results."—Obstetrical Society of London, 8 P.M. Annual Meeting. Dr. Playfair, "On the Treatment of Empyema in Children"; Mr. Jalland, "On a Case of Vaginal Thrombus"; President's Address.

NOTICES TO CORRESPONDENTS.

ALL Letters and Communications for the JOURNAL, to be addressed to the EDITOR, 37, Great Queen Street, Lincoln's Inn Fields, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

TO PURCHASERS.—To insure attention, it is requested that all orders sent to the Office for extra copies of the JOURNAL, be accompanied with *halfpenny* stamps for the amount.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FOR replies to questions concerning Poor-law medical questions, see Poor law Medical Department, under charge of Mr. Benson Baker, London, and Dr. Maunsell, Dublin.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

M.B., M.A., is thanked for the correction.

DR. HAWKSLEY is thanked for his courteous communication. For other reasons, we do not propose to use the information.

WE would again request correspondents not to enclose stamps for the return of MSS., and refer them to the standing notice on this subject at the head of this column.

WE have handed Dr. Dale's communication to the publisher, to whom, obviously, both communications should have been addressed.

DR. GRAY (Castlewellan).—It would be useless to publish the letter; for it illustrates not the deficiencies of the Medical Act, great as they are, but the operation of certain rules of evidence common to the English law in general.

H. M. (St. Bartholomew's).—On the 13th and 19th proximo; see our advertising columns, and the numbers of the BRITISH MEDICAL JOURNAL following the respective examinations, where you will find the questions published.

THE MEDICAL DIRECTORY AND FOREIGN TITLES.

WE have been requested to publish the following letter.

"To the Editors of the Medical Directory.

"30, Gower Street, Bedford Square, December 28th, 1871.

"Gentlemen,—You publicly announced in September last that no foreign qualification would be inserted in the edition of the *Medical Directory* for 1872. Allow me to express my surprise on finding that in my case the annotation 'M.D. Paris, is omitted, as also in the case of Dr. Chepmell, while it is not omitted in several other instances.

"If the *Directory* purports to show the scientific standing of the members of the profession, it must have one and the same rule for all.

"I am, gentlemen, yours truly,

"THOMAS COOKE, M.D. Paris, F.R.C.S.E.,

"Ass'tant-Surgeon to and Demonstrator of Anatomy at Westminster Hospital."

MR. LARDNER GREEN'S communication was duly received, and shall have attention.

MR. FURNEAUX JORDAN'S request shall be complied with, if possible. We fear that some of the numbers in question are out of print, and we have no means of procuring them for him.

THERMOMETER CHARTS.

SIR,—Can you inform me where I can obtain thermometer charts marked with the same number of degrees as are marked on the thermometers? Those published by Messrs. Harvey and Reynolds, of Briggate, Leeds, commence with 96 deg. Two cases have come under my observation, where the temperature was frequently as low as 93 deg. Again, it would be better if a wider space were allowed for the registration of the pulse, as it is necessary, in cases of aneurism of the arteries of the neck and upper extremities, to register both the right and the left pulse.

Dec. 18, 1871.

I am, etc., GEO. CHAS. COLES.

ENGLISH POOR LAW.—A Poor-law Medical Officer writes to say that, about a week since, I applied to the Board of Guardians for extra remuneration, on account of the number of small-pox cases I have had under my care at the Dartford Union Workhouse, stating that medical officers of other unions had been rewarded in a similar way. At the weekly meeting of the Board this morning, they requested me to prepare a statement by next Saturday, citing some of the names and the circumstances under which this extra remuneration had been granted. I shall esteem it a great favour if you can furnish me with any names of the recipients, with or without the particulars under which the remuneration was granted.

* * The Guardians of the Westminster Union have granted a gratuity to the medical officer of the Petty France Workhouse, for his extra labour during the small-pox epidemic. The Paddington Guardians also awarded a gratuity to their workhouse medical officer; and the Mile-end Old Town guardians have granted a gratuity to their district medical officer; and there are, doubtless, many others that have received gratuities for their services.

TORSOCCLUSION.

SIR,—Dr. McRae will find particulars regarding the first use of torsocclusion in Sir J. Y. Simpson's work on *Acupressure*. Let me repeat what I stated in my former letter concerning the properties of the different varieties of iron-wire—viz., hard tempered wire is elastic, annealed wire is inelastic. Mr. Harper, of Aberdeen, one of the most extensive wire-workers in the North of Scotland, has assured me of the correctness of my statement, and has expressed his willingness to give Dr. McRae ocular proof, should he desire it. I am, etc., J. C. OGILVIE WILL.

VENTILATION OF DRAINS.

SIR,—How would you ventilate drains from a country house? My notion has been to ventilate the cesspool by a pipe projecting about ten feet above the ground, and by this means try to prevent the accumulation of gases, which might, by backward pressure, force the traps and enter the house. I am, etc., A. P.

PROSTATIC GLEET.

SIR,—A young man, aged 30, has for two years past been troubled with prostatic gleet, for which the many remedies tried have proved unavailing. The prostate is slightly tender and swollen; there is some feeling of tenesmus; in the morning, after micturition, there is a discharge of clear sticky mucus; seminal emissions in dreams are attended with some degree of obscure perineal pain. Blisters to the perineum have been tried with some relief, but not with perfect curative results. These, with cold water enemata into the rectum, as recommended by Sir H. Thompson, are the only plans of treatment that have been found of avail. Can you, or any of your surgical readers, mention any drugs (iron and turpentine have both been tried) or application likely to prove successful in removing the condition? You or they would thereby much oblige, Yours, etc., A. B. M. A.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Inverness Courier, Dec. 21st; The Bristol Daily Post, Dec. 22nd; The Liverpool Weekly Albion, Dec. 23rd; The North British Daily Mail, Dec. 20th; The Melbourne Argus, Nov. 6th; The Hastings and St. Leonards News, Dec. 22nd; The Ipswich Journal, Dec. 23rd; The Barnstable Times, Dec. 26th; The Lincoln, Rutland, and Stamford Mercury, Dec. 22nd; The Lincoln Journal, Dec. 26th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. T. Longmore, Woolston; Mr. Furneaux Jordan, Birmingham; Dr. George Johnson, London; Dr. E. Bucknill, Rawtenstall; Mr. T. D. Saunders, Smarden; Dr. Rowan, Kilkee; Mr. Michell Clarke, Clifton; Mr. Brocklehurst, Manchester; Dr. Denton, Bridlington; Mr. Stewart Clark, Allahabad; Dr. John Harley, London; Mr. W. B. Hay, Hull; Le Directeur de la Revue Scientifique, Paris; Zymosis; Mr. R. N. Willis, Rathmines; Dr. F. Harris, London; Mr. J. J. Bunch, Wolverhampton; Dr. Bishop, Paris; Mr. E. N. Smith, Crawley; An Associate; Mr. J. Robinson, Denbigh; Mr. J. Sleman, Gunnislake; Mr. D. P. Evans, Belper; Mr. C. B. Breary, Scarborough; Dr. Miller, Dundee; Mr. E. P. Edwards, Plas, Llanfigall; Mr. J. A. McDonagh, London; Mr. G. H. Evans, Birmingham; Sir H. Hillard, London; Mr. W. E. Musson, Clitheroe; Dr. A. Farre, London; Mr. A. E. Barrett, Lynn; Dr. B. W. Foster, Birmingham; The Registrar-General of England; The Secretary of Apothecaries' Hall; The Registrar-General of Ireland; Mr. T. M. Stone, London; The Registrar of the Medical Society of London; Dr. Armstrong, Gravesend; The Secretary of the Obstetrical Society; Mr. Watkin Williams, Birmingham; Dr. Wiltshire, London; Dr. Bodkin, Chelmsford; Mr. H. B. George, Oxford; Mr. Lewis Lewis, London; Dr. R. G. Alexander, Bradford; Dr. J. Rogers, London; Our Berlin Special Correspondent; Dr. Ferries, London; Mr. Skey, London; Dr. B. W. Foster, Birmingham; Dr. Styrap, Shrewsbury; Mr. F. Jordan, Birmingham; Dr. Shapter, Exeter; Our Vienna Correspondent; Dr. Rumsey, Cheltenham; Mr. A. E. Durham, London; Mr. Greenway, Plymouth; Dr. Benjamin Hunt, Birmingham; Mr. Elliot, Kingsbridge; Mr. F. C. Bullmore, Plymouth; Dr. Shettle, Reading; Mr. S. Payne, Norwich; Dr. F. T. Roberts, London; Dr. Beverley, Norwich; Mr. J. A. MacDonald, Woburn; Mr. Reeves, King's College; Mr. J. Grant, Grantown; Dr. Gray, Castlewellan; Mr. E. B. Roche, Norwich; Dr. Mulvaney, Dundalk; Dr. Leslie, Battersea Park; Mr. C. J. Evans, Northampton; Dr. Dale, Plymouth; etc.

Now Ready, Price 10s. 6d., the EIGHTH EDITION of

Squire's Companion to the British PharmacopœiaContains the New Medicines, *Chloral*, *Chloroxide of Iron*, *Subcutaneous Injections*, and all Practical Information up to the present time.

J. & A. CHURCHILL, New Burlington Street.

THE VISITING LIST FOR 1872.

THE TWENTY-SIXTH YEAR NOW READY.

Medical Account Books. Complete Sets always ready. **Practitioner's Private Register of Cases, with Index** For 500 Cases, 5s.; by post, 5s. 6d.**Medical Bill Heads & Account Forms.** Prospectus, with Specimens and Prices, post free on application. **Register of Obstetric Cases.** For 250 Cases, 2s. by post 2s. 2d.; for 500 Cases, 3s., by post 3s. 4d.

Orders forwarded direct to the Publishers will be executed immediately.—J. SMITH & CO., Medical Stationers, 52, Long Acre, London, W.C.

PRIZE MEDAL OF THE BRITISH MEDICAL ASSOCIATION.

THE HASTINGS GOLD MEDAL, value Twenty Guineas, is offered annually by the BRITISH MEDICAL ASSOCIATION as a Prize for an Essay on some subject connected with Medical Science. The subject selected for competition for 1873 is—"ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES," and the award will be made at the Annual Meeting of the Association in that year. Essays must not be in the handwriting of the Author. Each Essay, which must not exceed in length twenty-four pages of the BRITISH MEDICAL JOURNAL, must be sent, under cover, with a sealed envelope bearing the motto of the essay and containing the name and address of the Author, to the General Secretary of the Association, 37, Great Queen Street, on or before the 1st of May, 1873. The successful Essay will be the property of the Association, and will be published in the BRITISH MEDICAL JOURNAL.

13, Newhall Street, Birmingham.

T. WATKIN WILLIAMS, F.R.C.S., General Secretary *pro tem*.

All the New Books and New Editions, in unlimited supply, on the day of publication. Subscription commences at any date. Prospectus on application to H. K. LEWIS, 136, Gower Street, W.C.

Van Houten's Cocoa.

The only guaranteed Pure Soluble Cocoa, better and cheaper than any other Cocoa, Cocoa Extract, or any Chocolate.

The British Medical Journal, March 27th, 1869, says:—"Van Houten's Extract is admirable. In flavour it is perfect, and it is so pure, well prepared, and rich alkaloid," &c., &c. See also *The Lancet*, etc.

Sold in round Tins at 3s. 6d., 2s., and 1s. Sample Tins, sufficient for a family, free of charge, through your Grocer or Chemist.

Sole Consignee, H. ESCHWEGE, 6 & 7, Coleman Street, London, E.C.

Oxygenated Water is the

only Aerated Water of real service at this season; by its use vital warmth is kept up and health promoted without recourse to stimulants.—Laboratory, 36 Acre, Long London.

CITY DISTILLERY,

WOOD STREET, OLD STREET ROAD, E.C.

Spirits of Wine, best Quality,

specially for Chemists and Perfumers; Methyated Spirits, French Cognac Brandy, J. M. Farina's Eau de Cologne, Port and Sherry, finest Sublime Oil, and Hambro' Speckled Leeches, at lowest wholesale prices.

J. LEWISON, Distiller and Importer.

SCARLET FEVER, &c.

S. Whitfield and Sons, Puri-
FIERS of BEDDING and WEARING
APPAREL, by Chemical Process.

Purifiers to the Birmingham General Hospital.

Testimonials and Terms post free on application.

VIADUCT WORKS, OXFORD STREET
BIRMINGHAM.**GRANT'S MORELLA CHERRY BRANDY,**

Supplied to Her Majesty THE QUEEN.

This delicious Liqueur, from the famous Kent Morella, supersedes Wine in many households—is much favoured by Sportsmen, and is also recommended by the Medical Profession as a valuable tonic in cases of weakness. Order of any Wine Merchant, or direct of T. GRANT, Distillery, Maidstone. 42s. per dozen, cash, Carriage paid.

KINAHAN'S LL. WHISKY.

This celebrated and most delicious old mellow spirit is the very CREAM OF IRISH WHISKIES, in quality unrivalled, perfectly pure, and more wholesome than the finest Cognac Brandy.

Note the words "Kinahan's LL. Whisky", on Seal, Label, and Cork.

Wholesale Depot, 6A, Great Titchfield Street, Oxford Street, W.

INDEX TO VOLUME II FOR 1871.

A.

Abdomen, puncture of, in tympanites, *see* Colon.
 A'Beckett, Mr. A. M., obituary notice of, 278
 Abortion, and mesmerism, 15; trial for producing, 101; Dr. Swayne on hæmorrhage after, 201; case of, 634
 Acardiac foetus, circulation in the, Dr. J. W. Ogle on, 490; Dr. G. Johnson on, 524
 Acland, Dr. H. W., habits of labouring classes, 478
 Action, by Dr. Pantaleoni against *Tablet*, 15; Craig versus Jex-Blake, 446; for alleged maltreatment, 531
 Acupressure, letters on, 425, 516, 651
 Adams, Mr. J. E., treatment of cervical abscess, 756
 — Dr. Robert, treatment of ganglion, 123
 — Mr. W., treatment of ganglion, 38
 Adulteration of chocolate, 564; of drugs in America, 587
 Albuminuria, strychnia in, 501
 Alcohol, treatment of disease without, 648; medical declaration respecting, 737; Dr. J. W. Eastwood on use of, 755; Mr. Skey on declaration concerning, 788
 Aldridge, Dr. R., iron in scarlatina, 175
 Allbutt, Dr. T. C., Dr. Haughton's teleology, 83; marasmus after enteric fever, 242, 547; electricity in hemiplegia, 262; address at opening of Leeds School of Medicine, 416
 Allen, Mr. A. H., address at opening of Sheffield School of Medicine, 417
 Althaus, Dr. J., the galvanic current in paralysis of the bladder, 242, 581
 Ambulance, the English, in Paris, 99; the Anglo-American, 333; of the press, in Paris, 421
 Ambulances, Mr. W. Mac Coimac on, 244; humours of the, 309
 America, medical practitioners in, 155; pseudo-medical degrees in, 425, 620
 Ammonia in whooping-cough, Mr. Grantham on, 323
 Amputation of thigh, supracondyloid, 277; of penis by galvanic cautery, 384; of forearm in an old man, 614
 Amyl, nitrite of in cholera, Dr. Talfourd Jones on, 378; letters on, 426, 451; in angina, 670
 Amyloid degeneration, case of, 654
 Anæmia, fatal, case of, 613
 Anatomy, "institute of," 601; teaching of, 711
 Aneurism, treatment of by compression, Dr. Macnamara on, 199, 244; of abdominal aorta, Mr. S. Woodman on, 380; of popliteal artery, 383, 439, 729; of innominate artery, 387, 653; of heart, 511, 654; of subclavian artery, injection of ergotin, 529; of thoracic aorta, tracheotomy in, 538, 603; of thoracic aorta, 682, 685; of subclavian artery, 686; of aorta, Dr. G. Johnson on diagnosis of by laryngoscope, 720
 Angina pectoris, digitalis in, 91; Dr. Anstie on pathological relations of, 550; nitrite of amyl in, 670
 Animals, killing of, without pain, 512
 Ankle, Dr. J. Carmichael on rare luxation of, 35; disease of, 668
 Ankylosis of hip after coxitis, 81; Dr. J. Hardie on subcutaneous section in, 438; Mr. Jessop on, 439; false, of hip, 698
 Annandale, Mr. T., sen., obituary notice of, 656
 — Mr. T., treatment of ganglion, 95; the Syme testimonial, 337
 Anstie, Dr. F. E., pathological relations of asthma, angina pectoris, and gastralgia, 550
 Antiparasitic ointment, 70
 Antiseptic treatment of wounds, Dr. E. Drummond on, 4; Mr. Lister on, 225; Mr. E. Lund on, 243; Dr. W. Newman on, 662
 Antiseptics, Mr. T. P. Blunt on, 61; letters on, 140, 168
 Antiseptic soaps and solutions, 327
 Aorta, abdominal, Mr. S. Woodman on aneurism of, 380; thoracic, tracheotomy in aneurism of, 538, 603; Mr. B. Browning on rupture of, 661; thoracic, aneurism of, 682, 685; Dr. G. Johnson on diagnosis of by laryngoscope, 720
 Aphasia, uncomplicated, 684
 Aphthæ, epizootic, 539
 Apothecaries, Society of, regulations of, 288; prizes, 563; pass-lists, *see* Medical News in each number
 Apothecaries' Hall of Ireland, dinner of, 157; office-bearers, 187; regulations of, 297
 Arm-presentation, Mr. Wright on evisceration in, 467
 Army, British, successful candidates for medical service, 224, 252; regulations for medical service, 300; return of soldiers from India, 473
 — French, the medical commissioners on, 617
 — German, sunstroke in, 15; entry of into Berlin, 24; loss of surgeons in war, 46; losses by sick and wounded in, 129; medical commissioners on, 617
 — Portuguese, mortality in, 11
 Arnold's enema-apparatus, 235; surgical bag, 327

Arnott, Mr. H., treatment of cervical abscess, 727
 Arsenic in wall-papers, 101, 392; in menorrhagia and leucorrhœa, Dr. Aveling on, 247; in chorea, Dr. J. K. Spender on, 429
 Arteries, variations in diameter of, 703
 Artery, axillary, Dr. Smart on injury of, causing gangrene, 245, 342; central, of retina, Mr. C. S. Jeaffreson on embolism of, 351; popliteal, aneurism of, 383, 439, 729; innominate, aneurism of, 387, 653; vertebral, Mr. H. Taylor on embolism of, 527; subclavian, ergotin injected in aneurism of, 529; aneurism of, 686
 Artery-forceps, self-holding, 597
 Artesian well, an, 703
 Arthritis, chronic rheumatic, 557
 Asbury, Mr. J. V., obituary notice of, 195
 Ascites, elaterium in, 557
 Aspray, Mr. C., obituary notice of, 279
 Assafœtida, syrup of, 670
 ASSOCIATION, BRITISH MEDICAL, Mr. Gamgee's remarks on, 20; programme of annual meeting, 21, 48, 77, 106, 131, 159; proposed alterations in laws, 22, 48, 193; committee on Parliamentary Bills, 22, 134; collection of subscriptions, 42; annual museums, 46, 48, 78, 391; statement of local committee, 77; secretaries of sections, 78; Mr. Hodgson on the business of, 137; president's address, 169; address in medicine, 171, 210; report of committee on Observation and Registration of Disease, 177; report of Parliamentary Bills Committee, 178, 212; report of Poor-law Committee, 179; remarks on the annual meeting, 182, 215, 265; thirty-ninth annual meeting, 189, 200; address from Town Council of Plymouth, *ib.*; vote of thanks to the retiring president, *ib.*; report of Council, 190; financial statement, 191; discussion on report, *ib.*; report of joint committee in the report of the Royal Sanitary Commission, 203, 212; members present at annual meeting, 208; discussion on alterations of laws, *ib.*; address from Town Council of Devonport, 210; place of meeting in 1872, *ib.*; report of Medical Reform Committee, 210; votes of thanks, 218; dinner, *ib.*; meetings of Committee of Council, 214, 536; address in surgery, 225; remarks on business and constitution, 236; photographs of members, 240; Section of Medicine, abstract of papers and discussions, 241; Section of Surgery, abstract of papers and discussions, 243; Section of Midwifery, abstracts of papers, 246; Section of Public Medicine, abstracts of papers and discussions, 247, 274; members of committee of Council, 250; temperance breakfast, *ib.*; excursions, 251, 311; members of joint committee on Sanitary Legislation, 276; members of Poor-Law Medical Reform Committee, *ib.*; arrangements for meeting in 1872, 311; election of general secretary, 533; Mr. G. May on memorabilia in history of, 575; preparations for the annual meeting in 1872, 731; list of officers and council, 763; list of members, 765
 — Bath and Bristol Branch, annual meeting, 164; ordinary meetings, 569, 740
 — Birmingham and Midland Counties Branch, annual meeting, 23; general meetings, 510; meetings of pathological and clinical Section, 554, 681
 — Cambridge and Huntingdon Branch, annual meeting, 49
 — Cumberland and Westmorland Branch, annual meeting, 161; autumnal meeting, 593
 — East Anglian Branch, annual meeting, 49
 — Lancashire and Cheshire Branch, annual meeting, 80
 — Metropolitan Counties Branch, annual meeting, 162
 — North Wales Branch, annual meeting, 108
 — Northern Branch, annual meeting, 48
 — Reading Branch, annual meeting, 536
 — Shropshire Ethical Branch, annual meeting, 536
 — Shropshire Scientific Branch, annual meeting, 652
 — South-Eastern Branch, annual meeting, 78; East Kent district meeting, 681; West Kent district meetings, 450, 681; East Sussex district meetings, 423, 681
 — South Midland Branch, autumnal meeting, 451
 — South Wales and Monmouthshire Branch, annual meeting, 135; autumnal meeting, 594
 — West Somerset Branch, annual meeting, 134; autumnal meeting, 450
 — Yorkshire Branch, annual meeting, 164
 Association, British, for advancement of science, annual meeting, 187, 222; suggested changes in, 216
 — of Certifying Medical Officers, annual meeting, 656
 — Herefordshire Medical, report of, 421
 — Italian Medical, programme of, 445

Association, Manchester and Salford Sanitary, discussion on small-pox, 74
 — of Medical Officers of Health, proceedings of, 538, 653, 787
 — proposed medical, in Spain, 332
 — North of Scotland Medical, annual meeting, 157
 — Poor-law Medical Officers of England, annual meeting, 126; meeting on Mr. Corrance's Bill, 562; payment of subscriptions, 655; address, 744
 — Poor-law Medical Officers of Ireland, address, 745
 — St. Andrew's Medical Graduates, summer session, 73; annual session, 678
 — Social Science, subjects for discussion in, 238
 — proceedings in department of Public Health, 476
 Asthma, cardiac, digitalis in, 92; Dr. Anstie on pathological relations of, 550; Dr. Thorowgood on, 612
 Asylum, for idiots, at Lancaster, 156; new, for East London, 184; lunatic, at Aberdeen, 220; for idiots, at Earlswood, donation from Queen to, 386; new, in Glasgow, 620
 Asylums, remarks on management of, 12, 100; superannuation of medical officers of, 47; letter on management of, 109, in England, statistics of, 387; of Victoria, 672
 Atlas, Mr. W. Stokes on gunshot fracture of, 716
 Australian meat, 218, 648, 650; entozoa, 590
 Aveling, Dr. J. H., arsenic in menorrhagia and leucorrhœa, 247
 Axford, Mr. W. H., vaccination, 135

B.

Baby-farming in Scotland, 18; proceedings of committee concerning, 103; trial concerning, 156, 360
 Baker, Mr. Benson, poor-law medical service, 249; sanitary tour through Dublin, 335, 362; medical charities of Ireland, 507, 565
 Barbosa, Dr., Operations at St. Joseph's Hospital in Lisbon, *rev.*, 11
 Barham, Dr. C., the annual meeting of the Association, 83; diseases of miners, 241, 253
 Barnes, Dr. R., sudden death in patients suffering from cancer, 62; hypertrophy of the cervix uteri, 246, 375; decapitation and evisceration, 570; investigation of diseases of women, 576
 Barry, Mr. T. S., obituary notice of, 711
 Barton, Dr., treatment of ganglion, 123; introductory lecture at the Adelaide Hospital, 592
 Basham, Dr. W. R., introductory address at Westminster Hospital, 412
 Bastian, Dr. H. C., epidemic and specific contagious diseases, 400
 Bathers, sea-side, safety for, 268
 Baths, new, at University College Hospital, 186; public swimming, 331
 Battery, portable galvanic, 281
 Bäumlér, Dr. C., idiopathic pericarditis, 484
 Beatty, Dr. T. E., fibro-cystic disease of the uterus, 246, 517; radical cure of retroflexion of uterus, 246, 341
 Beaupérthuy, Dr., death of, 421
 Bear, chloral in, 618
 Begbie, Dr. J. W., therapeutic action of turpentine, 277
 Behrend, Dr. H., lip-reading by the deaf and dumb, 598
 Bell, Dr. Joseph, treatment of ganglion, 95; treatment of scrofulous abscesses of neck, 728
 — Mr. Royes, treatment of ganglion, 9
 Belladonna, poisoning by, 326
 Bellamy, Mr. E., treatment of ganglion, 37; treatment of scrofulous abscesses of cervical glands, 757
 Bennet, Dr. J. H., physical geography and climate of Spain, 346
 Bequests, 131, 224, 339, 353, 372, 424, 441, 515, 538, 572, 581, 622, 656, 677, 713, 747, 790
 Berlin, special correspondence from, 24, 193, 623, 784
 Bernays, Dr. A. J., disinfectants, 364
 Bigelow, Dr., on dislocation of the hip-joint, 718
 Billroth, Dr., Surgical Pathology, *rev.*, 11; ovariectomy, 650
 Birt, Mr. J., obituary notice of, 367
 Black, Dr. D. C., treatment of nocturnal enuresis, 609
 Blackman, the late Dr. G. C., 388
 Bladder, exfoliation of, Mr. Spencer Wells on, 8; Mr. W. Whitehead on, 432; Dr. G. Buchanan on, 520
 — Dr. Althaus on paralysis of, 242, 581; hyperæsthesia of, 379; extroversion of, 585; Sir H. Thompson on diagnosis of diseases of, 662
 Blandford, Dr., Insanity and its Treatment, *rev.*, 327
 Blood, heat of, during arterialisations, 222
 Blunt, Mr. T. P., disinfectants, 61
 Bones, removal of tumours from, 50

Bone-setter, a female, 618
 Bone-setting in Algeria, 649
 Boulton, Dr. P., treatment of retroflexion of the uterus, 524; paralysis during pregnancy, 756
 Brabazon, Dr. A. B., pathology and treatment of cholera, 278; treatment of retroflexion of the uterus, 539
 Bradbury, Dr. J. B., prognostic value of hæmoptysis, 259; treatment of cholera and diarrhoea, 383
 Bradley, Mr. S. M., new evolutions of disease, 19; unity of syphilitic virus, 216, 376; the germ-theory of disease, 452; rupture of membranes before delivery, 612; death in chloroform-poisoning, 641; effect of rocking on temperature, 725
 Brain, Dr. G. Gray on decreased frequency of pulse as a sign of disease of, 94; digitalis in anæmia of, 147; cancer of, 603; concussion of, 681; iodide of potassium in disease of, 683, 684; tumour of, 710
 Bramwell, Dr. J. B., address to Northern Branch, 49
 Brazil, Emperor of, visit to College of Surgeons, 128
 Breast, cancer of, 604, 698
 Broadbent, Dr. W. H., chloral in delirium tremens, 36; herpes frontalis giving rise to erysipelas, 94
 Bromide of potassium, effects of, 310, 352, 353, 380, 426, 435
 Bromine in uterine cancer, 246
 Bromohydrates of quinine and cinchonine, 501
 Brown, Mr. G. D., abdominal puncture in tympanites, 526
 ——— Dr. J. D., on death from chloroform, 93
 ——— trust and the University of London, 14, 53
 Browne, Dr. Henry, treatment of cholera and diarrhoea, 381
 ——— Dr. J. C., hysterical mania, 113, 145
 Browning, Mr. B., recovery after swallowing a large quantity of chloral, 640; rupture of aorta within pericardium, 661
 Brumwell, Dr., hydrophobia after bite of a cat, 434
 Bruuton, Dr. T. L., experimental researches on the action of medicines, 659, 687, 749
 Buchanan, Dr. G., treatment of ganglion, 95; exfoliation of the bladder, 520
 ——— Dr. R., obituary notice of, 453
 Bucknill, Dr. E., amaurosis after convulsions during bronchitis, 756
 Bullen, Mr. G., obituary notice of, 629
 Bunion-spring, a, 441
 Burns, treatment of, 203
 Burrows, Mr. Cordy, testimonial to, 503
 Bushell, Mr. T., obituary notice of, 453

C.

Cabs, small-pox in, 620
 Cacography, ingenious, 746
 Cæcum, cancer of, 670
 Calabar bean, poisoning by, 73
 Calculi in Museum of Royal College of Surgeons, Mr. T. Taylor's Catalogue of, *rev.*, 500; under the prepuce, 730
 Calculus, rare, 193; in female bladder, Mr. C. Heath on, 431; large, with tumour of prostate, 558
 Calvert, Dr. C., antiseptics and disinfectants, 140
 Campaign, the Berkshire, 155
 Canal, the Regent's, state of, 242
 Cancer, Dr. R. Barnes on sudden death in, 62; treatment of by condurango, 237, 309, 497, 503, 731; of stomach, 527, 597; of kidney, 583, 597; of brain, 603; of spleen, 604; of breast, 604, 698; intrauterine, 634; of oesophagus, excision of, 643; of cæcum, 670; rapid formation of, 686; of mediastinum, 742
 Cancerum oris, Dr. Priestley on, 577; Mr. McGreevy on, 635
 Cane-sugar, action of light on, 704
 Cantharides, poisoning by, 437
 Capillaries, action of digitalis on, 27
 Carbolic acid in snake-bite, 70; Dr. A. Mackintosh on experiments with, 151; vegetable source of, 589; in small-pox, 611; paper, 790
 Carmichael, Dr. J., rare luxation of ankle, 35
 Carpenter, Dr. A., sewage and entozoa, 627, 711
 Carter, Dr. W., introductory address at Liverpool Royal Infirmary School of Medicine, 416
 Cartilages, loose, in knee-joint, Mr. H. J. Alford on, 124; Mr. Square on, 245, 343
 Casey, Dr. T., obituary notice of, 338
 Cat, Dr. Brumwell on hydrophobia after bite of a, 434
 Cataract, congenital, 510; Dr. R. Liebreich on extraction of, 633
 Catheterism of the Eustachian canal, Dr. R. H. Taylor on, 548; Dr. S. Haynes on, 725
 Cattell, Dr. T., administration of chloroform, 112
 Cattle-plague in Chili, 14
 Caution, galvanic, amputation of penis by, 384
 Cayley, Dr., Middlesex and University College Hospitals, 485
 Census of the British Isles, 43
 Cerebellum, absence of, 180; tumour of, 242, 528, 787
 Cerebrum, hyperæsthesia of, 371. *See* Brain.
 Certificates, death, remarks on, 388, 674; letter on, 573
 Chadwick, Mr. E., sanitary influences of town-pavement, 472; sanitary construction of schools, 482
 Chambers, Dr. T. K., Harveian oration, 1, 310
 ——— Mr. T., ovariectomy, 426
 Chapman, Dr. J., nitrite of amyl in cholera, 426

Chapman's entire wheat-flour, 441
 Chausseaud, Dr., Invasion and Propagation of Cholera, *rev.*, 730
 Cheadle, Dr. W. B., cirrhosis of the liver in early life, 545
 Chemistry, Medical Council on teaching of, 68
 Chicago, fire at, 759
 Children, pauper, boarding of, 165; Dr. West's Lumleian Lectures on Disorders of the Nervous System in, *rev.*, 11; Dr. Priestley on empyema in, 577; mortality among in Vienna, 589; ovariectomy in, *ib.*; injuries of, by nurses, 675
 Chloral in delirium tremens, Dr. Broadbent on, 36; Dr. G. Elliott on, 63; in small-pox, Dr. Pollard on, *ib.*; in toothache, Dr. D. Page on, 262; large doses of, 437; in cholera, 531; action on fœtus in utero, 516, 544, 573; in beer, 618; Mr. Browning on recovery after large dose of, 640; use of in New York Asylum, 643; toxic effect of, 670; in puerperal convulsions, Dr. Swayne on, 752
 Chloroform, Mr. Clover on accidents from, 33, 278; Dr. Skinner on deaths from, 54; Dr. Petrie on, 85; Mr. J. D. Brown on death from, 93; Mr. Lister on accidents from, 117; deaths from, 124, 130, 388, 421, 619, 641; electro-puncture of the heart in apparent death from, 330; and ether as anæsthetics, 537; recovery after large dose of, 635; Mr. Bradley on death from, 641
 Chlorosis, treatment of, 334
 Chocolate and its adulterations, 564
 Cholera, Sir Thomas Watson on, 141; Dr. Murray on, 175; Dr. G. Johnson on, 197; Dr. R. Martin on, 198; discussion on, 241; Dr. Brabazon on, 278; reports on treatment of, 324, 380, 438; Mr. G. Foote on sporadic case of, 352; Dr. Talfourd Jones on nitrite of amyl in, 378; letters on nitrite of amyl, 426, 451; chloral in, 501; Dr. Chausseaud on Invasion and Propagation of, *rev.*, 730; notes of prevalence of, 16, 45, 74, 120, 156, 158, 185, 217, 221, 239, 272, 310, 333, 336, 365, 386, 423, 443, 473, 504, 532, 620, 735; precautions regarding, 155, 158, 182, 183, 186, 218, 220, 221, 239, 273, 333, 366, 588; order of Privy Council, 186; alarm of in London, 219, 225; memorandum of medical officer of Privy Council, 221; course of epidemic in 1871, 237; epidemiology of in the Punjab, 269; the Registrar-General's prescription for, 271; accommodation for in London, 423; causes of in India, 589; the water-theory of, 626
 ——— infantile, Trousseau on treatment of, 332
 Cholesterine, spontaneous deposit of crystals of, 597
 Chorea, Dr. J. K. Spender on arsenic in, 429
 Christian, Dr. J. S., obituary notice of, 513; resolution of committee of Royal Humane Society on, 564
 Christison, Sir R., bust of, 17; baronetcy conferred on, 564
 Christmas in hospital, 736
 Cinchona, Messrs. Southall's preparations of, 615
 Circulation in the cardiac fœtus, Dr. J. W. Ogle on, 490; Dr. G. Johnson on, 524; of BRITISH MEDICAL JOURNAL and *Lancet*, 504, 532, 539, 563, 570
 Clapton, Dr. E., treatment of cholera and diarrhoea, 383
 Clark, Mr. F. Le Gros, treatment of ganglion, 10; introductory address at St. Thomas's Hospital, 397; biliary concretion in ileum, 537; treatment of abscess in neck, 726
 ——— Dr. James, obstructed labour, 597
 Clarke, Mr. W. Fairlie, atrophy of tongue, 35, 682; treatment of scrofulous abscess in neck, 757
 ——— Dr. J., introductory address at St. George's Hospital, 400
 Clements, Mr. G., rupture of the uterus, 467
 Clinical instruction, Medical Council on, 67
 Clothes, pawning infected, 505
 Clover, Mr. J. T., accidents from chloroform, 33, 278
 Club, Edinburgh University, general meeting, 155
 Clubs, benefit, remarks on, 502; resolutions regarding fees, 760
 Cobbold, Dr. T. S., the new hog-parasite, 394; sewage and entozoa, 654
 Cocking's poroplastic splints, 355
 Cold, effect of local application of, 136; treatment of hyperpyrexia by, 241
 College, Female Medical, remarks on, 357, 396, 454; in New York, 759
 ——— King and Queen's, of Physicians of Ireland, regulations, 296; officers of, 506; pass-list, 514, 629
 ——— King's, changes in, 282; classes and fees, 298, 302; Dr. Rutherford's introductory address at, 410
 ——— Malvern, speech day at, 188
 ——— Queen's, Birmingham, changes in, 282; classes and fees, 305, 306; Dr. Russell's introductory address at, 414
 ——— Royal, of Physicians of Edinburgh, regulations, 292; office-bearers, 676
 ——— Royal, of Physicians of London, Dr. Chambers's Harveian Oration, 1; pass-lists, 138, 195, 485, 542, 746; fellows of, 154; lecturers at, 217; bye-laws, 284; new regulations concerning library and reading-room, 647
 ——— Royal, of Surgeons of Edinburgh, pass-lists, 167; regulations, 292; officers, 535
 ——— Royal, of Surgeons of England, election of members of Council, 43, 55; additions to Museum, 45, 443, 735; new Fellows, 74; appointments in, *ib.*; festival of Fellows of, 75; removal of name from list of members, 106; pass-lists, 111, 138, 167, 195, 514, 572, 600, 656, 686, 712; examination questions, 140, 602,

687; visit of Emperor of Brazil to Museum, 128; proceedings of Council, 223, 510, 738; regulations, 286; finances and statistics, 394; registration at, 446, 475; Mr. Taylor's Descriptive Catalogue of Calculi in Museum, *rev.*, 500; statistics regarding examinations, 618; candidates at, 616, 626; proceedings in case of Mr. Washington Evans, 673, 703; Mr. Cock's resignation, 704; letters on examinations at, 711; prizes of, 761
 College, Royal, of Surgeons in Ireland, regulations, 296
 ——— University, the Sharpey scholarship, 44, 156; classes and fees, 299, 304; Dr. Bastian's introductory address at, 400
 ——— University of Durham, at Newcastle, classes and fees, 306, 308; Dr. Philipson's introductory address at, 411
 Colon, case of opening the, 193; puncture of in tympanites, Mr. J. H. Wathen on, 464, 515, 612; Dr. Littleton on, 518; Dr. Braxton Hicks on, 526, 556; Mr. G. D. Brown on, 526; Mr. Mc Bride on, 527; Sir T. Watson on, 563; Dr. G. S. Saunders on, 583; Dr. T. M. Rooke on, 584; Dr. S. Wilks on, *ib.*
 Commercial antagonism, 340
 Concours in France, 735
 Condurango, use of in cancer, 237, 309, 497, 503, 734
 Conrad, Dr., prolapse of female genitalia, 624
 Constipation attending use of iron, 203
 Consultations, remarks on, 18
 Contagious Diseases Acts, Mr. Bruce's remarks on, 89; the report of commission on, 99; deputation against, 129; the Association for extension of, 184, 359; discussion in Parliament on, 233; in India, 333; discussion on, 445; effects of, 619; meeting in Liverpool, 651; memorial on, 762
 Contagion, Dr. Burdon Sanderson's studies in, 328; Dr. Charlton Bastian on, 400; letter on, 451, 452
 Convict prisons, health of inmates of, 645
 Convulsions, puerperal, treatment of, 634; Dr. J. G. Swayne on hydrate of chloral in, 752; during bronchitis, Dr. E. Bucknill on, 756
 Cooke, Mr. F., obituary notice of, 599
 ——— Mr. T., treatment of abscess in neck, 757
 Copyright, international, 503
 Cormack, Dr. J. R. and a French court martial, 503; a member of the Legion of Honour, 588
 Corner for the curious, suggested, 735
 Coroners of Middlesex, salaries and expenses of, 270; precepts of, 271; and house-surgeons, 340; juries of, 360
 Coronership of North Northumberland, 474
 Cortis, Dr. W. S., lunatics in metropolitan asylums, 628
 Cottage-homes, 482
 Couch for bandaging, 81
 Counter-practice, 760
 Craig's solid pea-soup, 699
 Craniotomy, religious aspect of, 47
 Crichton, Dr. R. W., sulphate of iron in phlegmasia dolens, 246, 466
 Crisp, Mr. N., aneurism of aorta, 603
 Crocker, Mr. J., iron in scarlatina, 255
 Crossman, Mr. E., setons in strumous diseases, 693
 Croton-chloral-hydrate, 649
 Crystalline lens, dislocation of, 568
 Curragh, state of the, 334
 Cursham, Dr. G., obituary notice of, 424
 Cyanosis, Dr. E. Mackey, on a case of, 666
 Cyon's researches on diabetes, 732

D.

Dalby, Mr. W. B., teaching of the deaf and dumb, 573
 Dal Cin, Regina, account of, 618
 Dalrymple, Mr. D., his bill on drunkenness, 70; visit to America, 591
 Darwinian theory, Sir W. Thompson on, 187
 Daun, Dr. R., obituary notice of, 25
 Davidson, Mr. John, obituary notice of, 712; resolution concerning, 735
 Davies, Mr. David, difficulties and trials of a health officer, 248, 377; nuisance-inspectors, 274, 554
 Davy, Mr. R., treatment of ganglion, 87
 Day, Dr. H., address to St. Andrew's Medical Graduates' Association, 678
 Deaf and dumb, education of by lip-reading, 531; letters on, 573, 598
 Death, sudden, in cancer-patients, Dr. Barnes on, 62; registration of, 532, 544, 573
 Decorations, foreign, and British subjects, 219, 251
 Degeneracy of race in towns, 482
 De la Garde, Mr. P. C., obituary notice of, 628; resolution regarding, 674
 Delirium tremens, hydrate of chloral in, Dr. Broadbent on, 36; Dr. G. F. Elliott on, 63; digitalis in, 147
 Demarquay, Dr., dinner to, 104
 De Morgan, Mr. Campbell, treatment of ganglion, 36
 Dempster, Dr. J., obituary notice of, 655
 Dental diplomas, 418, 452; surgery, school of, 421
 De Renzy, Mr. A. C. C., water-theory of cholera, 626
 Dextral pre-eminence, 136
 Diabetes, milk-treatment of, 64; lactic acid in, 588, 720; acute, 728; the cause of, 732
 Diarrhoea in London, 185, 218, 273, 386; notes on nosology and treatment of, 324, 380, 438

Dickson, Dr. J. T., case of hydrocephalus, 696
 Dictionary for poor-law guardians, 573
 Dietaries in workhouses, 222
 Digitalis, Dr. J. M. Fothergill's Hastings prize essay on action and use of, 5, 27, 57, 90, 115, 146
 Dilke, Sir C., on the medical officers of the Royal household, 563
 Diplomas, forged, 534, 563; regulations in America against sale of, 620. See Medical degrees
 Disease, Mr. S. M. Bradley on evolution of, 19; prudential prevention of, 26; Dr. G. Johnson on nature and art in cure of, 171; report of Committee on observation and registration of, 177; remarkable epidemic in Pernambuco, 261; germ-theory of, Dr. R. Liveing on, 365; letters on, 451, 452; production of by excremental pollution, 479; treatment of without alcohol, 618
 Diseases, epidemic and specific, Dr. Bastian on, 400; epidemic, of last three years, 648
 Disraceful proceeding, a, 760
 Disinfectants, Mr. T. P. Blunt on, 61; letters on, 140, 168, 515; M. Dumas on, 237; Dr. Bernays on, 364
 Dislocation, rare, of ankle-joint, Dr. J. Carmichael on, 35; of hip-joint, Mr. J. Hutchinson on Dr. Bigelow's views of, 718
 Dispensaries, provident, Dr. Nankivell on, 274, 318; remarks on, 502
 Dispensary medical officer, charge against a, 737
 Dispensary system in Ireland, Mr. Benson Baker on, 507
 Diuretic, is digitalis a? 148
 Dobell, Dr., and the British and Foreign Review, 486
 Donations, 47, 184, 195, 217, 224, 237, 353, 372, 473, 515, 538, 572, 581, 622, 656, 677, 713, 747, 790
 Double-headed child, a, 268
 Down, Dr. Langdon, mouth and teeth in idiots, 734
 Dropsy, Dr. Murchison on, 723
 Drugs, adulteration of in America, 587
 Drutt, Dr. R., position and duties of medical officers of health, 653
 Drunkenness, Mr. Dalrymple's bill on, 70; habitual, discussion on, 678
 Drury, Mr. C. D. H., wasp-stings, 351
 Drysdale, Dr. C., prudential prevention of disease, 26
 Dublin, sanitary state of, 272, 329, 372, 390, 650; Mr. Benson Baker on a sanitary tour through, 335, 362; letters on, 336, 366; small-pox in, 535, 621, 650, 737; Dr. Grimsbaw on fever in, 605, 626; the streets of, 704
 Dubois, M. Paul, death of, 703
 Duckworth, Dr. D., visit to military hospitals at Bonn, 260
 Duigan, Dr. C., obituary notice of, 338
 Dumville, Mr. A. W., obituary notice of, 83
 Dundas, Dr. R., obituary notice of, 83
 Durham, Mr. A. E., removal of morbid growths of larynx, 623
 Durrant, Dr. C. M., treatment of diarrhoea and cholera, 382
 Dwellings, improvement of, 506
 Dyke, Mr. T. J., on mode of dealing with fevers at Merthyr Tydfil, 274
 Dynamometer, Dr. P. Smith on, 247
 Dysmenorrhoea, Dr. Protheroe Smith on treatment of, 247, 694; Dr. A. Hall on, 667; intermenstrual, 683
 Dyte, Mr., and the St. Pancras Guardians, 101, 281, 544

E.

Eade, Dr. P., modern medical doctrines, 257; treatment of diarrhoea and cholera, 438
 Eastwood, Dr. J. W., alcohol in health and disease, 755
 Edinburgh, special correspondence from, 597
 Edis, Dr. A. W., dilatation of the cervix uteri in anti-flexion and dysmenorrhoea, 525
 Edmunds, Dr., and cholera, 219, 225; the Female Medical Society, 396, 454
 Elaterium in ascites, 557
 Elbow-joint, Mr. Maude on excision of, 121; case of, 653
 Elder, Mr. G., cases of hydrophobia, 642, 669
 Electricity, Dr. Allbutt on hemiplegia treated by, 262
 Electro-puncture of heart in apparent death from chloroform, 330
 Elephantiasis Græcorum, Dr. R. Liveing on, 551; case of, 685
 Elevator for depressed cranium, Mr. Waterhouse on, 692
 Elliot, Dr. R., address to Cumberland and Westmorland branch, 161
 Elliott, Dr. G. F., chloral in delirium tremens, 63
 Ellis, Mr. R., revaccination by vesication, 612
 Ellison, Dr., monument of, 475
 Embolism of vertebral artery, Mr. H. Taylor on, 527
 Emmenagogue, polygonum hydropiper as an, 730
 Empyema with fetid sputum, 436; Dr. Priestley on paracentesis thoracis in, 577
 Endocarditis simulating intermittent fever, 193
 Endoscope, the, in military surgery, 4
 Enemata, origin of, 361
 Entozoa, Australian, 590; and sewage, letters on, 627, 654, 711
 Enuresis, Dr. D. C. Black on, 609
 Epidemics of last three years, 653
 Epilepsy, use of the ophthalmoscope in, 513

Epithelioma of palate, 497; of larynx, 529; of leg, 652
 Ergotin, injection of in aneurism, 529
 Erysipelas, contagious, after herpes frontalis, Dr. Broadbent on, 94; Dr. C. C. Ritchie on, 122; Dr. Wiltshire on removal of pitting of small-pox by, *ib.*; with delirium, chloral in, 437; sulphate of iron in, 599
 Ether and chloroform as anæsthetics, 537
 Ethmoid bone, cancer of, 730
 Eustachian tube, Dr. R. H. Taylor on catheterism of, 548; Dr. S. Haynes on, 725
 Evans, the late Dr. Griffith, resolution concerning, 590
 — Mr. Washington, proceedings of Council of College of Surgeons regarding, 673, 703
 Evanson, Dr. R. T., the Torquay excursion, 337; obituary notice of, 540
 Evolution and teleology, Rev. Dr. Houghton on, 140
 Examinations, conjoint, see Medical examinations
 Excision of elbow-joint, Mr. Maude on, 121; of scapula, Mr. C. Steele on, 243, 430; of tongue, 243, 384; of teeth, Mr. Fay on, 497; of hip, 604; of knee, 604, 668; of cancer of œsophagus, 643; of elbow-joint, 653; of wrist, 739
 Experts, medical, in courts of law, 101, 127, 185
 Extracts from a doctor's diary, 574, 714
 Extroversion of the bladder, cases of, 585
 Eye, operation after injuries of, 136; melanotic tumours of, 484; shot in, 513; Dr. Liebreich on examination of, 526

F.

Factory-workers, vaccination of, 127; discussion on health of, 480
 Faculty of Physicians and Surgeons of Glasgow, regulations of, 294; office-bearers, 417
 Faecal accumulation, Dr. C. J. Gibb on case of, 755
 Faithorn, Mr., death of, 503
 Farquharson, Dr. R., experiments on santonine, 466
 Fashions in medicine, Dr. Reynolds on, 256
 Fasting, alleged case of, 270, 331
 Favell, Mr. W., obituary notice of, 279
 Fawcus, Dr. J., obituary notice of, 541
 Fay, Mr. T. W. W., excision of teeth, 497
 Fees, midwifery, disputed, 368; consultation, 543; midwifery under order of Poor-Law Board, 599; for certifying lunatics, *ib.*
 Felce, Dr. S., registration of deaths, 544; the British Medical Benevolent Fund, 711
 Femur, division of neck of, 439; Mr. P. Hewett on injury of lower end of, 513
 Fergus, Dr. W., production of disease by excremental pollution, 479
 Fergusson, Sir W., removal of fungoid tumour of arm, 49
 Ferris, Mr. J. S., case of morphia-poisoning, 555
 Fever, mode of dealing with at Merthyr Tydfil, 274; in Dublin, Dr. Grimsbaw on, 605, 626; in Galway, 704
 — hectic, in phthisis, Dr. R. W. Foss on, 434
 — intermittent, endocarditis simulating, 193
 — relapsing, in Glasgow, 390; in Liverpool, 505
 — typhoid, Mr. W. G. Kemp on latent, 114; Dr. Clifford Allbutt on maresmus as an occasional consequence of, 242, 547; production of by sewage gases, 479, 671, 674; in London, 647; in Lincoln, 648; illness of H.R.H. the Prince of Wales from, 644, 671, 700; relation of scarlet fever to, 740
 — typhus, in Vienna, 309
 Fibrocystic disease of uterus, Dr. Beatty on, 246
 Filkin, Dr. R., obituary notice of, 395
 Fincham, Dr., treatment of diarrhoea and cholera, 324
 Fistula, vesico-vaginal, 585
 Fitzgerald, Dr. C. E., visible pulsation of arteria centralis retinae in aortic valvular disease, 723
 Fœtus acardiac, circulation in, Dr. J. W. Ogle on, 490; Dr. G. Johnson on, 524; action of chloral on, 516, 573
 Food for marching regiments, 267; parasites in, 310
 Foot, Dr. A. W., introductory address at the Meath Hospital, 592
 Foote, Mr. G., sporadic cholera, 352
 Foreign body in larynx, 355; bodies, subcutaneous, 602
 Foss, Dr. R. W., effects of bromide of potassium, 353; hectic fever in phthisis, 434
 Foster, Dr. B. W., synthesis of acute rheumatism, 720
 Fothergill, Dr. J. M., the Hastings prize essay on digitalis, 5, 27, 57, 90, 115, 146
 Foundlings at St. Petersburg, 309
 Fox, Mr. Charles J., the dental profession and the Royal College of Surgeons, 452
 — Dr. Cornelius, estimation of atmospheric ozone, 276
 — Dr. E. L., treatment of diarrhoea and cholera, 381; tuberculous phthisis, 463
 — Dr. Tilbury, use of bichloride of mercury, 337
 — Dr. Wilson, treatment of hyperpyrexia, 241
 Fracture of skull and vertebrae, 52; prevention of spasm in, 70; influence of nerves in repair of, 245; of skull, cases of, 383; of spine, 668; of neck of scapula, 682; of atlas from gunshot injury, Mr. W. Stokes on, 716; of cervical vertebrae, Dr. G. H. Savage on temperature in, 719; of os pubis, supposed, Mr. P. Hewett on, 722; of cervical vertebrae, 742
 Frerichs, Dr., and the Berlin Scientific Board, 784
 Fruit, damaged, sale of, 267
 Fuller, Dr. H. W., supposed cases of hysteria, 610
 Fungus hæmatodes, 604

G.

Gallstone, large, in the ileum, 537
 Galvanic current in ileus, 70; in paralysis of the bladder, Dr. Althaus on, 242, 581
 Galvanic cautery, and polypus-snare, 81; amputation of penis by, 384; nævus treated by, *ib.*
 Gamgee, Mr. J. S., the British Medical Association, 20
 Ganglia of heart, action of digitalis on, 27
 Ganglion, notes on treatment of, 9, 36, 64, 94, 123, 133, 139, 326, 527
 Gangrene from injury of axillary artery, Dr. Smart on, 342
 Gant, Mr. F. J., Science and Practice of Surgery *rev.*, 499
 Gascoven, Mr. G. G., treatment of ganglion, 37; treatment of scrofulous abscess of cervical glands, 727; the coming race, 743
 Gastralgia, Dr. Anstie on pathological relations of, 550; Dr. Thorowgood on, 612
 Gay, Mr. J., treatment of ganglion, 37
 Geese, too many, 702
 Generation, certain points relative to, 140; spontaneous, experiments on, 223
 Genitalia, female, prolapsus of, 624
 Germ-theory of disease, Dr. R. Liveing on, 365; Dr. Bastian on, 400; letters on, 451, 452
 Gibb, Dr. C. J., poisoning by sewage-water, 432; case of faecal accumulation, 755
 Gilder, Mr. W. T., obituary notice of, 789
 Gillespie, Dr. J., treatment of ganglion, 95
 Glanders, case of, 193
 Glands, cervical, scrofulous abscess of, 727, 756
 Glasgow, sanitary condition of, 103; relapsing fever in, 390
 Glaucoma, intraocular myotomy for, 579
 Glottis, case of œdema of, 653
 Gloves, poisonous silk, 144
 Godwin, Mr. G., address on public health, 457
 Gold, coming shower of, 444
 Gordon, Dr. C. A., the Prussian siege of Paris, 313
 Gourlay, Dr. S., poor-law medical officers and health-officers, 366
 Gout, veratrum viride in, 557
 Grantham, Mr. J., ammonia in whooping-cough, 323
 Gray, Dr. G., the pulse in cerebral complication, 94
 Greaves, Mr. A. G., obituary notice of, 514
 Green, Mr. E. S., obituary notice of, 338
 — Dr. T., introductory lecture at Charing Cross Hospital, 412; Introduction to Pathology, *rev.*, 500
 Greenhill, Mr. D., obituary notice of, 394
 Greenway, Mr. H., hospital construction, 275
 Greenwood, Dr. H., obituary notice of, 656
 Grieve, Dr. R., hæmorrhagic small-pox, 465
 Griffiths, Mr. T. D., intestinal wounds, 553
 Grimsbaw, Dr. T. W., remarks on the sanitary state of Dublin, 390; fever in Dublin, 605, 626
 Grubb, Mr. P., conduct of Warminster Guardians towards, 586; presentation to, 734
 Guardians, dissolution of a board of, 475; a dictionary for, 573
 Guinea-fee in Ireland, 745
 Gunshot injuries, the endoscope in, 4; the thermometer in, 446; remarks on nature of, 619; Mr. Longmore on exploration of, 715, 751
 Gunshot-injury, Mr. W. Stokes on fracture of atlas from, 716
 Gynæcometer, a, 785

H.

Habershon, Dr., treatment of diarrhoea and cholera, 325
 Haddon, Dr. J., effects of bromide of potassium, 580
 Hæmatocele, pelvic, 51
 Hæmaturia, intermittent, Mr. J. N. Stevens on, 323
 Hæmoptysis, Dr. Bradbury on prognostic value of, 259
 Hæmorrhage, from retention of secundines after abortion, Dr. Swayne on, 201; post partum, rare form of, 247
 Haining, Dr. W., early pregnancy, 496; house-surgeons and fees for necropsies, 515
 Halford, Dr. G. B., testimonial to, 74
 Hall, Dr. A., dysmenorrhoea and endometritis, 667
 Hamilton, Dr. E., treatment of ganglion, 123
 Hancock, Mr. H., treatment of ganglion, 37
 — Mr. J., obituary notice of, 600
 Hardie, Dr. J., subcutaneous section of neck of femur in ankylosis of hip-joint, 438
 Harding, Mr. J. F., treatment of wasp-stings, 380
 Harley, Dr. John, pathology of scarlatina, 740
 Harries, Mr. C. A., obituary notice of, 423
 Harrison, Mr., morbid conditions of bones, 603
 Harrison, Mr. Reginald, excision of the tongue, 384
 Harveian oration, Dr. T. K. Chambers, 1
 Harvey, tercentenary of, 387, 590
 Hastings, Mr. G. W., the recommendations of the Royal Sanitary Commission, 460
 Hastings prize essay, on digitalis, 5, 27, 57, 90, 115, 146
 Hatton, Dr. John, donation by widow to Life-Boat Institution, 72
 Houghton, the Rev. Dr., teleology and evolution, 83, 149
 Haward, Mr. J. W., ether and chloroform as anæsthetics, 537; treatment of scrofulous glandular abscess, 747
 Hay-fever, 739
 Haynes, Dr. S., cutaneous neurosis, 322; practitioners as jurymen, 516; catheterism of Eustachian canal, 725

- Head, Mr. Jessop on post-mortem examination of, 262
 Health-officers, *see* Medical officers of Health
 Hearing, physiology of, 568
 Heart, mode of action of, and disturbance, 6; action of digitalis on, 27, 57, 90; electro-puncture of in apparent death from chloroform, 330; mitral disease, 353; Dr. Handfield Jones on neuralgia of, 370; Dr. J. Thompson on rupture of left ventricle of, 497; aneurism of, 511; Dr. Shapter on disease of, 522; hypertrophied, 594; rupture of right auricle of, *ib.*; diseased, with splenic embola, 597; disturbed action of, 613; Dr. Brunton on investigation of action of drugs on, 659, 687, 749; Dr. Mackey on patent foramen ovale, 666; disease of, with transient murmur, 667; rare form of hypertrophy of, 709; cases of disease of, 710; visible pulsation of arteria centralis retinae in valvular disease of, 723; narrowing of mitral orifice, 742; triple sound in disease of, 788
 Heat, application of to the body, Dr. W. Roberts on, 513; Dr. A. Robertson on, 607, 638, 664
 Heath, Mr. C., treatment of ganglion, 10; stone in the female bladder, 245, 431; the circulation of the BRITISH MEDICAL JOURNAL and the *Lancet*, 504, 532, 539, 563, 570
 Heaton, Dr. J. D., rheumatic pericarditis, 96; alternating hemiplegia, 498
 Hemiplegia, right, with loss of speech, 82, 557; treated by electricity, 262; alternating, Dr. Heaton on, 498
 Hepatitis, acute interstitial, 511
 Hernia, femoral, difficulties in diagnosis of, 52; temporarily irreducible, 82; strangulated inguinal, 668; radical cure of, 709; Mr. Leeds on management of thickened or diseased omentum in, 724; Dr. P. C. Smyly on plan for facilitating reduction of, *ib.*
 Herpes frontalis, contagious erysipelas after, Dr. Broadbent on, 94; Dr. C. C. Ritchie on, 122
 Hester, Dr. J., obituary notice of, 166
 Hewett, Mr. P., injury of lower end of femur, 518; ruptured or lacerated kidney, 722
 Hewitt, Dr. S. M., obituary notice of, 85
 Hicks, Dr. J. B., midwifery and the Medical Council, 83; *post partum* hemorrhage, 247; abdominal puncture in tympanites, 526, 556
 Hill, Mr. Berkeley, treatment of ganglion, 64; a new stricture-dilator, 245, 345; candidates at the College of Surgeons, 626; iodides of ammonium and sodium in syphilis, 725; treatment of enlarged cervical glands, 726
 —, Dr. G., multiple malignant tumours, 556
 Hip, osseous ankylosis of, 81; disease of, after use of tangle-ent, 82; Dr. L. Sayre on treatment of disease of, 85; Dr. Hardie on subcutaneous section of neck of femur in ankylosis of, 438; Mr. Jessop on, 439; excision of, 604; disease of, undergoing repair, 681; false ankylosis, 698; Mr. J. Hutchinson on dislocation of, 718
 History of medicine, M. Daremberg's lectures on, 589
 Hitchman, Dr. J., general paralysis of the insane, 493; retirement from the Derby Asylum, 505
 Hjaltalin, Dr., small-pox in Iceland, 519
 Hodgson, Mr. G. F., the British Medical Association, 137; Mr. Ellis's mode of vaccination, 556
 Hog-parasite, new, 388, 394
 Holland, Mr. P. H., prevention of waste of water, 481, 574; arrangement of meetings of Association, 631
 Hollis, Dr. W. A., mercurial tremors and chronic lead-poisoning, 9
 Holmes, Mr. T., *System of Surgery*, *rev.*, 11
 Holthouse, Mr., treatment of ganglion, 37; treatment of enlarged cervical glands, 756
 Home, Mr., the anatomy of, 472
 Homeopathic Congress, 389
 Hooping-cough, Mr. Grantham on inhalation of ammonia vapour in, 323
 Hope, Mr. W., sewage-irrigation in connection with public health, 274, 372
 Hornby, Mr. T., obituary notice of, 338
 Hospital, Adelaide, introductory address, 592
 — Barnes Convalescent, foundation of, 183
 — Bethlehem, convalescent institution in connection with, 422
 — Birmingham General, fees, etc., 305, 306
 — Bristol General, fees, 305
 — Charing Cross, resignation of Dr. Salter, 44; changes at, 281, 443; classes, fees, etc., 298, 301; introductory address, 412
 — Children's, at Birmingham, appointments at, 16
 — Convalescent, proposed, for Dundee, 676
 — Cottage, at Tenby, 420
 — Devon and Exeter, changes in staff, 72
 — Dudley General, opening of, 531
 — new English, in Paris, 420
 — Fever, London, appointments at, 154; new rooms, 735
 — General, in Vienna, statistics of, 14; description of, 449, 709
 — Glasgow Maternity, 736, 761
 — Guy's, changes at, 281; classes, fees, etc., 228, 301
 — King's College, changes at, 282; classes, fees, etc., 298, 302
 — Liverpool Northern, fees, 305
 Hospital, London, changes at, 282; classes, fees, etc., 299, 302; introductory address, 413; dinner, 422
 — Meath, introductory address, 592
 — Middlesex, Report of Medical and Surgical Registrars of, *rev.*, 38; a benefactor, 156; changes at, 270, 359, 282; classes, fees, etc., 299, 303; introductory address, 414; dinner, 422; remarks on alleged connection with University College, 474, 485
 — Northern, in Liverpool, the regulations regarding physicians, 708
 — Queen's, in Birmingham, fees, etc., 305, 306; introductory address, 448; new wing of, 675
 — Royal Naval, at Plymouth, remarks on, 265
 — Royal Orthopaedic, charges against management of, 219
 — St. Bartholomew's, testimonial to Sir J. Paget, 44; prizes at, 280; changes at, 281, 617; classes, fees, etc., 298, 300; dinner of, 422
 — St. George's, changes in resident appointments, 16; donation to, 237; changes at, 281; classes, fees, etc., 298, 301; introductory address, 400; dinner of, 422
 — St. Joseph in Lisbon, Dr. Barbosa on Statistics of Great Operations in, *rev.*, 11
 — St. Mary's, changes at, 16, 151, 183, 282; scholarships in Natural Science, 100, 421; classes, fees, etc., 299, 303; introductory address, 409
 — St. Thomas's, opening of, 100; appointments at, 282; classes, fees, etc., 299, 304; introductory address, 397
 — St. Vincent's, Dublin, visit of Royal family to, 186
 — Small-pox, at Hampstead, imputations against, 238, 273; alleged loss of a child, 359; inquiry into management of, 363, 387, 445, 560; resolution of Committee of Management, 619
 — Strangers', in New York, 41
 — University College, appointments at, 46, 156, 282; new baths, 186; classes, fees, etc., 299, 304; tablet in memory of Mr. Yates, 421
 — Westminster, changes in, 127, 183, 282; donation to, 217; classes, fees, etc., 299, 304; report concerning, 332, 451; introductory address, 412
 — for Women, at Birmingham, staff of, 46
 Hospital Visiting Society, 100; Sunday, 533; letters, traffic in, 647
 Hospitals, finances of, 128, 156; military, at Bonn, Dr. Duckworth on a visit to, 260; Mr. H. Greenway on construction of, 275; medical relief at, 449; number of out-patients at, 505; support of by working men, 589; in Victoria, 680, 763; in Lisbon, 703; meeting on outdoor relief at, 705; Christmas in, 736; payments by patients of, 758. *See* also Dispensary and Infirmary.
 House-surgeons and coroners, 540, 515
 Howse, Mr., treatment of ganglion, 10
 Hulke, Mr., treatment of enlarged cervical glands, 727
 Humerus, necrosis of, 698
 Hunt, Mr. R. T., introductory lecture at Manchester Royal School of Medicine, 448, 539
 Hunter, John, proposed memorial window, 100; the house of, 140
 Hutchinson, Mr. J., Dr. Bigelow's views of dislocation of the hip-joint, 718
 Hydatid tumour of liver, 179; pregnancy with profuse hemorrhage, 353; of peritoneum, 511
 Hydrocele, sloughing after tapping for, 439; injection of alcohol in, 730
 Hydrocephalus, chronic, Dr. Umpleby on case of, 580; Dr. J. T. Dickson on case of, 696
 Hydronephrosis, case of, 180
 Hydrophobia, case of, 183; Dr. J. R. Fothergill on case of, 264; following bite of a cat, Dr. G. M. Brumwell on, 434; Mr. G. Elder on cases of, 642, 669
 Hydrotherapeia in infantile pneumonia, 529
 Hyperæsthesia, Dr. Handfield Jones on, 369
 Hypovenosity of the lower limb, 512
 Hysteria and its interpreters, Dr. Tilt on, 246, 690; supposed, Dr. Fuller on, 610; and physicians, Dr. Handfield Jones on, 742
 Hysterical mania, Dr. J. C. Browne on, 113, 145
 I.
 Idiots, the mouth and teeth of, 734
 Ileum, large biliary concretion in, 537
 Ileus, induced galvanic current in, 70; chronic, Mr. R. H. Meade on, 261
 Ilkley, sanitary state of, 45
 Impalement, case of, 787
 India, medical news, 16, 589; the Contagious Diseases Act in, 333; subordinate medical department in, 735
 Infants, umbilical excrescence in, 368, 426
 Infirmary, Aberdeen Royal, fees, etc., 308; resignation of Dr. Harvey, 675
 — Edinburgh Royal, officers, 307; fees, etc., 308; proposed sale of, 506; new superintendent, 736
 — Glasgow Royal, officers, 307; fees, etc., 308
 — Glasgow Western, foundation of, 220
 — New, at Halifax, 183, 472
 — Liverpool Royal, changes in medical staff, 567, 708
 — Manchester Royal, appointment in, 73; proposed amalgamation with St. Mary's Hospital, 420, 708
 — in Naples, British, 360
 Inflammation, Mr. F. Jordan on Treatment of, *rev.*, 11; researches in, 18
 Inhaler, steam-spray, 181
 Insane, Dr. Yellowlees on treatment of the, in private practice, 151; Dr. Hitchman on paralysis of, 493
 Insanity and its treatment, Dr. Blandford on, *rev.*, 327. *See* Lunacy and Lunatics.
 Institution, Royal, of Cornwall, annual excursion, 129
 Intemperance and cholera, Dr. R. Martin on, 198; a cause of Bright's disease, Dr. W. Roberts on, 243, 521
 Intestine, Dr. M. W. Taylor on obstruction of, by knot, 119; Mr. T. D. Griffiths on wounds of, 553; wound of, in ovariectomy, 595
 Introductory address, the missing, 418. *See* Lectures.
 Iodate of potassium, 16
 Iodide of potassium in intracranial disease, 683
 Iodides of ammonium and of sodium in syphilis, Mr. Berkeley Hill on, 725
 Ipecacuanha, cultivation of, in India, 360
 Ireland, analysis of report of Poor-law Commissioners in, 13; statistics of population, 43; proposed amendment of laws on dangerous lunatics and superannuation, 47; small-pox in, 103, *see* Small-pox; poor-law medical relief in, 249; statistics of lunacy in, 334; Mr. Benson Baker on medical charities of, 507, 565
 Iron in scarlatina, Dr. Aldridge on, 175; Mr. J. Crocker on, 255; Mr. R. McL. Fraser on, 261; constipation attending use of, 203; Dr. Crighton on local use of sulphate of, in phlegmasia dolens, 466; sponge, purification of water and sewage by, 479; sulphate of in erysipelas, 699
 Irvine, Mr. J. W., obituary notice of, 367
 J.
 Jackson, Dr. Hughlings, tumours of cerebellum, 242, 528
 — Mr. M., perityphilitis, 63
 — Mr. Matthew, obituary notice of, 789
 Jagielski, Dr. V. Koumiss, 242, 239
 Jaw, upper, sarcoma of, 181; lower, myeloid tumour of, 729; malignant tumour of, 739
 Jeaffreson, Mr. C. S., embolism of central artery of retina, 531
 Jenner, Dr., a descendant of, 127; the teachings of, 274, 309; memorial of, 646
 — Sir William, the Queen's recent illness, 539
 Jessop, Mr. T. R., *post mortem* inspections of the head, 262; traumatic neuroma, 640
 Johnson, Mr. C., labour with unbroken hymen, 611
 — Dr. G., nature and art in the cure of disease, 171; pathology and treatment of cholera, 197; treatment of diarrhoea and cholera, 324; circulation in the acardiac fetus, 524; diagnosis of aneurism of the aorta with the laryngoscope, 720
 — Mr. T., the coming race, 711
 Joints, hyperæsthesia of, 371
 Jones, Dr. C. Handfield, hyperæsthesia, 369; physicians and hysteria, 742
 — Mr. G., statistics of cases of midwifery, 31
 — Mr. Sydney, treatment of abscess of cervical glands, 726
 — Dr. Talfourd, nitrite of amyl in cholera, 378
 — Dr. Thomas, testimonial to, 444
 Jordan, Mr. F., Treatment of Surgical Inflammation by a New Method, *rev.*, 11; extension of inflammation from epididymis to urethra, 243; introductory lecture at Queen's Hospital, 448
 JOURNAL, BRITISH MEDICAL, Mr. Heath and the circulation of, 504, 532, 539, 563, 570
 Journal, a new Portuguese medical, 420
 Juries, medical practitioners in, 516
 K.
 Keith, Dr. W., statistics of lateral lithotomy, 320, 349
 Kelly, Dr. C., treatment of diarrhoea and cholera, 324
 Kemble, Mr. C., on hospital finance, 128
 Kemp, Mr. W. G., latent typhoid fever, 114; multilocular ovarian cyst, 496
 Kempe, Mr. A., obituary notice of, 541
 Ketchen, Dr. W., child swallowing plum-stones, 496
 Kidd, Dr. C., anesthetics, 681
 Kidney, removal of, 44, 73; cystic, 180, 597; disease of, with syphilis, 436; Dr. W. Roberts on intemperance as a cause of chronic disease of, 521; dilatation of, 596; cancer of, 597; ruptured or lacerated, Mr. P. Hewett on, 722; Dr. T. G. Stewart on Bright's Disease of, *rev.*, 730; apoplexy after disease of, 767
 King, Mr. O., obituary notice of, 574
 Knee, loose cartilages in, Mr. H. J. Alford on, 124; Mr. Square on, 245, 343; excision of, 604; disease of, 651
 Koumiss, a dietetic remedy, 242, 339
 L.
 Labour, Dr. Wallace on case of obstruction of, by tumour, 372; with unbroken hymen, Mr. C. Johnson on, 611; rupture of membranes before, Mr. S. M. Bradley on, 612; Mr. E. Norton on, 667; Dr. T. Savage on, 756; obstructed, Dr. J. Clark on, 667
 Labouring classes in rural districts, habits of, 478
 Lacrymal passages, treatment of obstruction of, 739
 Lactic acid in diabetes, 588; Dr. B. W. Foster on production of rheumatism by, 720
Lancet, Mr. Heath and the circulation of the, 504, 532, 539, 563, 570

Lane, Mr. S. A., presentation to, 704
 Lausdown, Mr. J. G., obituary notice of, 138
 Laryngoscope, Dr. Morell Mackenzie on the Use of the, *rev.*, 38
 Laryngotomy for oedema of glottis, 653
 Larynx, comparative advantages of modes of removal of growths from, 245; half-penny impacted in, 355; epithelioma of, 520; Mr. Durham on removal of growths in, 623
 Latham, Dr. P. W., treatment of diarrhoea and cholera, 382
 Lawson, Mr. G., treatment of ganglion, 36
 Lead-poisoning, Dr. Hollis on co-existence of mercurial tremor with, 9; preventive treatment of, 70
 Lectures on Surgery, Mr. Spence's, *rev.*, 11; on Disorders of the Nervous System in Childhood, Dr. West's, *rev.*, *ib.*; hip-joint disease, Dr. L. A. Sayre, 85; hysterical mania, Dr. J. C. Browne, 113, 145; uterine displacements, Dr. P. Smith, 130; Asiatic cholera, Sir T. Watson, 141; varicocele, Mr. J. Wood, 316; on Insanity, Dr. Blandford, *rev.*, 327; hyperaesthesia, Dr. C. H. Jones, 369; introductory, at St. Thomas's Hospital, Mr. Le Gros Clark, 397; University College, Dr. Charlton Bastian, 400; St. Mary's Hospital, Dr. Meadows, 409; King's College, Dr. Rutherford, 410; Westminster Hospital, Dr. Basham, 412; Charing Cross Hospital, Dr. Green, *ib.*; London Hospital, Dr. Little, 413; Middlesex Hospital, Dr. Murray, 614; Queen's College, Birmingham, Dr. J. Russell, 414; Newcastle-on-Tyne College of Medicine, Dr. Philipson, 415; Liverpool Royal Infirmary School of Medicine, Dr. W. Carter, 416; Leeds School of Medicine, Dr. Allbutt, *ib.*; Sheffield School of Medicine, Mr. A. H. Allen, 417; London School of Dental Surgery, Mr. Turner, *ib.*; trusses, Mr. Wood, 427; on Principles and Practice of Physic, Sir T. Watson's, *rev.*, 439, 468; introductory, Manchester Royal School of Medicine, Mr. R. T. Hunt, 443; Queen's Hospital, Birmingham, Mr. F. Jordan, *ib.*; on ophthalmology, Dr. Liebreich, 462, 526, 552, 633; injury of end of femur, Mr. P. Hewett, 518; cirrhosis of the liver in early life, Dr. W. B. Cheadle, 545; elephantiasis Graecorum, Dr. R. Living, 551; investigation of diseases of women, Dr. R. Barnes, 576; cancerum oris, and empyema, Dr. Priestley, 577; introductory, Meath Hospital, Dr. Foot, 592; Adelaide Hospital, Dr. Barton, *ib.*; supposed hysteria, Dr. Fuller, 610; experimental investigation of action of medicines, Dr. T. L. Brunton, 659, 687, 749; diagnosis of urethral and vesical diseases, Sir H. Thompson, 662; on dislocation of the hip-joint, Mr. J. Hutchinson, 718; on ruptured kidney, Mr. P. Hewett, 723; on dropsy, Dr. C. Murchison, 723; purpura in a child, Dr. Priesley, 753
 Ledwich, Mr., treatment of ganglion, 326
 Lee, Mr. H., treatment of ganglion, 37
 Leeds, Mr. J., management of thickened or diseased omentum in hernia, 724
 Leeds, sanitary state of, 129, 482
 Legion of Honour, appointments in the, 44, 72, 568
 Leprosy, inquiry into, 14
 Lewis, Dr. Waller, small-pox and vaccination, 451
 Ley, Mr. R., testimonial to, 69
 Licensing system, amendment of, 533
 Liddle, Mr. J., effects of defective ventilation, 538
 Liebreich, Dr. R., lectures on clinical ophthalmology, 462, 526, 552, 633
 Life, Sir W. Thomson on origin of, 187; duration of, 504; influence of marriage on, 650
 Ligateur automatique, 597
 Light, action of, on cane sugar, 704
 Liniment, soap and iodine, 426, 515
 Lip-reading by the deaf and dumb, 598
 Lister, Mr. J., chloroform accidents, 117; address in surgery, 225
 Lithotomy, Dr. Keith's analysis of statistics of, 320, 349; median, 604
 Lithotripsy followed by lithotomy, 563; cases of, 613
 Little, Dr., introductory address at the London Hospital, 413
 Littleton, Dr. T., submarine descent, 274; abdominal puncture in tympanites, 518
 Living, Dr. R., the germ-theory of disease, 365; elephantiasis Graecorum, 551
 Liver, hydatid tumours of, 179; Dr. Cheadle on cirrhosis of, in early life, 545; case of cirrhosis, 594
 Liverpool, sanitary state of, 73, 505, 651; causes of disease and mortality in, 17, 627; correspondence from, 567, 651, 703, 739
 Livingstone, Dr., news of, 353
 Locomotion, human, 590
 Locomotor ataxy in a young man, 490
 Londesborough Lodge, sanitary state of, 676, 734
 London, water-supply of, 156, 271; sanitary regulations of, 268
 Longmore, Mr. T., instruments for exploring gunshot wounds, 715, 751
 Lowe, the Right Hon. R., and the Edinburgh University, 736
 Lunacy systems, remarks on, 12; letters on, 109; report on, in Scotland, 17; Regulation Amendment Bill, 24; in Ireland, proposed amended law, 47; in Ireland, statistics of, 334; fees for certificates, 340, 397, 599, 628; *see* Insane and Insanity

Lunatic, an alleged, 334
 Lunatics in metropolitan asylums, 628; increase of, 674
 Lund, Mr. E., antisepticity in surgery, 243
 Lungs, Mr. J. W. Trotter on malignant disease of, simulating phthisis, 583
 Lush, Dr. W. V., duration of vaccine prophylaxis, 496
 Lying-in Institutions, Miss Nightingale's notes on, *rev.*, 559
 Lymphadenoma, case of, 511
 M.
 McBride, Mr. J. A., abdominal puncture in tympanites, 527; epizootic apthae, 539
 Mac Cormac, Mr. W., notes on ambulances, 244; treatment of enlarged cervical glands, 726
 Macdougall, Dr. A., obituary notice of, 395
 McGreevy, Mr. N., treatment of cancerum oris, 635
 Mackenzie, Dr. J. L., the climate of Sidmouth, 492
 ——— Dr. Morell, the Use of the Laryngoscope, *rev.*, 38; removal of growths in larynx, 245
 Mackey, Dr. E., case of cyanosis, 666
 Mackintosh, Dr. A., experiments with carbolic acid, 151
 M'Intyre, Dr. J., legacy to, 735
 Macnamara, Dr. R., treatment of aneurism by compression, 199
 Madge, Dr. H. M., paralysis during pregnancy, 696
 Malformation of the upper limb, 588
 Malpas, sanitary state of, 127
 Malpractice, actions for, 15, 564
 Manchester, special correspondence from, 651, 708
 Manchineel poison, 590
 Mann, Mr. R., obituary notice of, 279
 Manson, Mr. R. T., sulphurous acid in small-pox, 584
 Mapother, Dr. E. D., sanitary affairs in Dublin, 336
 Marasmus after enteric fever, Dr. Clifford Allbutt on, 517
 Marches, fatal, 503
 Marine phosphorescence, 112
 Marques, Dr. J. A., Diseases and Mortality of the Portuguese Army, *rev.*, 11
 Marriage, influence of on duration of life, 650
 Marsh, Mr. H., Dr. Sayre's hip-joint splint, 139
 Martin, Dr. R., intemperance and cholera, 198
 Martyn, Dr. S., treatment of diarrhoea and cholera, 381
 Mason, Mr. F., treatment of ganglion, 37; treatment of enlarged cervical glands, 726
 Maunders, Mr. C. F., excision of the elbow-joint, 121; treatment of enlarged cervical glands, 756
 Maunsell, Dr. D. T., poor-law medical relief, 249
 Maurice, Mr. O. C., cases of cancer, 604; removal of uterus, 634
 May, Mr. G., jun., address to the Reading Branch, 575; median lithotomy, 604
 ——— Mr. Joseph, address in section of surgery, 197
 Mayors, medical, 588
 Meade, Mr. R. H., chronic ileus, 261
 Meadows, Dr. A., treatment of fibroid disease of uterus, 247, 636; introductory address at St. Mary's Hospital, 409
 Meat, preservation of, 46; uncooked, effect of use of, 193
 Mediastinum, cancer of, 742
 Medical Act, prosecution under the, 572, 591, 759
 ——— Acts Amendment Bill, discussion in Medical Council, 39; remarks on, 42; Dr. E. Waters on, 53; proceedings at meeting of Association, 210, 216
 ——— Benevolent Fund, proceedings of Committee, 45, 332; letter on, 711
 ——— charities of Ireland, 507, 565
 ——— consultations, irregular, 18
 ——— Council, session of, 39, 65; new members of, 39; president's address, *ib.*; committees, *ib.*; returns from public departments, 39, 40, 69; Medical Acts Amendment Bill, 39; preliminary examination, 40, 68; report on professional education, 40, 65, 69; removal of names from Register, 40, 68; petition for restoration to Register, 40; charge against a registered practitioner, *ib.*; registration of deaths, 41; remarks on, 42; instruction in pharmacy and therapeutics, 65; instruction in midwifery, 66; instruction in pathological anatomy, *ib.*; class examinations, 67; conjoint examinations, 67, 69; clinical instruction, 67; chemistry, 68; executive committee, *ib.*; proceedings under penal clauses of Medical Act, *ib.*; report of Finance Committee, *ib.*; treasurer, 69; report of Pharmacopoeia Committee, *ib.*; visitation of examinations, *ib.*; visit to Cambridge, 84; regulations of, 283
 ——— declaration respecting alcohol, 737; letter on, 788
 ——— degrees, continental, 397; American pseudo-, 425; prohibition of sale of in America, 620; illegal assumption of, 657, 702, 759
 ——— Directory, new regulation concerning, 332
 ——— doctrines, modern, Dr. Eade on, 257
 ——— etiquette, questions regarding, 196, 396, 515, 574, 760
 ——— examinations, remarks on, 655, 711, 743
 ——— examining board, conjoint, 18, 42; proceedings in Medical Council regarding, 67, 69; scheme of, for England, 153; proceedings in Council of College of Surgeons, 223, 510
 ——— experts in courts of law, 101, 127, 185
 ——— institutions and diseases of Victoria, 446, 679, 783
 ——— legislation, remarks on, 70

Medical officers of health, for Islington, 186, 333, 387; proposed appointment of Poor-law medical officers as, 205, 235, 360, 454, 461, 569; Mr. Davies on difficulties and trials of, 248, 377; Dr. Druitt on position and duties of, 653
 ——— officers of the Royal Household, 563
 ——— policeman, the, 761
 ——— practice, Dr. W. Ogle on, 29, 60
 ——— practitioners, foreign, in Portugal, 619
 ——— profession in the United States, 155; in Russia, 331; and the working classes, 530; in Roumania, 646
 ——— quackery, 657
 ——— relief at hospitals, 442, 469, 502, 530
 ——— school, Manchester, the introductory lecture at, 420, 539; of Lisbon, opening of, 535; Liverpool Royal Infirmary, 566; Strasburg, 646; the Manchester, condition of, 651
 ——— schools, changes in, 281; days of opening, 282; tables of, 298, 306; information concerning, 300; of Glasgow, 390; introductory addresses at, 397 *et seq.*, 448, 592; dinners, 422; of Scotland, 535
 ——— students, plain truths to, 281; registration of, 446, 475, 542; remarks on education and examination of, 616, 626, 655, 711, 743
 ——— students, female, and the University of Edinburgh, 47, 102, 157, 218, 506, 598, 675, 761; remarks on, 356; in Moscow, 359; letters on, 396, 454; in Berlin, 623
 ——— witnesses' fees, 281
 Medicine, Dr. G. Johnson's address on, 171; Dr. Russell Reynolds on fashions in, 257; and theology, 421; old records of, 534
 Medicines, Dr. T. L. Brunton on experimental investigation of action of, 659, 687, 749
 Medico-legal examinations of the person, 419
 Meldou, Dr. A., treatment of ganglion, 123
 Memorial of Mr. Solly, 533; of Jenner, 646
 Memory, lemonade for strengthening the, 14
 Meningitis, tubercular, 681
 Menstrual fluid, retained, 81
 Mercurial tremors, Dr. Hollis on coexistence of with lead-poisoning, 9
 Mercury, poisoning by absorption of bichloride of, 332, 337; inunction of in syphilis, 384; hypodermic injection of in syphilis, 470, 573
 Merrifield, Dr. J., meteorology of Plymouth, 247, 347
 Mesmerism and abortion, 15
 Mesterton, Herr C., skin-grafting, 622
 Methylene, bichloride of, death during use of, 332
 Michael, Mr. W. H., sanitary legislation, 786
 Midwifery, Mr. G. Jones's statistical account of cases of, 31; proceedings in Medical Council on teaching of, 66; fees under Poor-law orders, 599
 Midwives, certification of, 759
 Miles, Dr. H. C., obituary notice of, 166
 Military surgery, Stromeyer on, 357
 Milk, treatment of diabetes with, 64; adulteration of, 361
 Miller, Dr. Patrick, obituary notice of, 789
 Miners, Cornish, Dr. Barham on diseases of, 253; health and longevity of, 269
 Molluscum sebaceum, 686
 Monstrosities in Vienna Museum, 740
 Moore, Dr. W. D., obituary notice of, 571
 Mordaunt, Lady, case of, 618
 Morphia, poisoning with, 156; Mr. J. S. Ferris on anomalous symptoms in poisoning by, 555
 Morris, Mr. H., treatment of enlarged cervical glands, 727
 Morton, Dr. J., treatment of enlarged cervical glands, 757
 Movements, voluntary and automatic, 641
 Moxhay, Mr. W., resection of hip, 604
 Mucous membranes, hyperaesthesia of, 369
 Murchison, Dr. C., dropsy, 723
 Murphy annuity fund, 646
 Murray, Inspector-General Dr. J., on cholera, 175
 ——— Dr. John, introductory address at the Middlesex Hospital, 414; thoracentesis in pleuritic effusion, 595
 ——— Mr. J. D., obituary notice of, 338
 Muscle and nerve, dynamics of, 125, 385; Dr. Radcliffe on, 150
 Muscle-grafting, 17, 612
 Muscles, anomalies of, and the Darwinian theory, 222
 Museum of Royal College of Surgeons, *see* College; the annual, 46, 391; pathological, of Vienna, 739
 Mushrooms, poisoning with, 207
 Myeloid tumour of lower jaw, 729
 Myotomy, intraocular, Mr. A. Frichard on, 578
 N.
 Nævus, treatment of by galvanic cautery, 384; Mr. Weston on vaccinations of, 534; large congenital of face, 663; treatment of by subcutaneous rupture, 730
 Nalty, Dr. J., obituary notice of, 789
 Nankivell, Dr. A. W., chloral in erysipelas, 437; injury of cervical vertebrae, *ib.*
 ——— Dr. C. B., provident dispensaries, 274, 313
 Navies, British and American, medical departments of, 165
 Navy, Dr. Smart on provision for sick and wounded in, 276, 487; regulations for medical service of, 300, health of the, 619
 Neoropsies, legality of, 444, 674

Necrosis of lower end of humerus, 698
Needham, Dr. F., effects of bromide of potassium, 352
Neilson, Dr. C., obituary notice of, 166
Nerve and Muscle, dynamics of, 125, 315; Dr. Radcliffe on, 150
Nerve, third, paresis of, 513
Nerves, influence of in repair of fractures, 245; of special sense, hyperæsthesia of, 371; investigation of influence of drugs on, 659, 687, 749
Nervous System, Dr. West's Lumenian Lectures on Disorders of in Childhood, *rev.*, 11; affections, digitalis in, 147; notes on, 641
Neumann, Dr., Text-Book of Skin-Diseases, *rev.*, 441
Neuritis, retrobulbar, 512
Neuroma, traumatic, Mr. Jessop on, 640
Neurosis, cutaneous, Dr. Stanley Haynes on, 322
Newbold, Mr. E., obituary notice of, 571
Newman, Dr. W., antiseptic treatment of wounds, 663
Nightingale, Miss, Notes on Lying-in institutions, *rev.*, 559
Nisbet, Mr. W., obituary notice of, 367
Noble, Dr. D., effects of bromide of potassium, 352
Norton, Mr. A. T., treatment of scrofulous abscess of neck, 728
—— Mr. E., rupture of membranes seven weeks before delivery, 667
Nostrils, plugging of as a precautionary measure, 29
Nuisance-officers, Mr. D. Davies on, 274, 554
Nunn, Mr. T. W., Treatment of ganglion, 36
Nunneley, Dr. F. B., effects of application of heat and cold, 136; treatment of diarrhoea and cholera, 325

O.

Oesophagus, excision of cancer of, 643
Ogle, Dr. J. W., circulation in the arcadic foetus, 490
—— Dr. W., dextral pre-eminence, 136
—— Dr. W. (Derby), reform of professional grievances, 29, 60
Ogston, Dr., treatment of ganglion, 95; treatment of scrofulous abscess in neck, 757
Ophthalmology, clinical, Dr. Liebreich's lectures on, 462, 526, 552, 633
Ophthalmoscope, use of in epilepsy, 513; Dr. Liebreich on use of, 526
Opium, specimens of, 615; veratrum viride an antidote to, 643
Optic disc, Dr. Liebreich on atrophy of, 552
Orton, Mr. John, treatment of cholera, 455
Orwin, Dr. James, subcutaneous foreign bodies, 602
Osteomalacia in Milan, 624
Osteophytes, intracranial, with hydrocephalus, 152
Otorrhoea, sulphocarbonate of zinc in, 70
Ovariectomy, Mr. Spencer Wells's cases of, 50; cases of, 355, 496; letters on, 426; in a child, 589; wound of intestine in, 595; Dr. Billroth on, 650; in Manchester, 709; during pregnancy, 786
Overcrowding and mortality, 17
Ozone, atmospheric estimation of, 276

P.

Page, Dr. D., chloral in toothache, 262; santonin as a parasiticide, 323
Paget, Dr. G. E., address to Medical Council, 39
—— Sir James, testimonial to, 44; removal of tumours from liver, 50; baronetcy conferred on, 183; proposed testimonial to, 425, 454
Palpitation, physiology and treatment of, 115
Pantaleoni, Dr., action for libel by, 15
Paracentesis in children, Dr. Priestley on, 577; in pleuritic effusion, Dr. Murray on, 595
Paralysis of the insane, Dr. Hitchman on, 493; during pregnancy, Dr. Madge on, 696; letter on, 756; agitans, 698
Paresis of third nerve, 513
Paris, Dr. C. A. Gordon on Prussian siege of, 313; deaths in, 386, 443; public urinals in, 591
Parker, Mr. Langston, obituary notice of, 540
Parturition, regulation of supplemental force during, 247
Pathology, Surgical, Dr. Billroth's, *rev.*, 11; discussion in Medical Council on education in, 66; Dr. T. H. Green's Introduction to, *rev.*, 500
Pavement, town, sanitary influences of, 479
Payne, Dr. J. F., nervous origin of cutaneous affections, 242
Penis, amputation of by galvanic cautery, 384
Pension, civil list, 157
Pepsine, granular effervescent preparations of, 38
Pericarditis, rheumatic, Dr. Heaton on, 96; idiopathic, 484
Perityphlitis, Mr. Marsh Jackson on, 63
Petroleum, poisoning by, 525
Pharmaceutical conference, British, 184
Pharmacopoeia, British, nomenclature of, 388
—— new German, 502
Pharmacy, legislation on, 15, 46; discussion in Medical Council on education in, 65; elegant, 365
Philipson, Dr. G. H., treatment of diarrhoea and cholera, 381; introductory address at University of Durham College of Medicine, 415
Phlegmasia dolens, Dr. Crighton on local application of sulphate of iron in, 246, 466

Phosphorus in skin-diseases, 685
Photographs of annual meeting, 240
Phthisis, geography of, 266, 396; Dr. Foss on hectic fever in, 434; tuberculous, Dr. E. L. Fox on, 463; Sir T. Watson on, 468; rapid contraction and obliteration of cavities in, 567; fibroid, 568
Physic, Sir Thomas Watson's Lectures on Principles and Practice of, *rev.*, 439, 468
Pitfalls, metropolitan, 257
Placenta, Dr. Swayne on hæmorrhage from retention after abortion, 201; prævia, treatment of, 247; hæmorrhage from retention of after abortion, 668
Plague, alleged outbreak of in Persia, 130
Pleurisy, diaphragmatic, 194
Pleuritic effusion with foetid expectoration, Dr. Thorowgood on, 7
Plum-stones swallowed by a child, Dr. Ketchen on, 496
Plymouth, Mr. Whipple on history of, 169; Dr. Merrifield on meteorology of, 247, 347
Poison-bottle, a, 327
Poisoning by Calabar beans, 73; by morphia, 156; by belladonna, 326; by absorption of bichloride of mercury, 332, 337; by sewage water, Dr. Gibb on, 432; by cantharides, 497; by morphia, Mr. Ferris on anomalous symptoms in, 555; by petroleum, 525; by vermipowder, Dr. F. T. Roberts on, 754
Poisons, prosecution for sale of, 360, 588
Politics and professorships, 651
Pollard, Dr. F., local applications and chloral in small-pox, 36
Polygonum hydropiper as an emmenagogue, 730
Poor-law.—*England and Wales.*—Testimonial to a medical officer, 69; report of Committee of British Medical Association, 179; the Plymouth guardians and their medical officers, 238; Mr. Benson Baker on medical service, 1249; members of Committee of Association, 276; proposal to appoint medical officers of as health-officers, 205, 235, 366, 454, 461, 669; a board of guardians in a difficulty, 473; superannuation of a medical officer, 542; superannuation of medical officers, 586; midwifery fees, 599, 655; fees for certifying pauper lunatics, 599, 628; lunatics in metropolitan asylums, 628; address to medical officers, 744
Ireland.—Analysis of report of commissioners, 18; salaries of medical officers in Limerick Union, 130; Dr. Maunsell on medical service, 249; Mr. Benson Baker on medical charities in Ireland, 507, 565; charge against medical officers, 599, 650, 737; address to medical officers, 745
Scotland.—Report on, 154
Postal regulation regarding obscene circulars and books, 647
Portugal, foreign practitioners in, 619
Pregnancy, hydatid, with profuse hæmorrhage, 553; early, Dr. W. Haining on, 496; letters on, 574; vomiting of, 501; anomalous, 513, 597; false, 513; pyæmia after, 557; variola during, 681; Dr. Madge on paralysis during, 696; abdominal, 709, 739, 785; paralysis during, 756; ovariectomy during, 786
Preston, Mr. T. J., vaccination-papers, 725
Priehard, Mr. A., intraocular myotomy, 578
Priestley, Dr. W. O., cancer oris and paracentesis, 577; intermenstrual dysmenorrhœa, 683; purpura and convulsions in a child, 753
Prince of Wales, visit to St. Bartholomew's Hospital, 44; illness of, 617, 644, 671, 699, 701, 732, 746, 758; diagnosis of in Berlin, 760
Prisons, sickness and mortality in, 645
Prizes, Dr. Lacaze's, 267; at St. Bartholomew's Hospital, 280; in medical schools, 301 *et seq.*; Actonian, 747; of Royal College of Surgeons, 761
Probe, vertebrated, use of, 96; letters on, 109, 187; remark on, 505
Professors, mode of appointing in Germany, 785
Provis, Mr. W., effect of bromide of potassium, 353
Psychic force, the, 443
Public bone, Mr. P. Hewett on supposed fracture of, 722
Public Health Department, the new, 72; Mr. Godwin's address on, 457
—— Medicine, Dr. A. P. Stewart's address on, 233. *See also* Medical Officers of Health.
Pulse, Dr. G. Gray on sudden decrease in frequency of, 95
Purpura and convulsions in a child, Dr. Priestley on, 753
Purser, Dr., inflammation and suppuration, 18
Pyæmia after pregnancy, 557; after tooth-extraction, 619
Pyle, Dr. T. T., contagion of scarlatina and small-pox, 34

Q.

Quarantine in Persia, 130; English, 268
Queen, health of, 323, 386, 503, 539; donation to Queen's Hospital, Birmingham, 419
Quinine in tubercle of lung, 596

R.

Radcliffe, Dr. C. B., dynamics of nerve and muscle, 150
—— Mr. J. N., his hospital-tent, 359
Ramsey, Dr. James, high temperature in varicella, 35
Rawson, Mr., deodorisation and utilisation of sewage, 476
Rectum, polypi of, 709

Red cross, the, 219, 389
Registrar-General's cholera prescription, 271
Registration of disease, report of committee on, 177; in the medical schools, 475; of deaths, 532, 544
Renforth, Moral of death of, 333
Retina, Mr. C. S. Jeaffreson on embolism of central artery of, 351
Revaccination, Mr. E. J. Worth on confluent small-pox after, 556; in Dublin, 621. *See* Vaccination
Reynolds, Dr. J. R., fashions in medicine, 257; System of Medicine, *rev.*, 614
—— Mr. W., obituary notice of, 195
Rheumatic pericarditis, Dr. Heaton on, 96; arthritis, chronic, 152
Rheumatism, treated by cold applications, 241; and neuralgia, therapeutic indications of, 242; urethral, 625; Dr. B. W. Foster on synthesis of, 720
Rhino-plastic operations, 625
Richardson, Mr. B. Wills, treatment of ganglion, 124
Ricord, Dr., dinner to, 104
Ritchie, Dr. C. C., herpes zoster followed by contagious erysipelas, 122
Rivington, Mr. W., treatment of ganglion, 37
Roberts, Mr. C., antiseptics and disinfectants, 168; wasp stings, 425
—— Dr. F. T., poisoning by vermin-powder containing strychnia, 754
—— Mr. R., testimonial to, 604
—— Dr. W., alteration of laws of Association, 165; intemperance as a cause of chronic Bright's disease, 243, 521
Robertson, Dr. A., regulated temperature in the treatment of disease, 607, 638, 664
Robinson, Dr., sanitary state of Leeds, 482
Rodent ulcer, 53, 567
Roe, Mr., death-certificates, 573
Rooke, Dr. T. M., abdominal puncture in tympanites, 584
Roumania, the medical profession in, 646
Rouse, Mr., treatment of ganglion, 37
Royds, Mr. W., retrospective address of Pathological Society of Reading, 603, 634
Rumsey, Dr. H. W., degeneracy of race in towns, 482
Russell, Dr. James, introductory address at Queen's College, Birmingham, 414
Russia, medicine in, 331; female medical students in, 359
Rutherford, Dr. W., introductory address at King's College, 410

S.

St. Kilda, sanitary state of, 239, 271
St. Pancras guardians and their medical officer, 239; advice to, 270
Salford, sanitary state of, 420
Salter, Dr. Hyde, obituary notice of, 278
Samelson, Dr., ophthalmic cases, 512
Sandringham, water at, 734
Sanitary legislation, proceedings in Parliament regarding, 129; report of joint committee on, 203, 212; Dr. A. P. Stewart on, 233; members of committee on, 278; Mr. Godwin on, 457; Mr. G. W. Hastings on, 460; Mr. Michael on, 786
Sanitary regulations in London, 268; exhibition, 273
Sansom, Dr., the germ-theory of disease, 452; antiseptic treatment of small-pox, 611
Santonin as a parasiticide, Dr. D. Page on, 323; Dr. Farquharson on effects of, 466
Saunders, Dr. G. S., puncture of abdomen in tympanites, 583
Savage, Dr. G. H., temperature in fracture of spine, 719
—— Dr. T., early rupture of the membranes, 756
Savory, Mr., treatment of ganglion, 10
Sawyer, Dr. J., testimonial to, 452
Sayre, Dr. L., his visit to London, 44; treatment of hip-joint disease, 85; vertebrated probe and catheter, 109
Scabies, treatment of, 384
Scapula, Mr. C. Steele on excision of, 243, 430; fracture of anatomical neck of, 682
Scarborough, sanitary state of, 676, 701, 706
Scarlatina, Dr. Pyle on contagion of, 34; iron in, Dr. Aldridge on, 175; Mr. J. Creeker on, 255; Mr. R. Fraser on, 261; relation to typhoid fever, 740
School of Medicine, Bristol, fees, etc., 305, 306; Leeds, fees, etc., 305, 306; introductory address at, 416; Liverpool Royal Infirmary, fees, etc., 305, 306; introductory address at, 416; remarks on, 566; Manchester Royal, fees, etc., 305, 306; introductory address at, 448; Sheffield, fees, etc., 306, 308; introductory address at, 417; of Dental Surgery, introductory address at, 417
Schools, sanitary construction of, 483
Scotland, lunatics in, 17; baby-farming in, 18
Scott, Mr. J., obituary notice of, 424
Scrotum, sloughing of after tapping for hydrocele, 429
Scurvy in British ships, 647
Seborrhœa sicca vel squamosa, 180
Setons in strumous diseases, Mr. Crossman on, 693
Sewage, utilisation of, 216, 476; Mr. Hope on irrigation with, 274, 372; of Birmingham, 422; water, Dr. Gibb on poisoning with, 432; and entozoa, letters on, 627, 634, 711
Sewers, ventilation of, 673; effect of gases of, 671, 676, 734
Shapter, Dr., diseases of heart and lungs, 522

Shaw, Mr. O. S., obituary notice of, 25
 Shillitoe, Mr. B., treatment of ganglion, 38
 Shipman, Mr. R., obituary notice of, 279
 Shock, digitalis in, 115
 Shot in the eye, 513
 Siamese twins, state of, 157
 Sibson, Dr., testimonial to, 704
 Sidmouth, Dr. J. I. Mackenzie on climate of, 247, 492
 Silkworm disease, prevention of, 472
 Silver wire, removal of, 136
 Simms, Dr. F., the address in medicine, 240
 Simon, Mr. J., his annual report, 153; precautions against cholera, 221
 Skey, Mr. F. C., the medical declaration respecting alcohol, 788
 Skin, nervous origin of diseases of, 242; hyperæsthesia of, 369; Dr. Neumann on Diseases of, *rev.*, 441; phosphorus in diseases of, 685
 Skin-grafting, cases of, 383, 622, 787
 Skinner, Dr., deaths from chloroform, 54; mortality in Liverpool 627
 Skoda, presentation of medal to, 703
 Skull, fracture of, 52, 383; depressed, Mr. Waterhouse on an elevator for, 692
 Small-pox, wards for in Berlin Hospital, 24; Dr. Pyle on contagion of, 34; Dr. F. Pollard on local applications and chloral in, 36; Dr. Wiltshire on removal of pitting of by erysipelas, 122; hæmorrhage, Dr. R. Grieve on, 465; effect of sulphurous acid on, Dr. Hjaltelin on, 519; Mr. R. T. Manson on, 584; confluent after recent vaccination, Mr. E. J. Worth on, 556; corymbo-crystalline, with catalepsy, 588; Dr. Sansom on antiseptic treatment of, 611; during pregnancy and delivery, 681; oedema of lung after, 787; in Durham, proceedings respecting, 14; in Florence, 15, 267; deputation to the Marquis of Ripon on spread of, 16; proposed Act of Parliament, 17; wards for in Berlin Charité Hospital, 24; deaths from in Paris, 44; in Glasgow, 103; in Ireland, 103; in St. Petersburg, 128; in Monte Video, 129; in Hamburg, 183; in England and Wales, summary of mortality, 183; in Manchester, 184; in Brecon, 217; in London, 218, 358, 386, 419, 443; mortality from in the Punjab, 269; in Santa Cruz, 269; at Bridgewater, 388; in Oxford, 389; in Wolverhampton, 505; in Sheffield, *ib.*; in Dublin, 535, 621, 650, 737; conveyance of patients in cabs, 620; in Buda-Pesth, 646; in Gotha, 704; in Vienna, 734, 759; in Philadelphia, 735
 Smart, Dr. W. R. E., injuries to the axillary artery, 245, 342; institutions for sick and wounded in Royal Navy, 276, 487
 Smith, Dr. Edward, dietary in workhouses, 222
 — Mr. Henry, treatment of ganglion, 9
 — Dr. J. W. F., acute diabetes, 728
 — Dr. Protheroe, uterine displacements, 130; supplemental mechanical force during parturition, 247; treatment of dysmenorrhœa and sterility, 694
 — Mr. R., obituary notice of, 712
 — Mr. Spencer, treatment of enlarged glands in neck, 727
 — Mr. Thomas, treatment of ganglion, 10
 Smyly, Dr. P. G., reduction of strangulated hernia, 724
 Snake-bite, carbolic acid in, 70
 Snook, Mr. J. S., obituary notice of, 599
 Society, British International Aid, 103; annual meeting, 155
 — Cambridge Philosophical, annual dinner, 675
 — Charity Organisation, proceedings of, 563, 646, 675
 — Clinical of London, reports of, 82, 484, 567, 595, 633, 710; opening meeting, 474
 — of German naturalists and physicians, meeting of, 445
 — Harveian, proposed officers and Council of, 761
 — Hospital Visiting, 100
 — of Hungarian Physicians and Naturalists, annual meeting, 331
 — King's College Medical, introductory meeting, 473
 — Lincoln Medical, summer meeting, 111
 — Medical, of College of Physicians of Ireland, reports of, 194, 626, 685; officers of, 506
 — Medical of London, opening meeting, 505; reports of, 512, 568, 597, 625, 737
 — Medical, Manchester, reports of, 512, 597
 — Medico-Chirurgical of Edinburgh, reports of, 52, 277
 — Medico-Chirurgical of Glasgow, office-bearers, 334
 — Obstetrical of Dublin, opening meeting, 621; meeting of, 737
 — Obstetrical of Edinburgh, office-bearers, 650
 — Obstetrical of London, reports of, 54, 193, 511, 534, 624, 785; investigation of temperature, 100; proposed examination of midwives, 759
 — Pathological of Dublin, subject of prize essay, 650; reports, 654, 685, 742
 — Pathological of London, opening meeting, 474; reports of, 511, 596, 652, 710; proposed officers and Council of, 761
 — Pathological of Reading, retrospective address, 603, 634
 — for Relief of Widows and Orphans of Medical Men, proceedings of, 100
 — Royal, annual meeting, 656

Society, Royal Humane, resolution concerning Dr. Christian, 564
 — Royal Medical of Edinburgh, presidents of, 650
 — Royal Medical and Chirurgical, reports of, 50, 136, 537, 623, 682, 740
 — Salford Hospital Medical, dinner of, 444
 — Surgical Aid, 534
 — Surgical, of Ireland, reports of, 52, 277, 709
 — West Kent Medico-Chirurgical, officers of, 472
 Soldiers, food for, 267
 Solly, Mr. S., obituary notice of, 395; resolution of Council of College of Surgeons, 510; memorial of, 533
 Southall and Co.'s, Messrs., preparations, 613
 Southam, Mr. G., excision of the tongue, 243
 Spain, Dr. H. Bennet on physical geography and climate of, 346
 Specific gravity, vulcanite instruments for ascertaining, 501
 Spence, Mr., Lectures on Surgery, *rev.*, 11; treatment of ganglion, 94
 Spender, Dr. J. K., arsenic in chorea, 429
 Spermatoc incontinence, Dr. D. C. Black on, 609
 Spina bifida with disease of cerebellum, 180
 Spine, fracture of, 52, 437, 668, 742; congestion of pia mater of, 437
 Spiritualism tested, 71, 97; Dr. Allen Thomson on, 188
 Spleen, embolism in, 596
 Splints, poroplastic, 355
 Spontaneous generation, experiments on, 223
 Square, Mr. W., influence of nerves on repair of fracture, 245
 — Mr. W. J., loose cartilages in the knee-joint, 245, 343
 Squire, Mr. W., Puerperal Temperatures and Temperature Variations in Children, *rev.*, 181
 Stallard, Dr., health of operatives in factories, 480
 State medicine, new qualification in, 18
 Steele, Mr. C., flexible probe, 137; excision of scapula, 243, 430
 Sterility, Dr. Protheroe Smith on treatment of, 694
 Stevens, Mr. J. N., intermittent hæmaturia, 323
 Stewart, Dr. A. P., address to Public Medicine Section, 233
 — Dr. T. G., Bright's Disease of the Kidneys, *rev.*, 730
 Stimulants, use of in workhouse infirmaries, 542
 Stokes, Mr. W., diagnosis of strangulated femoral hernia, 52; supracondyloid amputation of thigh, 277; opinion of surgeons on treatment of Talbot's case, 591; fracture of atlas from gunshot injury, 716
 Stomach, hyperæsthesia of, 370; causes of, 527, 597; perforation of, 603
 Stricture with fistula of urethra, 698
 Stricture-dilator, a new, Mr. Berkeley Hill on, 345
 Strike, sequel of a, 473
 Stromeyer, Dr. L., lessons of the Franco-German war, 357
 Strumous diseases, Mr. Crossman on setons in, 693
 Strychnia in albuminuria, 501; Dr. F. T. Roberts on case of poisoning by, 754
 Suicide, statistics of, 237
 Sulphurous acid fumigation in small-pox, Dr. Hjaltelin on, 519; Mr. R. T. Manson on, 584
 Suprarenal capsules, disease of, 24
 Surgery, military, the endoscope in, 4; Mr. Spence's Lectures on, *rev.*, 11; Mr. Lister's address on, 225; Mr. F. J. Gant's Science and Practice of, *rev.*, 499
 Surgical Pathology, Dr. Billroth's, *rev.*, 11; operations, statistics of, 270
 Swayne, Dr. J. G., treatment of hæmorrhage after abortion, 201; hydrate of chloral in puerperal convulsions, 752
 Sydney, Dr. Thorowgood on climate of, 433
 Syme testimonial, 157, 337, 761
 Syphilis after vaccination, report of Committee of Royal Medical and Chirurgical Society on, 15; Mr. Bradley on unity of virus of, 376; mercurial inunction in, 384; with kidney-disease, 436; case of, after vaccination, 442; hypodermic injection of mercury in, 470, 573; Mr. Berkeley Hill on iodides of ammonium and sodium in, 725
 Syphilitic ulcers, skin-grafting in, 787
 T.
 Tait, Mr. L., medical experts in courts of law, 127, 219
 Talbot, Constable, case of, 130, 586, 621; necropsy of, 650; Mr. W. Stokes on, 716
 Tanner, Dr. T. H., obituary notice of, 110; proposed memorial of, 218, 426
 Tapping in dropsy, 56
 Tattooed all over, 532
 Taylor, Mr. H., embolism of left vertebral artery, 527
 — Dr. M. W., intestinal obstruction from knot in the ilium, 119
 — Dr. R. H., catheterism of the Eustachian canal, 548
 — Mr. T., Catalogue of Calculi in Museum of Royal College of Surgeons, *rev.*, 500
 Tea, spurious, 16
 Teeth, Mr. Fay on excision of, 497
 Teleology and evolution, Dr. Allbutt on, 83; Rev. Dr. Houghton on, 149

Temperance, medical aspects of, 389
 Temperature, modification of by application of heat and cold, 136; Puerperal, Mr. W. Squire on, *rev.*, 181
 regulated, in the treatment of disease, Dr. A. Robertson on, 607, 638, 664; in fracture of a cervical vertebra, Dr. G. H. Savage on, 719; Mr. Bradley on effect of rocking on, 725
 Tendons, divided, treatment of, 122
 Terry, Mr. G., wasp-stings, 255
 Tessier, Dr. W. H. C., pauper lunatic certifying fees, 628
 Testimonial to Mr. R. Ley, 69; to Dr. Halford, 74; to Mr. A. L. Peacock, 158; to Dr. W. McEwen, 339; to Dr. Thomas Jones, 444; to Dr. J. Sawyer, 452; to Mr. Cordy Burrows, 503; to Mr. R. Roberts, 604; to Dr. Wallace, 628; to Mr. T. Coe, *ib.*; to Dr. Sibson and Mr. Lane, 704
 Therapeutics, Dr. T. K. Chambers's Harveian oration on progress of, 1; Practical, Dr. Waring on, *rev.*, 11
 Thermometer in gunshot injuries, 446
 Thigh, supracondyloid amputation of, 277
 Thompson, Sir Henry, treatment of ganglion, 10; diagnosis of urethral and vesical disease, 602
 — Dr. James, rupture of left ventricle, 497
 — Dr. J., inversion of the uterus, 697
 — Mr. W. E., obituary notice of, 338
 Thomson, Dr. Allen, address on Biology, 188
 — Dr. F., obituary notice of, 453
 — Dr. Spencer, the annual meeting photographed, 240
 — Sir William, address at annual meeting of British Association, 187
 Thoracentesis in pleuritic effusion, 595
 Thorowgood, Dr. J. C., pleuritic effusion with foetid expectorations, 7; climate of Sydney and New South Wales, 433
 Throat, hyperæsthesia of the, 369
 Thyrotomy, Dr. Morell Mackenzie on, 649
 Tilt, Dr. E. J., hysteria and its interpreters, 246, 690
 Tinea in animals and in man, 591
 Tongue, Mr. Fairlie Clarke on atrophy of, 35, 632; excision of, 243, 384
 Toothache, Dr. D. Page on chloral in, 262
 Tracheotomy in aortic aneurism, 603
 Transfusion of blood, 729, 737
 Trotter, Mr. J. W., malignant disease of lung simulating phthisis, 583
 Trouseau, Dr., treatment of diarrhœa and cholera, 332
 Trusses, Mr. J. Wood on adjustment and use of, 427
 Tuberculosis of lung checked by quinine, 596
 Tumours, removal of from bones, 50; hydatid, of liver, 179; sarcomatous, of upper jaw, 181; of cerebellum, 242, 528, 710, 787; fibroid, of uterus, *see* Uterus; melanotic, of eye, 484; fungoid, of upper arm, 497; multiple malignant, Dr. G. Hill on, 556
 mammary, 709; of lower jaw, 729, 739
 Turner, Mr., introductory address at School of Dental Surgery, 417
 Turpentine, therapeutic action and uses of, 277
 Tutu plant, properties of, 590
 Tyacke, Dr., address at annual meeting of South Eastern Branch, 78
 Tympanites, puncture of the colon for the relief of, Mr. J. H. Wathen on, 464, 515, 612; Dr. T. Littleton on, 518; Dr. J. B. Hicks on, 526, 556; Mr. G. D. Brown on, 526; Mr. McBride on, 527; Sir T. Watson on, 563; Dr. G. S. Saunders on, 583; Dr. T. M. Rooke on, 584
 Dr. S. Wilks on, *ib.*
 U.
 Ulcer, rodent, 53
 Ulcers, skin-transplanting in, 383, 787
 Umbilical excrescences in infants, 368, 426
 Umpleby, Dr. H., chronic hydrocephalus, 580
 Universities, German, mode of electing professors in, 784
 University of Aberdeen, regulations for degrees, 294; classes and fees, 307, 308; medical bursaries in, 475
 — Anderson's, in Glasgow, fees, etc., 307, 308
 — of Berlin, effect of war on, 623
 — of Cambridge, pass list, 25; regulations for degrees, 289; courses of lectures at, 337; notices, 409; examiners, 485
 — of Dublin, qualification in state medicine, 18; medical travelling prize, 47; pass lists, 53, 84, 790; regulations for degrees, 297
 — of Durham, regulations for degrees, 291
 — of Edinburgh, and female medical students, 47, 102, 157, 218, 506, 598, 675, 761; regulations for degrees, 294; classes and fees, 307, 308; Ettles scholarship, 389; Lord Rectorship of, 564; number of students in, 591; Mr. Lowe and Mr. Turner on, 736; the Syme Fellowship, 761
 — of Glasgow, regulations for degrees, 294; classes and fees, 307, 308; Lord Rector of, 591
 — of London, and the Brown trust, 14; remarks on examinations, 17; pass lists, 280, 311, 712; regulations for degrees, 290
 — of Oxford, regulations for degrees, 289; instruction at, 337; natural science fellowship, 485; non-resident students, 530
 — Queen's, in Ireland, regulations for degrees, 300

University of St. Andrew's, regulations for degrees, 202;
 Lord Rector of, 591, 650
 — of Vienna, number of students in, 443
 Urethra, extension of inflammation from epididymis to,
 243; Sir H. Thompson on diagnosis of diseases of,
 662; stricture of with fistula, 698
 Urethral rheumatism, 625
 Urinals, public, in Paris, 581
 Urine, Dr. D. C. Black on nocturnal incontinence of, 609
 Urticaria, spurious, 589, 682
 Uterus, hip-disease following introduction of tangle-tent
 into, 82; Dr. Protheroe Smith on displacements of, 130;
 diagnosis of inflammation of, 193; Dr. Beatty on fibro-
 cystic disease of, 246, 517; Dr. R. Barnes on elongated
 hypertrophy of, 246, 375; Dr. Beatty on radical cure of
 retroflexion of, 247, 341; Dr. Braxton Hicks on reduc-
 tion of inversion of, 247; Dr. Wallace on tumour of,
 obstructing delivery, 379; Mr. G. Clements on rupture
 of, 467; Dr. Boulton on radical cure of retroflexion of,
 524; Dr. Edis on dilatation of cervix of, 525; Dr.
 Brabazon on retroflexion of, 539; Dr. Walters on
 flexions of, 611; imperfect evolution of, 624; treatment
 of flexion, *ib.*; removal of, 634; Dr. Meadows on
 fibroid tumours of, 636; bag for applications to, 665;
 Dr. J. Thompson on inversion of, 697

V.

Vaccination, syphilis after, 15, 442; in the Lancaster
 Union, 24; deputation on enforcement of, 16; pro-
 ceedings regarding, in Parliament, 46, 239, 251, 252; of
 factory workers, 127; at the Cape of Good Hope, 130;
 Mr. W. H. Axford on, 135; instructions of Privy
 Council regarding 166; use of secondary lymph for
 219; prosecutions for neglect of, 269, 270, 359, 372, 444,
 504; gratuities for, 426; sleeve for, 441; official ob-
 structiveness to, 455; Dr. W. V. Lush on duration of
 prophylaxis of, 497; in Ireland, 508; in Norwich, 513;
 Mr. G. F. Hodgson on Mr. Ellis's mode of performing,
 556; Mr. E. J. Worth on confluent variola after, *ib.*;
 by vesication, Mr. R. Ellis on, 612; of nævi, Mr.
 Weston on, 584; discussion on, 635; suggestion re-
 garding, 649; at Northampton, 703; Mr. T. J. Preston
 on papers for, 725; with glycerised lymph, 730
 Vaccine lymph, alleged degeneration of, 309
 Van Praagh, Mr. W., lip-reading by the deaf and dumb,
 598
 Varicella, Dr. J. Ramsay on high temperature in, 85
 Varicocele, Mr. J. Wood on, 816

Veratrum viride in gout, 557; in acute rheumatism, *ib.*;
 as an antidote to opium, 643
 Vesia-vaginal fistula, 585
 Victoria, medical institutions and prevailing diseases
 of, 446, 679, 783
 Vienna, correspondence from, 81, 449, 651, 709, 799; the
 epidemic of typhus in, 309; mortality among children
 in, 589; epidemic diseases in, 734; the pathological
 museum in, 739
 Vintras, Dr. A., honour conferred on, 673
 Virchow, Dr., and scientific meetings, 623
 Vivisection, report of Committee of British Association
 on, 185
 Volunteer arrangements at Wimbledon, 73, 100; at
 Shoeburyness, 186, 218
 Vomiting of pregnancy, 501
 Vulcanite gravity-bulbs and thermometers, 501

W.

Wade, Dr., the address in medicine, 210; treatment of
 diarrhoea and cholera, 380
 Wahlruch, Dr. A., treatment of ganglion and diarrhoea,
 527
 Wallace, Dr. J., fibrous tumour obstructing labour, 379
 — Sir R., baronetcy conferred on, 237
 Walters, Dr. J., flexions of the uterus, 611
 War, German losses by sickness in, 129; lessons of, 357
 Waring, Dr. E., Practical Therapeutics, *rev.*, 11
 Wasp-stings, death from, 240; Mr. G. Terry on, 255; Mr.
 C. D. H. Drury on, 351; Mr. J. F. Harding on, 380;
 Mr. C. Roberts on, 425
 Water, supply of in London, 156; examination of for
 sanitary purposes, 238, 631; storage of, 331; waste of,
 481, 574; a new Scotch chalybeate, 506
 Waterhouse, Mr. F., elevator for depressed cranium in
 childhood, 692
 Waters, Dr. Edward, amendment of the Medical Art, 53
 Wathen, Mr. J. H., puncture of the colon in tympanites,
 464, 515, 612
 Watson, Dr. Eben, treatment of ganglion, 95
 — Dr. P. H., treatment of ganglion, 95; treat-
 ment of abscess in neck, 728
 — Mr. Spencer, treatment of injuries of the eye,
 130
 — Sir Thomas, on cholera, 141; Lectures on
 Principles and Practice of Physic, *rev.*, 439, 463
 Webbed fingers, 787

Wells, Mr. Spencer, exfoliation of the bladder, 8; cases
 of ovariectomy, 50
 West, Dr., Lumleian Lectures on Disorders of the
 Nervous System in Childhood, *rev.*, 11
 Weston, Mr. E. T., vaccination of nævi, 584
 Whalebone-loop in midwifery practice, 593
 Wheat-flour, Chapman's, 441
 Whipple, Mr. J., President's address at annual meeting,
 169
 White, Mr. J., obituary notice of, 270
 Whitehead, Mr. W., exfoliation of the bladder, 432
 Whittle, Mr. E., obituary notice of, 338
 Willett, Mr., treatment of ganglion, 10
 Wilks, Dr. S., puncture of the colon in tympanites, 584
 Williams, Dr. Caleb, obituary notice of, 599
 — Dr. C. J. B., triple sounds of the heart, 788
 — Mr. T. Watkin, the British Medical Association,
 165
 Willshire, Dr. A., removal of pitting of small-pox by ery-
 sipelas, 122
 Wines, note on, 501
 Wolverhampton, sanitary state of, 443
 Women, medical education of, and the University of
 Edinburgh, 157, 218, 506, 535, 598; remarks on prac-
 tice of medicine by, 356; medical, letters on, 396, 454;
 medical college for in New York, 759. *See also* Me-
 dical students, female
 Women, Dr. R. Barnes on investigation of diseases of,
 576
 Wood, Mr. T. O., effects of bromide of potassium, 435
 Wood, Mr. John, treatment of ganglion, 9 varicocele,
 318; trusses, 427
 Woodman, Mr. S., aneurism of the abdominal aorta, 380
 Workhouse infirmaries, stimulants used in, 542, 628
 Worth, Mr. E. J., variola confluens after recent vaccina-
 tion, 556
 Wounds, antiseptic treatment of, Dr. E. Drummond on,
 4; Mr. Lister on, 225; Dr. Newman on, 662; intes-
 tinal, Mr. T. D. Griffiths on, 553
 Wright, Mr. F. W., evisceration in arm-presentation, 467
 — Mr. W. H., obituary notice of, 395
 Wrist, excision of, 739

Y.

Yellowlees, Dr., treatment of insane patients in private
 practice, 151

Z.

Zinc, sulphocarbolate of in otorrhœa, 70

UNIVERSITY OF ILLINOIS-URBANA



3 0112 110713986